Digital, Responsible Citizenship in a Connected World

IO4 – Development and Evaluation of the Digital Citizenship Programme and Curricula on digital literacy

Digital Citizenship Programme

Templates prepared by CARDET

Project Title: Digital, Responsible Citizenship in a Connected World

Project Acronym: DRC

Project Number: 2017-1-CY01-KA201-026739

Project Information

Project title	**Digital, Responsible Citizenship in a Connected World**
Project acronym:	**DRC**
Project number:	**2017-1-CY01-KA201-026739**
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Project Partners	**FIPL (Ireland), Tamat (Italy), Rafina (Greece), Innovade (Cyprus)**

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Table of Contents

Executive Summary

This programme report is developed for the requirements of the Erasmus+ programme "Digital, Responsible Citizenship in a Connected World" (DRC) intellectual output 4 “O4. Development and Evaluation of the Digital Citizenship Programme and Curricula on digital literacy (Leading partner CARDET)”, in order to support children appropriate and responsible use of technology. The Digital Citizenship programme presents a series of lesson plans aiming at supporting teachers in the process of cultivating Digital Responsible Citizens in a Connected Word. The DRC curricula on digital literacy provides practical tips, pedagogical tools, methods, resources and material for teachers and students. Lessons have been developed by teachers from the 4 partner countries namely: Cyprus, Greece, Ireland and Italy. This Digital Citizenship Programme and Curricula is targeted at mainstream teachers, teaching assistants and other education providers of primary school students, aged 6-12 years. It presents a series of innovative and interactive lesson plans for primary teachers, with suggestions for assessment and homework activities in addition. It aims to support teachers and teaching providers to develop learning activities, games and exercises which can be delivered in the classroom with students, and which will enhance the digital competence of the students, encourage them to be responsible in how they participate and communicate online and to cultivate active (digital) citizenship in students. In addition, the Programme provides access to a range of innovative teaching activities, approaches, practices and methodologies and aims to act as inspiration for teachers to use some of these activities when integrating the topic of digital literacy into their lesson plans. The use of the lesson plans could be integrated to support teachers to develop the digital competence of young learners, while also addressing the learning objectives of core curriculum subject areas. As such, the activities presented in these lesson plans can be easily adapted by primary school teachers in all EU countries, and used to enhance the teaching of Digital Citizenship, while also addressing the learning outcomes for young digital citizens that were set at a European standard through the DIG COMP 2.0 Framework. Following testing of these activities with end -users (teachers and learners in primary schools) in all 4 countries, teachers are willing to adapt the activities to promote the sustainability of these lesson plans with schools outside of our current network. Finally, the content of this Programme is aimed at teachers who want to develop innovative approaches and methods in the classroom to enhance how digital literacy is taught to primary school students and to encourage and motivate young learners to develop their digital competence and to become responsible online citizens.

Keywords: Digital Citizenship; Programme; Curricula; Lesson plans; Primary school; digital literacy skills.

Introduction to the Digital Citizenship Programme

The aim of the Digital Citizenship (DC) Programme is to empower students to think critically, behave safely, and participate responsibly in our digital world. More precisely, the DC Programme seeks to support teachers to develop a positive attitude towards digital citizenship and to cultivate responsible, ethical, global citizens for a digital world. Students were equipped with the appropriate knowledge, attitudes and skills to navigate, behave and act safely and responsibly in the digital world. They learned how to exhibit appropriate online behaviour through a set of classroom-ready activities that reflected the main competence areas of Information and data literacy; Communication and collaboration; Digital content creation; Safety; and Problem solving. Topics that have been explored in the programme's curricula were embedded within a number of 5 courses with a variety of classroom-ready lesson plans that ranged across the 5 DigComp competence areas.

Each partner country developed the Digital Citizenship Curricula for the production of the DC Programe (see Diagram 1).

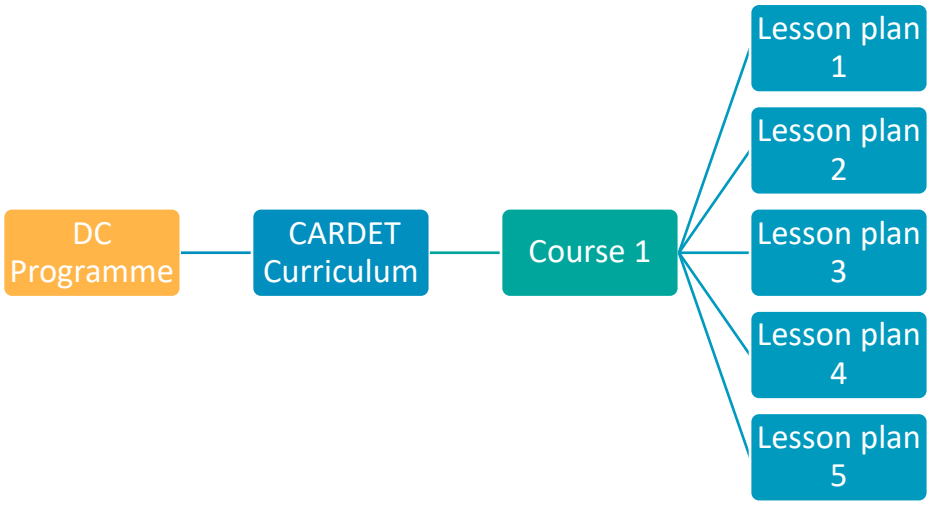


Diagram 1. The process for developing the DC Programme Curriculum

The following section provides some useful information in regard to the duration and the structure of the programme as follows:

1. The total duration of the DC Programme is 20 hours implemented in a period of 5 weeks.
2. The DC Programme as a whole consists of 5 Curricula. Each partner country developed 1 curriculum which consists of 1 course with 5 lesson plans.
3. Each course has 5 lesson plans (e.g. 2 teaching hrs/ lesson, 1 hr/lesson) etc.
4. The topic of each of the lesson plan derives out of the 5 Competence areas of the DigComp framework.

The curricula were put into practice through the Digital Citizenship programme. Specifically, each partner provided a 5-week long program introducing students to basic ICT skills through hands-on experience and interactive virtual games. In this regard, the programme includes a series of classroom activities and lesson plans which can be posted on the project's website to be referred to by classroom teachers around the world to encourage discussion of issues relating to the development of the digital citizenship identity. The activities and lesson plans will be designed in order to promote active engagement and subsequently enhance students' digital literacy skills through a mixture of methodologies, such as authentic learning, project-based learning and gamified learning.

The structure and nature of these classroom activities were based on findings from the Digital Citizenship profiling report and the literature review on the best practices for the e-Toolkit. These activities were piloted in classrooms in each partner country. A large pool of activities was created by researchers and practitioners and made widely available through the online platform of the project. The pilots were conducted in order to test the curricula and make final adjustments to the training material. Pilots took place with at least 10 members of the target group by each partner.

Depending on particular country needs and contexts, each partner selected, translated and adopted the Digital Citizenship Programme. All the translated materials are made available in print and electronic form.

Terms Overview: Programme, Curriculum and Lesson plan

Programme Overview

Diagram 1 provides a schematic representation of the relationship between Programme, Curriculum and lesson plan. First of all, both the lesson plan and curriculum are embedded within the school programme which aims to deliver learning activities of various sources and types in a structured manner. A programme is focused on the design usually consists of aa set of structured learning activities grouped in time-based or topic-based blocks. It constitutes the 'plan' for getting the learner to meet the specified outcomes as set out by the curriculum which are addressed by the specified learning objectives of a lesson plan.

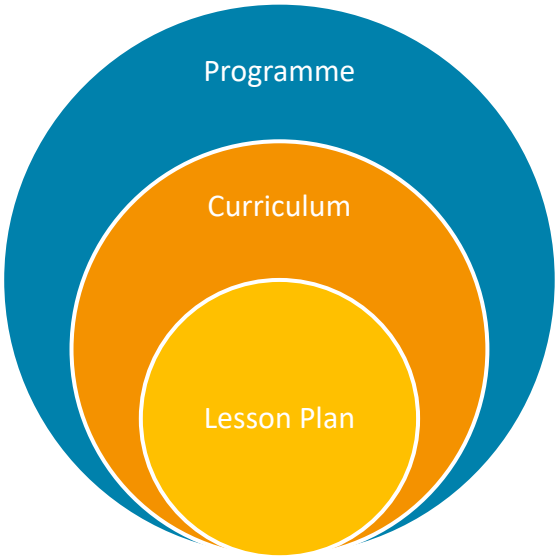


Diagram 1. Representation of the relationship between Programme, Curriculum and lesson plan.

Curriculum Overview

The Curriculum outlines the contents of children's learning (**what** and **how** of children's learning) and contains the content that the programme has to offer. It is focused on the development, delivery and assessment and generally it consists of a series of courses whose completions are required within a set timeframe (primary school teaching time is usually 40 minutes/period). The curriculum contains the purposes, learning outcomes, activities, methods, study material, resources (images, media etc), teaching methods, learning strategies, forms of

assessment and evaluation of delivery. Each curriculum contains course(s) which are formed in either one or a set of lesson plans.

Lesson Plan Overview

A lesson plan is a detailed step-by-step guide for running a particular course/ lesson. It provides the description of the "learning trajectory" (instruction) for a lesson and outlines the objectives (what the students are supposed to learn), how objectives will be reached (method, procedure, activities, materials) and the way of evaluating/ assessing students' performance (measuring how well the goal was reached e.g. test, worksheet, homework etc.).

Methodology

The DigComp Framework

The DigComp was first published in 2013 (two new versions have been released – latest Spring 2017), as a reference framework to support the development of digital competence of individuals in Europe" (Kluzer & Pujol Priego, 2018 pg. 12). **Figure 1** shows the Digital Competence Framework which is structured in 5 competence areas which outline the key components of the digital competence followed by a more detailed description of the 21 competencies in **Table 1**. These are the following:

1. Information and data literacy;
2. Communication and collaboration;
3. Digital content creation;
4. Safety; and
5. Problem solving.

Figure 1. DigComp 5 dimensions (Source © European Union 2018)

Table 1. DigComp Competence Area and reference competencies.

1. Information and data literacy	2. Communication and collaboration	3. Digital content creation	4. Safety	5. Problem solving
1.1 Browsing, searching and filtering data, information and digital content	2.1 Interacting through digital technologies	3.1 Developing digital content	4.1Protecting devices	5.1 Solving technical problems
1.2 Evaluating data, information and digital content	2.2 Sharing through digital technologies	3.2 Integrating and re-elaborating digital content	4.2 Protecting personal data and privacy	5.2 Identifying needs and technological responses
1.3 Managing data, information and digital content	2.3 Engaging in citizenship through digital technologies	3.3 Copyright and licenses	4.3 Protecting health and well-being	5.3 Creatively using digital technologies
	2.4 Collaborating through digital technologies	3.4 Programming	4.4 Protecting the environment	5.4 Identifying digital competence gaps
	2.5 Netiquette			
	2.6 Managing digital identity			

A more detailed description of each of the 21 numbered competencies is illustrated in Figure 2.

Figure 2. Description of DigComp 21 competencies (Source © European Union 2018)

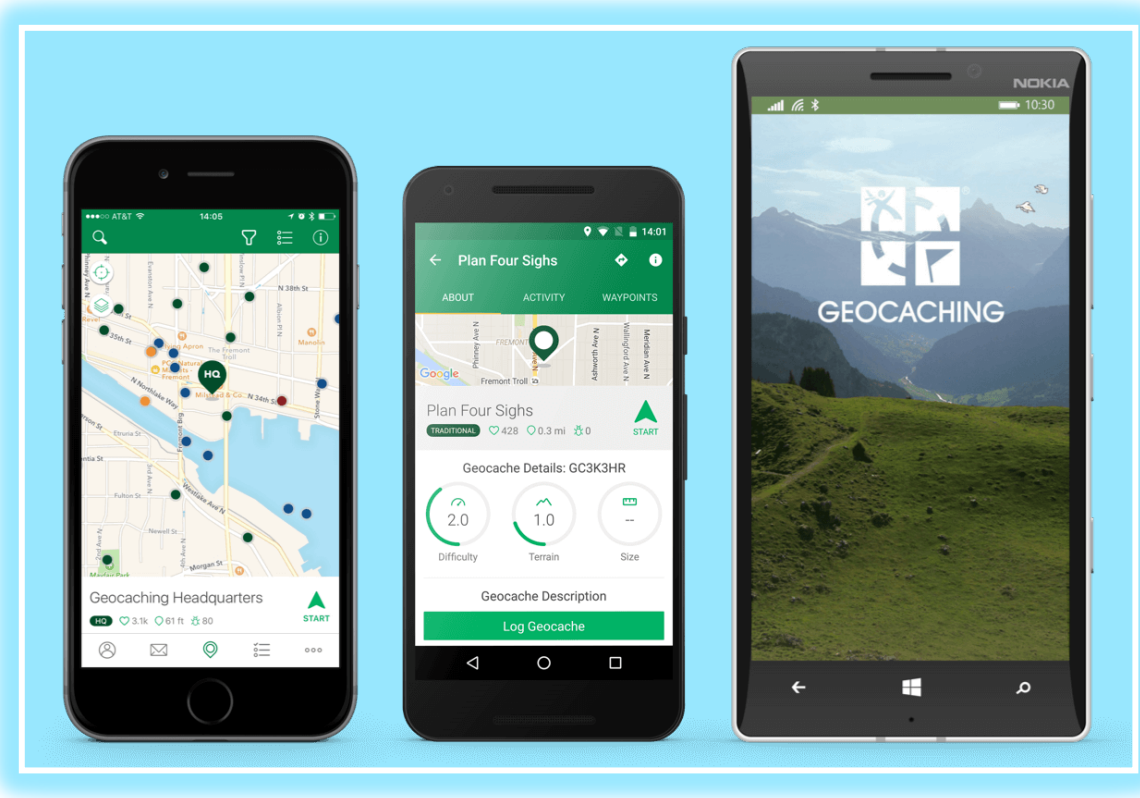
Retrieved from
http://publications.jrc.ec.europa.eu/repository/bitstream/JRC110624/dc_guide_may18.pdf
(pages 16-17)

National Digital Citizenship Curriculum

Cyprus: Digital Citizenship Lesson Plans

Lesson Plan 1

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson 3: History – Mythology (Unit 5 "The Trojan War – The Apple of Discord"), using Geocaching application	
Digital Competence Area: 2. Communication and Collaboration	
Grade Level: Year 3	**Timeframe:** 3x40'
Lesson Overview (Please edit accordingly): As part of the History lesson and, more specifically, Mythology, the teacher suggests that pupils, 26 in total, use two digital games, Geocaching and StoryboardThat, for the enhancement and consolidation of Unit 5 "The Trojan War – The Apple of Discord". For the first game, pupils need to have their mobile phones. As this is a team game, in case one does not have a mobile phone, pupils in the same team can share their device. For the second game, pupils need a computer or a tablet. The lesson takes three teaching periods, carried out in two different days and in one extracurricular activity.	
Objectives: Upon completion of this lesson, pupils will be able to: - enhance their interest in learning through the use of Geocaching application achieve a better understanding of the lesson - develop collaboration and team spirit by enhancing their imagination and participation in interactive and experimental procedures.	
Material/ Resources • Geocaching app (https://www.geocaching.com/play) • Storyboard That (https://www.storyboardthat.com/) • Mobile phones, tablets or computers	
Lesson Activities **Geocaching Game**	



Picture 1

Integration of the Game in the Lesson

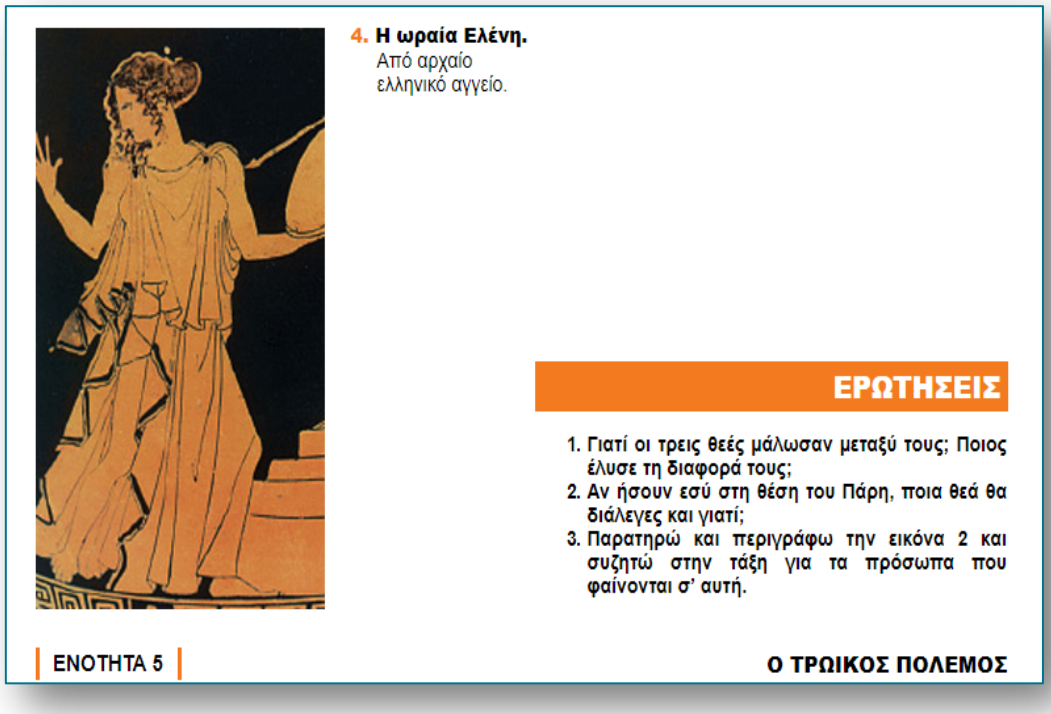
Upon completion of the lesson's theoretical part which lasts 1 teaching period, the hands-on part follows, where pupils are separated into 4 groups of 4 and 2 groups of 5. The teacher introduces the lesson's objectives and the way this game can contribute to their achievement, explaining the game's process and rules in detail.

Extracurricular Activities

Pupils and their teacher go to Alcazar park, which is located next to the school and is one of the biggest and most beautiful parks in Larissa. The teacher has already placed the geocaches in hidden spots in the park.

Picture 2

The geocaches contain questions which are related to the lesson (see the following picture). Each group should answer the question in the hidden notebook every time they find a geocache (2 teaching periods).



4. Η ωραία Ελένη.
Από αρχαίο
ελληνικό αγγείο.

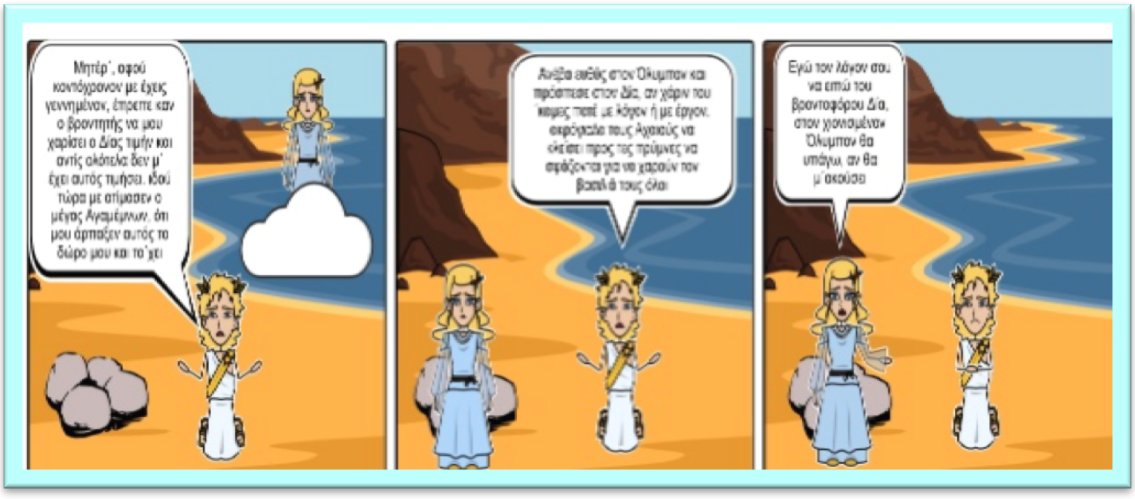
ΕΡΩΤΗΣΕΙΣ

1. Γιατί οι τρεις θεές μάλωσαν μεταξύ τους; Ποιος έλυσε τη διαφορά τους;
2. Αν ήσουν εσύ στη θέση του Πάρη, ποια θεά θα διάλεγες και γιατί;
3. Παρατηρώ και περιγράφω την εικόνα 2 και συζητώ στην τάξη για τα πρόσωπα που φαίνονται σ' αυτή.

ΕΝΟΤΗΤΑ 5 | Ο ΤΡΩΙΚΟΣ ΠΟΛΕΜΟΣ

Picture 3

StoryboardThat



Picture 4

Pupils are asked to create their own comic at home using StoryboardThat. Their comic should contain dialogues and narrations from the Trojan War and, more

specifically, a dialogue between Paris, Hermes and the three goddesses. Then, they will present it in the class.

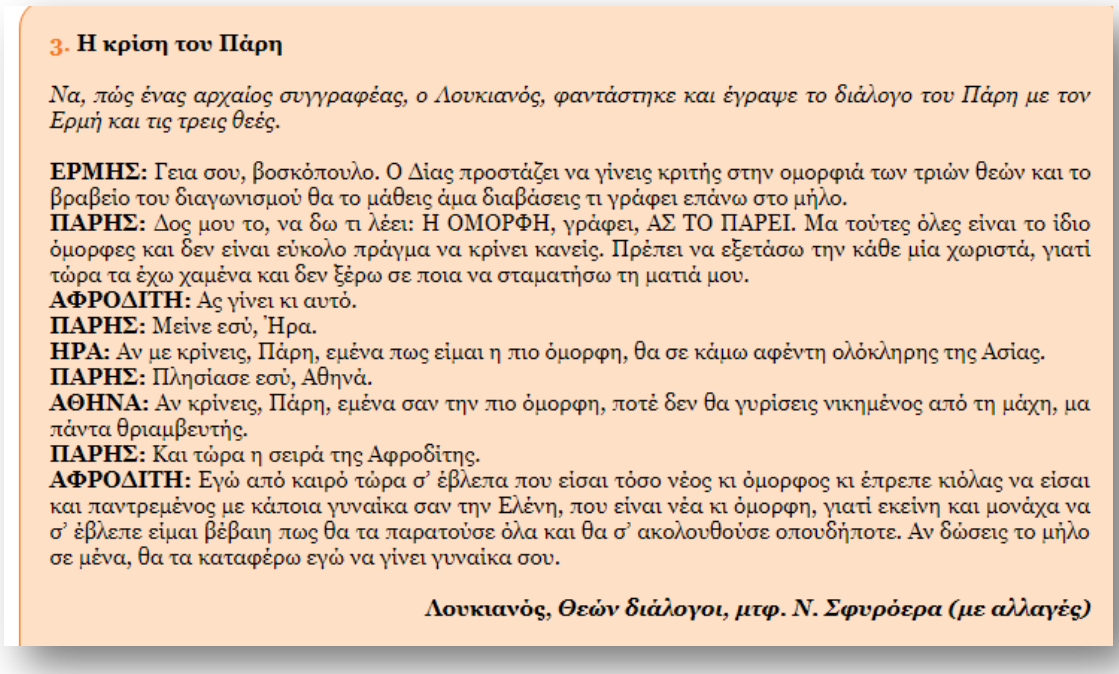
Integration of the Game in the Lesson

This activity is part of homework. The teacher will introduce StoryboardThat beforehand, explaining what it is, how it is used, why the specific software has been chosen and the benefits from its use for the pupils. Then, pupils will be assigned the homework.

Activities

This activity will be carried out after the completion of the 1st game. It is a group activity and groups remain the same as the ones formed in the previous game. Pupils can work in a library or at a classmate's house and will make a brief presentation of their work during the next lesson.

Pupils can create their own narratives through comics and use them in class, based on their lessons, including heroes from mythology. Below are some indicative dialogues, taken from the book:



3. Η κρίση του Πάρη

Να, πώς ένας αρχαίος συγγραφέας, ο Λουκιανός, φαντάστηκε και έγραψε το διάλογο του Πάρη με τον Ερμή και τις τρεις θεές.

ΕΡΜΗΣ: Γεια σου, βοσκόπουλο. Ο Δίας προστάζει να γίνεις κριτής στην ομορφιά των τριών θεών και το βραβείο του διαγωνισμού θα το μάθεις άμα διαβάσεις τι γράφει επάνω στο μήλο.
ΠΑΡΗΣ: Δος μου το, να δω τι λέει: Η ΟΜΟΡΦΗ, γράφει, ΑΣ ΤΟ ΠΑΡΕΙ. Μα τούτες όλες είναι το ίδιο όμορφες και δεν είναι εύκολο πράγμα να κρίνει κανείς. Πρέπει να εξετάσω την κάθε μία χωριστά, γιατί τώρα τα έχω χαμένα και δεν ξέρω σε ποια να σταματήσω τη ματιά μου.
ΑΦΡΟΔΙΤΗ: Ας γίνει κι αυτό.
ΠΑΡΗΣ: Μείνε εσύ, Ήρα.
ΗΡΑ: Αν με κρίνεις, Πάρη, εμένα πως είμαι η πιο όμορφη, θα σε κάμω αφέντη ολόκληρης της Ασίας.
ΠΑΡΗΣ: Πλησίασε εσύ, Αθηνά.
ΑΘΗΝΑ: Αν κρίνεις, Πάρη, εμένα σαν την πιο όμορφη, ποτέ δεν θα γυρίσεις νικημένος από τη μάχη, μα πάντα θριαμβευτής.
ΠΑΡΗΣ: Και τώρα η σειρά της Αφροδίτης.
ΑΦΡΟΔΙΤΗ: Εγώ από καιρό τώρα σ' έβλεπα που είσαι τόσο νέος κι όμορφος κι έπρεπε κιόλας να είσαι και παντρεμένος με κάποια γυναίκα σαν την Ελένη, που είναι νέα κι όμορφη, γιατί εκείνη και μονάχα να σ' έβλεπε είμαι βέβαιη πως θα τα παρατούσε όλα και θα σ' ακολουθούσε οπουδήποτε. Αν δώσεις το μήλο σε μένα, θα τα καταφέρω εγώ να γίνει γυναίκα σου.

Λουκιανός, Θεών διάλογοι, μτφ. Ν. Σφυρόερα (με αλλαγές)

Picture 5

Instructions for Teachers

The choice of this software was based on Constructivism, which suggests that individuals should actively construct their knowledge rather than just absorbing new ideas (Fort, 1991). Pupils are, therefore, encouraged to engage actively in

fun, game-based learning processes. Building on the recent popularity of digital animation games among children of all ages, the teacher introduces the types of visual narrative techniques, enabling pupils to express a concept or their knowledge (Siegle, 2014).
Other Comments

Lesson Plan 2

Course: Developing Digital Competence of Primary School Children in Cyprus

Lesson 4: "Introduction to EasyLogo programming environment"

Digital Competence Area:

- Digital Content Creation (Programming) and
- Problem Solving (Solving technical problems and creatively using digital technologies)

Grade Level: Year 5	**Timeframe:** 80'

Lesson Overview (Please edit accordingly):

- Please add a brief description of the lesson (50-100 words)

Objectives:

Upon completion of this Lesson, pupils will be able to:

- ✓ identify the basic concepts of the EasyLogo visual programming educational environment
- ✓ give simple commands in EasyLogo visual programming environment – composing and executing commands: turtle movement, pencil's up and down, defining the color and line size – turtle trace, output of commands executed, command "assembly" and the concept of programming
- ✓ define actions and scenarios that need to be executed to achieve the desired outputs

Pre-existing Knowledge: Pupils are not expected to have any pre-existing knowledge, as this is the first time they come across EasyLogo programming environment and the basic concepts of programming. However, they need a certain level of digital literacy and the ability to use a computer and a word processor in order to complete the worksheet and self-assessment sheet.

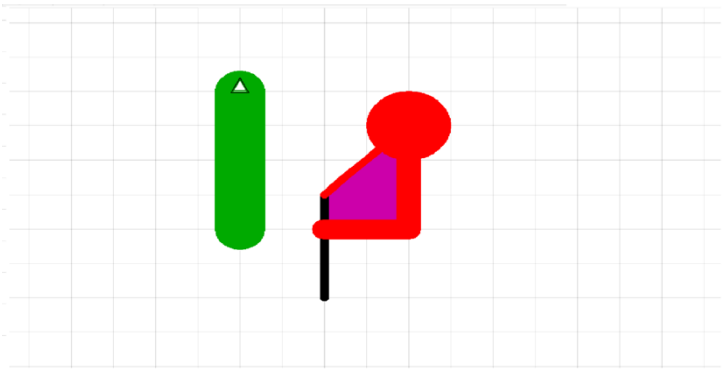
Classroom Arrangement: Pupils work individually or in groups of 2-3, as well as in collaboration with the other groups of pupils.

Material/ Resources

Video projector from the lab, worksheets and self-assessment sheets

Lesson Activities

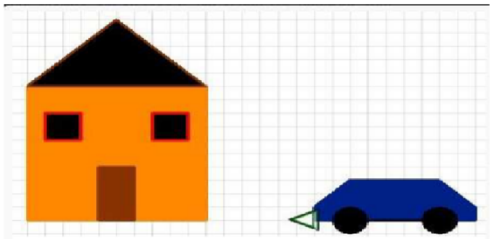
Scenario Description: First, there will be a brief proposal and the basic concepts of programming will be presented on the video projector. Then, the worksheet will be completed, so that the participants can design the drawing shown in picture 1.



Picture1

For exercise 1, pupils will be given a readymade code, but the parameters of most of the programming commands will not be available (see Appendix 1, p.19). The pupils are expected to test out and explore each parameter's feature, make decisions and evaluate the appropriate data of each command, in order to achieve the specific output of the scenario.

Upon completion of this exercise, pupils will work on a more open and complex designing problem, where they will be given the final output of a program and will be asked to design it and provide the commands (see Appendix I, p. 19).



Picture 2

Having become acquainted and familiar with the basic programming commands of the scenario, pupils will have the opportunity to engage and delve into a more complex programming problem, which requires analyzing an image into individual, simpler ones and then composing it stepwise to solve the problem. Upon completion of the worksheet, pupils complete the self-assessment sheet to evaluate whether they have comprehended the scenario's objectives.

Scenario Assessment: Assessment will be formative and summative. During the formative assessment, the teacher will observe and support pupils' activities throughout the learning process, providing feedback and guidance individually or to the whole class, when needed or required. Pupils will also be given a self-assessment sheet to evaluate their progress themselves (see Appendix). Final outputs will be collected by the teacher for assessment and feedback, where considered necessary.

Instructions for Teachers

Teaching and pedagogical approach: The scenario requires research, meaning that the pupils will test out and experiment with pre-set programming commands in order to design the drawings of the worksheet. This learning experience is based on the constructivist teaching method: through research and trials, pupils will build the new knowledge themselves, working on their own and interacting with each other (Agalianos, Noss & Whitty, 2001; Clements, 1986; Glezou & Georgiadou, 2010; Kynigos, 2007). The teacher's role will be to support, facilitate and guide pupils individually or as a group, and encourage their attempts.

Other Comments

APPENDIX I. Pupils' Worksheet

Class: . . . . . .

Pupils' names: . . . . . .

Year: 5

Lesson: Introduction to EasyLogo programming environment

Relevant Concepts: Programming, EasyLogo programming environment, Basic commands

Estimated Duration: 2 teaching periods

Objective: to become familiar with the EasyLogo programming environment

Upon completion of the lessons, you should be able to:

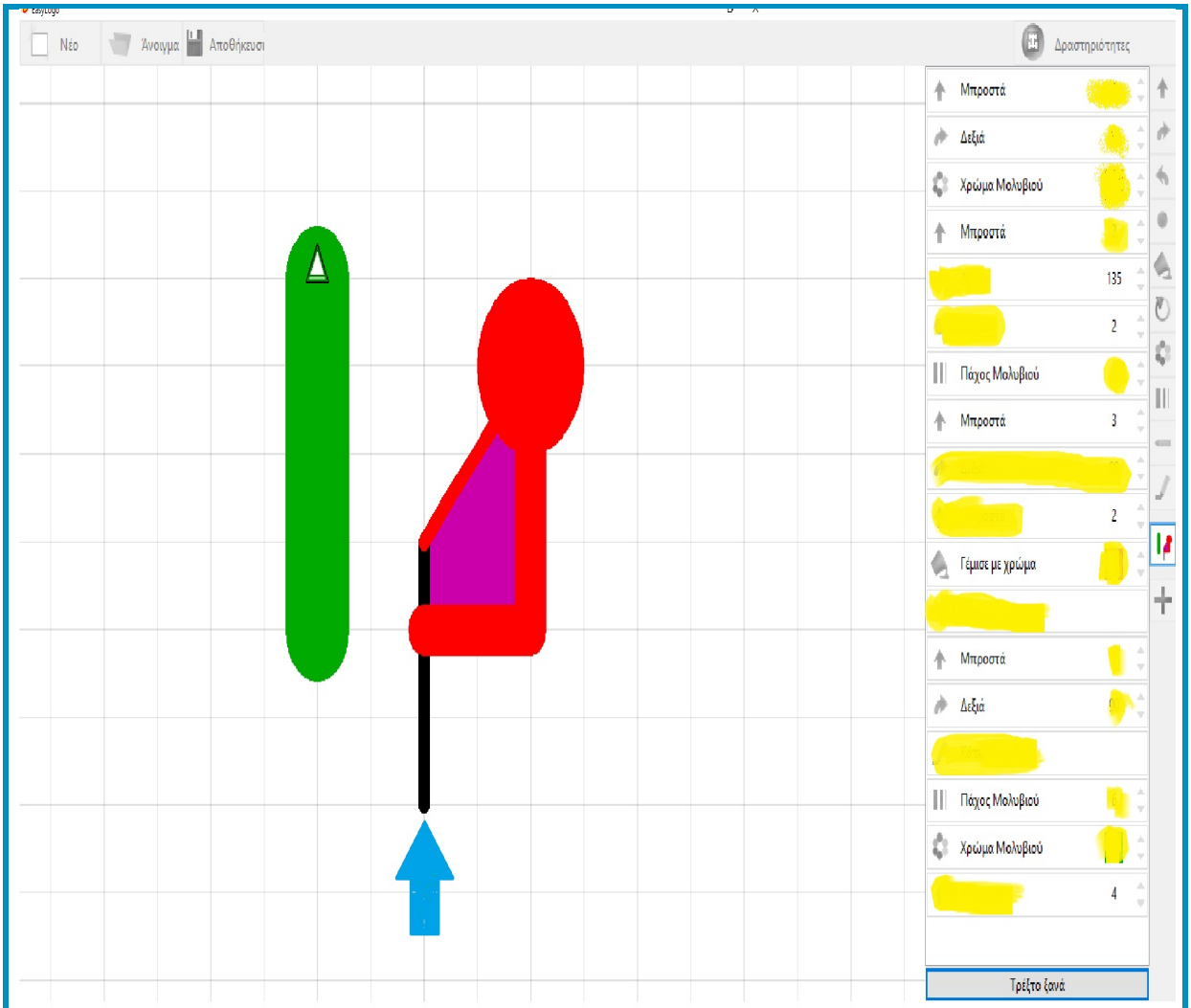
- ✓ identify the basic concepts of the EasyLogo visual programming educational environment
- ✓ give simple commands in EasyLogo visual programming environment – composing and executing commands: turtle movement, pencil's up and down, defining the color and line size – turtle trace, output of commands executed, command "assembly" and the concept of programming
- ✓ define actions and scenarios that need to be carried out so as to to achieve the desired outputs.

1st Teaching Period

There is an icon of the EasyLogo visual programming environment on your computer's desktop. The icon is 

.

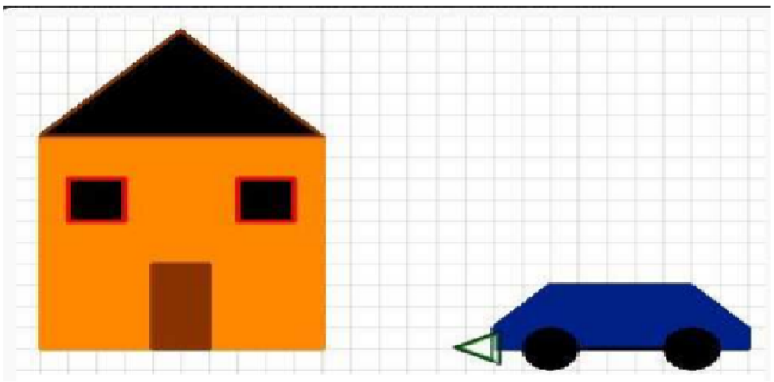
When entering the tool's environment, click on the option **"Free Creation".**
The turtle is at the spot indicated by the blue arrow, following an upward sense of motion. Complete the missing parts in the program (yellow areas provided), to make the turtle design the shape shown in the picture.



Well done! You have just designed and developed your first coding program. When you complete the activity, save the file under the name **"Scenario 1 – Your names"** in your folder.

2nd Teaching Period

Create the appropriate scenario in EasyLogo programming environment by developing the appropriate coding program through which the following desired output will be achieved.

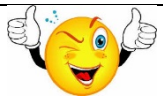
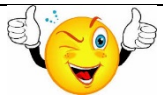
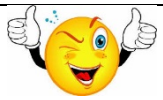
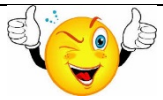
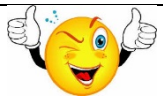


When you complete the activity, save the file under the name **"Activity 1 – Your names"** in your folder.

APPENDIX II. Pupils' Self-Assessment Sheet

Class: …… Date: ……

Pupils' names: ……

We have tried to	We have managed to		
	do very well	**do well**	**We will try again.**
understand the basic concepts of EasyLogo programming environment.			
move the turtle towards different directions, using the motion commands.			
comprehend the importance of the commands "pencil up" and "pencil down".			
color the lines and specific areas by using the corresponding commands.			
define the size of the turtle's trace by choosing the corresponding command.			
understand the output of each command's execution and how these are "assembled".			
understand the concept of programming.			
define our own actions and scenarios that need to be carried out to achieve the desired outputs.			

Lesson Plan 3

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson 5: Programming and Testing	
Digital Competence Area: Digital Content Creation (Programming)	
Grade Level: Year 5	**Timeframe:** 80'

Lesson Overview (Please edit accordingly):

Interdisciplinary Approach: connection to Mathematics

Interdisciplinary approach is essential. Through interdisciplinary teaching, we can point out the relation between Information Technology and other fields. The relation between Information Technology and Mathematics is an example of this approach, as through programming pupils also learn important mathematical concepts, such as coordinates, variables, the use of random numbers, shapes, etc.

Teaching and using the two programs aims at helping pupils understand that the computer is a machine totally controlled by humans, practice on simple problem solving into a programming environment and learn about basic concepts of programming in an easy, fun and effective way.

Objectives:

Upon completion of this lesson, pupils will be able to:

- become familiar with MicroWorlds Pro and Scratch programming environments
- become familiar with basic concepts of programming through simple, medium and more complex examples
- clarify basic concepts of direction and geometric shapes
- create a complete multimedia application as the final output

- search for a solution to a problem in a positive and efficient way, and "decriminalize" the concept of error
- work together to achieve a common objective, developing individual and collective responsibility as members of a group.

Material/ Resources

Computer, video projector, blackboard, MicroWorlds Pro software, Scratch software, worksheets

Lesson Activities

Activity 1

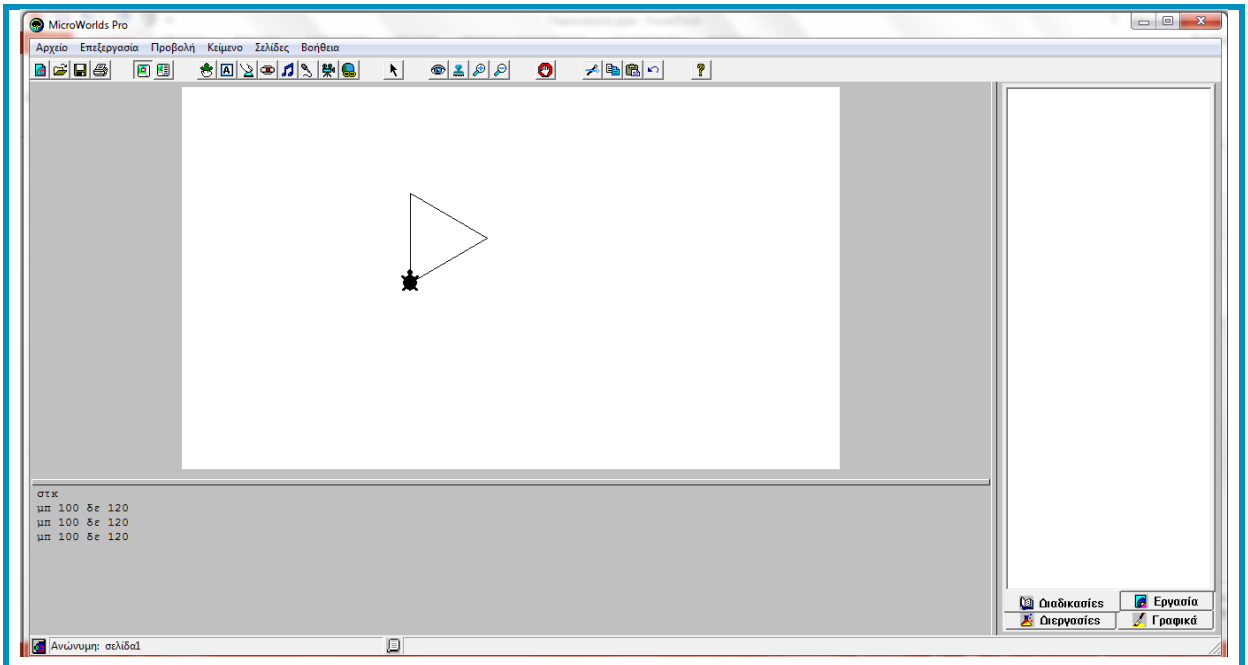
For the first activity, pupils were asked to create a square and a triangle (exercises 1 and 2 of the worksheet) by giving the corresponding commands to the turtle on MicroWorlds Pro (see Appendix).

Activity 2

For the second activity, pupils were asked to draw different polygons using different colors and line sizes by giving the corresponding commands to the kitten on Scratch. The commands were given in pictures and pupils had to choose and put together the corresponding command icons in order to achieve the output (see Appendix).

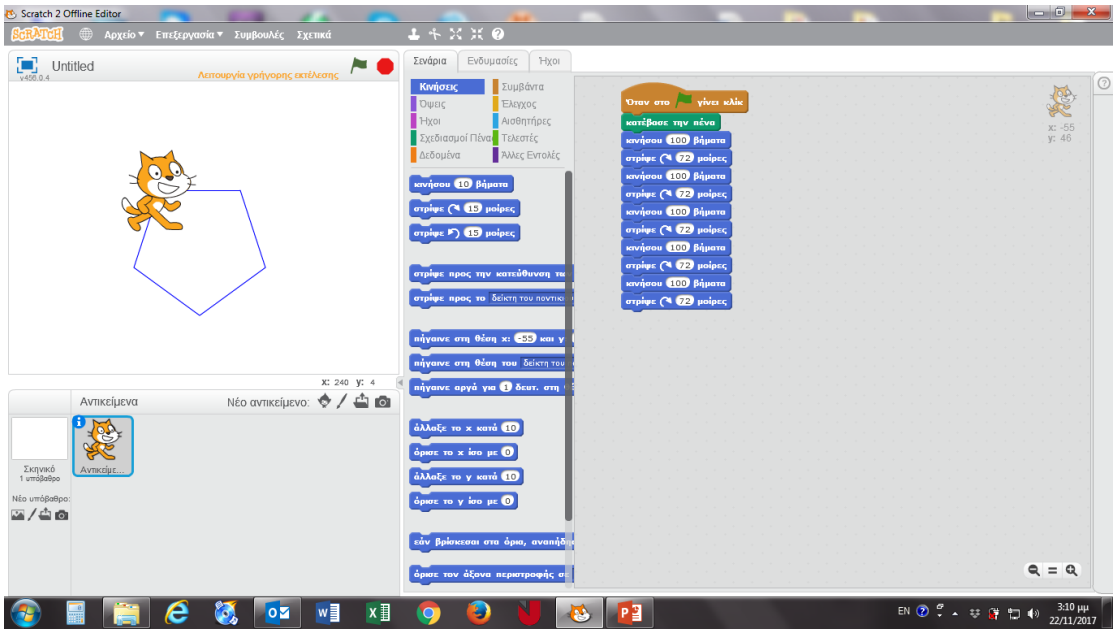
Assessment

Through these programs, we can easily create shapes such as triangles, squares, rectangles or polygons. The shapes are created through simple commands given to the turtle or the kitten, which guide their movements.
It is important for the turtle or kitten to turn to the right angle (e.g. 90 degrees for the square) and repeat their movements accordingly (e.g. 4 times for the 4 sides of the square) in order to create the correct shape. We need to consider every command we give carefully, depending on the shape we want to draw every time.
The activities on the worksheets were based on the idea that pupils will start by drawing simple shapes in order to become familiar with the use of commands and then move on with more complicated shapes.

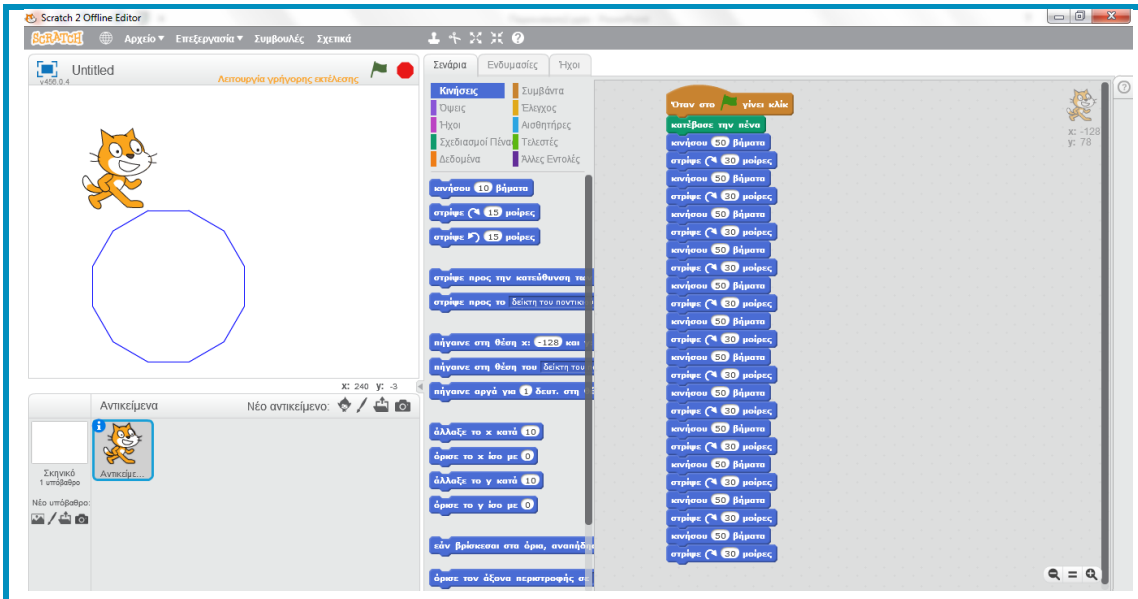


Picture 1: Drawing a triangle on MicroWorlds Pro

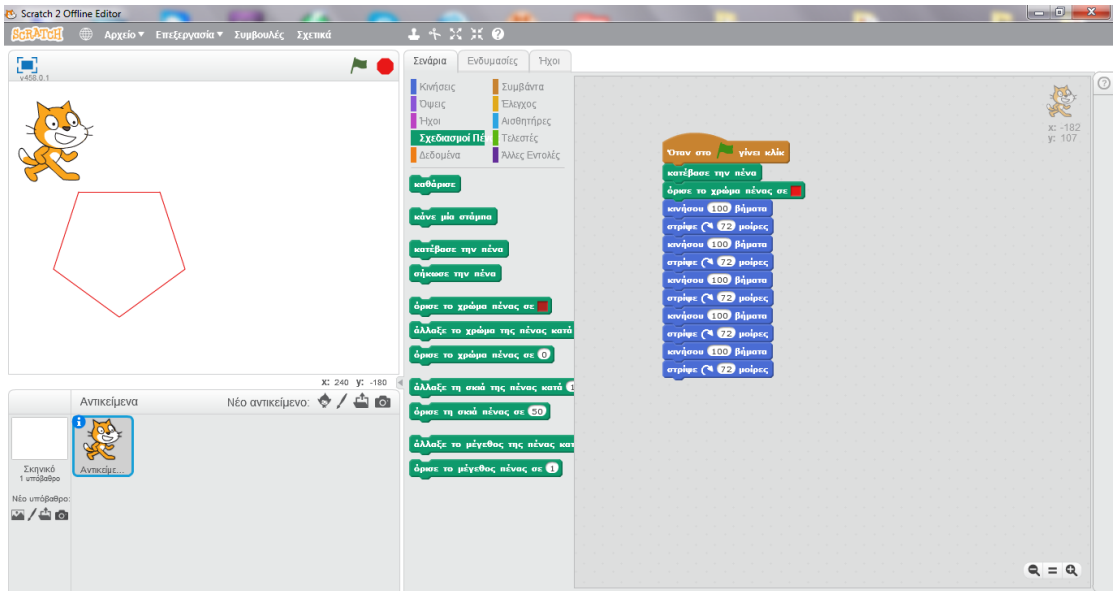
The output of the second activity is shown in the pictures below (see pictures 2,3 and 4).



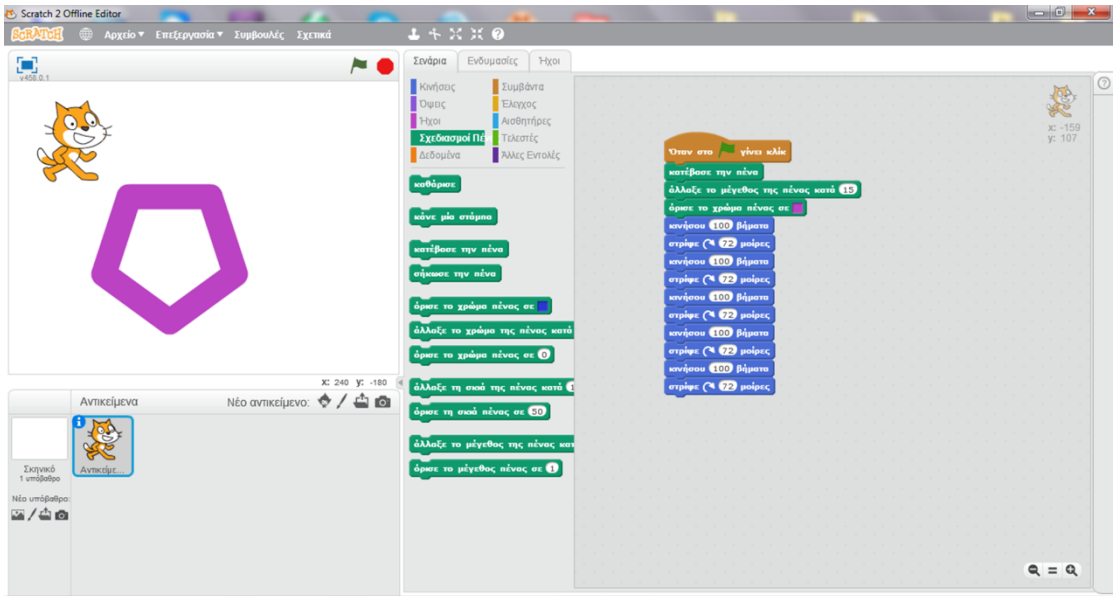
Picture 2: Drawing a polygon on Scratch



Picture 3: Drawing a polygon on Scratch



Picture 4: Drawing a polygon with a different color line on Scratch



Instructions for Teachers

- **Classroom Arrangement:** one computer for every pupil pair
- **Classroom:** the lesson was held in the computer lab. Pupils worked in pairs and helped each other during the different activities.
- **Pupils' Pre-existing Knowledge:** pupils need to have basic computer skills. Other skills are gradually developed while using the programming software.
- **Requirement:** the educational softwares MicroWorlds Pro and Scratch need to be installed on the computers of the lab.

It is worth noting that the teacher needs to carry out a formative assessment throughout the whole teaching approach, which will constitute a feedback for him/her as well.

Lesson Plan 4

Course: Developing Digital Competence of Primary School Children in Cyprus
Lesson 5: English as a Foreign Language (EFL) through Virtual Reality
Digital Competence Area: - Information and Data literacy (Evaluating data, Information and Digital Content and Interacting through Digital Technologies)

Grade Level: B class senior (CEFR A1-A2 level)	**Timeframe: 4x40'**

Lesson Overview (Please edit accordingly):

This lesson plan was designed to broaden the dynamic implementation of Virtual Reality in foreign language teaching through Google Cardboard and Google Expeditions. These media were used as supportive tools for teaching English as a foreign language to A1 and pre-A2 pupils, according to CEFR (Common European Framework of Reference for Languages).

Objectives:

Upon the completion of this lesson, pupils will be able to:

- know important landmarks of London
- develop tourism related vocabulary
- become familiar with the use of Virtual Reality in the learning process.

Vocabulary:

Tower of London, Big Ben, Buckingham Palace, British Museum, London Underground, River Thames, London Eye, Palace of Westminster, popular sights, public transport, black cabs, telephone booths, fish and chips.

Material/ Resources

- school textbook, Chapter 6 – Unit D, page 72
- internal Wi-Fi (connection to the internet is not required)
- projector and computer with the digital version of the book "Incredible five" (I5) 2 of Express Publishing
- loudspeakers
- an A4 sheet per pupil and a tablet for the teacher
- every pupil has a computer or a tablet at his/her working area. 7 computers and 7 tablets in total are sufficient to cover the needs of all groups.
- HMD Google Cardboard and mobile phone
- Google Expeditions application
- 1 HMD and 1 mobile phone per pupil. 7 HMD in total
- PowerPoint

Lesson Activities

Introduction – Activity 1
Pupils are encouraged to talk about whether they have ever visited London, having their books closed. They are asked to mention landmarks they already know (3 minutes).

Sound Clip – Activity 2
Pupils are asked to cover the pictures of their book with the A4 sheet provided. Then, the teacher plays the sound clip on the computer (3-4 minutes)

Text Reading – Activity 3
Pupils read out the text once. The teacher corrects mispronunciations (4-5 minutes).

Material Projection– Activity 4:
Pupils are asked to stand up and take action. Some static pictures are presented on the interactive whiteboard through the projector. The pictures described in the text are presented one by one to the pupils, who can ask questions on what they see. These questions may be answered either by the teacher or by classmates. Some landmarks appear in more than one pictures (30 minutes).

Then, every pupil is given an HMD which has a mobile phone with Google Expeditions activated and is asked to put it on his/her head. The teacher guides the pupils to the points of interest (landmarks) through the tablet. More specifically: Mission 1) Historic Places: Brief History of the UK, scenes of the Palace of Westminster, Robert Smirke: The British Museum, Norman Foster: Queen Elisabeth. Mission 2) 'Sites along the Thames River': scenes of the Tower Bridge, HMS Belfast, St. Paul's Cathedral, the Big Ben and the Houses of Parliament. Mission 3) Behind the Scenes of Tower Bridge: scenes of the Tower Bridge high level balcony, Modern control cabin. During the scenes, pupils are allowed to tour around by themselves, while the teacher focuses on the points of interest mentioned in the text, using the pointing feature. The teacher also provides some important information about the scene presented, while pupils can ask or answer their classmates' questions (30 minutes).

Test – Activity 5
Every pupil fills in the assessment test on the electronic device found at his/her working area (10 minutes).

Instructions for Teachers

Classroom
Computer lab

Classroom Arrangement
As the pupils are already familiar with the use of HMD (already used twice for two teaching periods in previous lessons), they take their usual seats before the lesson starts.

The pupils sit in desks placed in a "U" shape. There are two pupils, a tablet and a computer in every working station-desk.

Pupils are told that they are allowed to stand up and move around.

The missions are already downloaded on the teacher's laptop in a guide mode: 1) Historic Places: Brief History of the UK, 2) Sites along the Thames River 3) Behind the scenes of Tower Bridge.

Smartphones are connected to Wi-Fi and placed on the Cardboards. The Google Expeditions is activated on explorer mode.

Other Comments

Lesson Plan 5

Course: Developing Digital Competence of Primary School Children in Cyprus
Lesson 7: Vacations – Weather and Clothing – Myths and Legends | Gamification through Kahoot! Response System (English as a foreign language - EFL)
Digital Competence Area: 2. Communication and Collaboration 2.1 Interacting through digital technologies 2.2 Collaborating through digital technologies 3.Content creation 3.1 Developing digital content 3.2 Integrating and re-elaborating digital content

Grade Level: Year 5, A class senior (level A1 according to CEFR)	**Timeframe: 6x40'**

Lesson Overview (Please edit accordingly):
This lesson was designed to emphasize on the Kahoot's constructivist approach in an EFL class. More specifically, the use of Kahoot! Response System is tested in a class where English is taught as a foreign language and is used by the pupils to build their own quizzes!

Objectives:

Upon completion of this lesson, pupils will be able to:

- develop tourism, traveling, weather and clothing related vocabulary
- comprehend and revise all the tenses taught in the current year.
- develop their reading and comprehension skills on myths and legends related to weather.
- interact and create multimedia applications.

Material/ Resources

Internal Wi-Fi (internet connection is required). Projector and computer with the digital version of the book "Incredible five" (I5) 1 of Express Publishing. Loudspeakers. Language textbooks. Every pupils is given a computer at their working area. 12 computers in total are needed to cover the needs of all groups.

Pupils use their email account which was created by the teacher and is available for educational purposes. They create personal user passwords to enter the Kahoot! Platform.

Creation of Kahoot! Quizzes by Pupils

During the 10 teaching periods, each pupil creates 3 different Kahoot! quizzes, one for each skill. They are free to use the timeframe given as they wish to create their quizzes based on the same knowledge gained and tested in the first assessment tests (vocabulary, grammar, comprehension passages of the chapter).

Being familiar with the Kahoot! Response System already used several times in previous lessons, the pupils take their usual seats.

The pupils sit in desks placed in a "U" shape. There is one pupil, a computer and his/her language textbook in every working station-desk. Pupils are told that they can work together and help each other, if they wish.

Pupils create Kahoots by themselves enabling them to delve deeper into their pre-existing knowledge, at their own pace. For the purposes of the quiz, they revises the chapter's vocabulary in their language textbooks, understand its meaning and create sentences on Kahoot! that require filling in the gaps or connecting the vocabulary with the pictures. Similarly, they make sentences using the grammar correctly and, as for the reading, they compose questions for the comprehension of the text taught, after having read it and searched for further information on the myths and legends presented during the lesson.

The teacher has the Kahoot! application installed on his/her computer and shares the pupils' Kahoot! Quizzes, encouraging active participation and fun learning.
Instructions for Teachers A correct planning and familiarization of the teachers and pupils with the use of Kahoot! Response System should come first.
Other Comments N/A

Lesson Plan 6

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson 1: Embodied Learning with technology in the elementary classroom | Kinems games in the language lesson	
Digital Competence Area:	
Grade Level: Second graders	**Timeframe:** 13 intervention sessions of 45 min

Lesson Overview (Please edit accordingly):

This lesson plan describes how kinems games (motion-based games) were used as an adequate and applicable tool in the teaching setting, in a way that allows teachers to implement aspects of embodied learning in a real classroom. Two particular Kinems games were used to investigate how the embodied approach facilitates the improvement of memory abilities and language skills of the pupils. These were the "Unboxit" game and the "Lexis" game (see the games' description in the lesson activities). The lesson is prepared and organized using a class-wide intervention session, with the aid of the two games (the "Unboxit" game for some activities and the "Lexis" game for other activities). The settings were configured to increase the level of complexity/difficulty steadily. Finally, the lesson plan includes both individual and collaborative activities, based on the idea of embodied learning (physical interaction and movement).

Objectives:

Upon completion of this Lesson, pupils will be able to:

- acquire new vocabulary based on their classroom curriculum
- learn abstract words
- engage in collaborative learning activities
- work individually to achieve a learning goal
- list the appropriate words of different categories (traveling, emotions, etc.)
- use their hands and body movements to learn

Material/ Resources

Please number all the instructional tools/resources/material you will need for your lesson, using a short title and source for copyright issues:

- the commercial suite of Kinect-based educational games, Kinems (www.kinems.com)

- the material was linked to the games played by the pupils in each session in the classroom according to the curriculum of the class.

Lesson Activities

1. Unboxit Game (6 sessions of 45 minutes)

The "Unboxit" activity aims to improve pupils' visual-spatial working memory and attention. Every pupil must find the pairs of objects that are hidden in boxes, using his/her hand to select the appropriate ones.

Pupils will play the games, one by one, while other pupils do related worksheets and activities based on the lesson plan. In practice, pupils are organized into a queue, and each one is waiting for his/her turn to play the game while working on another activity. It is important to note that the teaching material is designed in such a way to serve the delivery of specific learning subject/ objectives.

The games in all the activities are fully integrated into the lesson in such a way that all pupils could benefit from them and enrich their knowledge on this particular subject. For example, for the chapter related to nutrition, the teacher can choose the corresponding category in "Unboxit" and "Lexis" games to give pupils the opportunity to consolidate what they have learned, but also enrich their knowledge on this specific subject.

2. Lexis Game (6 sessions of 45 minutes)

"Lexis" game is a missing letter game designed to allow children to practice their skills on spelling of words of different lengths. At an egg-packing plant, the pupil needs to create "egg-words," that is, words that consist of letters written on eggs; the pupil has to grab the correct missing egg-letter from a set of given egg-letters, place it carefully and appropriately in order to fill it in, so that the "egg-word" is packed. This activity follows the same procedure as the first activity.

3. Assessment Activity – General Learning Analytics (in all the sessions)

The learning analytics are automatically recorded in the suite of games and are used to examine in depth the progress of each pupil in the two games ("Unboxit" and "Lexis"). Analytics monitor the pupils' growth across sessions based on learning skills, making vivid the details of interventions delivered and the moment-by-moment impact on pupils' improvement. This lesson plan - activity focuses on general analytic details such as the time spent on using the game, the speed of completing the session and the number of errors in each session.

Instructions for Teachers

Before carrying out such embodied learning activities, the teachers need to be trained on using the motion-based activities in the classroom. Teachers need to be prepared in a way to be comfortable with the technology and need to be trained on using these games in classroom for specific learning purposes (i.e., memory and language skills). This suite of games is very easy to use in the classroom but requires internet, computer and an interactive board or projector. The Kinems games allow the teacher to change the settings easily (e.g., duration, level of difficulty, number and categories of words) and save the session to be ready for use into the classroom. As for the assessment, learning analytics recorded in the platform can be used as an assessment tool to see and evaluate the improvement of each pupils.

Other Comments

Kosmas, P., Ioannou, A., & Zaphiris, P. (2019). Implementing embodied learning in the classroom: effects on children's memory and language skills. *Educational Media International, 56*(1), 59-74.

Lesson Plan 7

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson 1: Managing Data, Information and Digital Content (total of 5 lessons)	
Digital Competence Area: Information and Data Literacy/ **Communication and Collaboration**	
Grade Level: 2	**Timeframe: 120 minutes**

Lesson Overview (Please edit accordingly):
Through QR codes, pupils explore various electronic resources (texts and photos) related to the city they live in, and classify them according to their historical period. Then, they are asked to move around the city center through the photos and a digital map, and refer to the historical buildings they visit. Finally, pupils create a brief presentation in groups with pictures and titles related to the life in the city, using google slide.

Objectives:

Upon completion of the lesson, pupils will be able to:

- scan codes, study and evaluate different resources
- divide the resources into subcategories
- place themselves in a digital map and move around
- make brief presentations based on the material from the resources.

Material/ Resources

- i-pads with Windows (7 or more)
- a folder with QR resources
- projector

Lesson Activities
Approach/ teaching method: project-based learning

1. **Information Search through QR Codes (40 minutes)**
   This activity is carried out in the classroom. With the help of their teacher, pupils define their search area on the interactive board, by creating a mind map for their city. Then, they are divided into pairs and given four codes per pair. After activating the QR program, they scan the codes and find different resources which present the history of the city in old times and in the last decade. Two resources have various numbered and mixed photos from Limassol city. After reading the texts, pupils are asked to write down the most important phrases or key words relating to the two historical periods during which the city was created and developed (60 years ago/ during the last 20 years) and find similarities and differences. Then, they divide the numbered photos into the two historical periods, looking at them closely as individual contexts (color, streets, objects). This lesson is the

starting point for the creation of a project which aims at helping pupils get to know the past and present of their city and country. Pupils look for information online and in books and write everything they observe and read on special worksheets.

2. Access to a Virtual Map (20 minutes)

This activity is carried out in the classroom. Pupils are divided into groups and walk around the city, choosing a route from the printed map (Limassol old city center). First, they use Google Earth to choose the route and then they follow it. One pupil asks the other to move from one point of the city to the other, asking about the route he/she will follow and the buildings he/she will pass by (Problem solving).

3. Creating a Brief Presentation on Google Slide (60 minutes)

This activity is carried out in the computer lab. Pupils, divided in pairs, choose photos of the city from the resources used before. They choose to present one or more landmarks of historical significance, cultural events of the city, its past and present history, the zoo, etc. The pre-existing digital knowledge required is the pictures copy/paste and the folder creation.

Instructions for Teachers

As a teacher, you need to create, find or choose very good sources of information which will be either evaluated by the pupils or given to them as the main sources to work with.

Other Comments:

Resource: Printed worksheets on Limassol, printed map, virtual map

Lesson Plan 8

Course: Developing Digital Competence of Primary School Children in Cyprus
Lesson 2: Creation of an electronic poster as part of my city's travel guide. First topic: Zoo (using Glogster software)
Digital Competence Area: Interacting through digital technologies Information and Data Literacy/ Safety
Grade Level: 2 | **Timeframe: 120 minutes**
Lesson Overview (Please edit accordingly): Pupils create a digital travel guide of their city, including video, presentations, images, electronic resources, etc.
Objectives: Upon completion of this lesson, pupils will be able to: • identify the main information a travel guide needs to include (most important landmarks, useful contact numbers, images, restaurants, hotels, transportation, events) • organize their poster based on the most important landmarks they want to mention and place their photos in order • create a video that presents the main points of interest of the city based on a topic
Material/ Resources • pupils' Greek language textbook • computers with Windows 7 or more • projector **Electronic Tools/ Media:** Digital application (Glogster) for making interactive posters, Animaker for making an animation video, computer, images with sound – landmarks using ChatterPix Kids tool.
Lesson Activities Activities are planned in the classroom. Approach/ teaching method: project-based learning Group size: in groups of four or five pupils. **1. Unit Starting Point (20 minutes)** First, the class had already studied the travel guide genre and had investigated its content and features. The class studies printed travel guides and discuss the following question: "Do you or your parents use a travel guide while traveling?" In past discussions, most pupils had mentioned that

every time they travel, their parents they search for information online, either on the computer or on their mobile phone. Thus, there is a need for creating a practical travel guide that will provide the visitor with all the necessary information.

2. Research (40 minutes)

Pupils are divided into groups and each group works on an aspect of the travel guide, doing online research.

Group 1 looks for information on Limassol's old and recent history. Group 2 looks for information on the main events in the city, focusing on main details and useful contact numbers.
Group 3 lists the most important landmarks of Limassol.
Group 4 looks for information on leisure activities in Limassol.
Group 5 looks for information on the history of the Limassol zoo.

While doing their research, pupils come across numerous different resources on Google. The search is paused at times and the class discusses why a specific resource found is appropriate or not, then pupils evaluate it and put all the information and photos they will use in a folder.

3. Poster Creation (60 minutes)

Pupils decide the topic of their poster. They all agree to create a poster for Limassol Zoo, as they have worked extensively on the topic of animal caging in a previous unit and discussed whether animals should be locked in for people's entertainment. Through various critical texts, videos and stories, they concluded that keeping animals in zoos is acceptable only when there is an absolute respect on the animals' needs. Pupils choose the picture they want to have as a background on their poster through Glogster software. Then, they choose pictures related to the history of the zoo and decide what information they will present with each picture. After numbering the pictures, they create a narrative audio for each picture. Then, they add electronic sources and more photos on the poster.

Instructions for Teachers
Pupils need to know what an electronic poster is beforehand in order to be able to create it easily.

Other Comments
See Appendix for resources:
http://school.glogster.com/
Pictures and text on the zoo

Extension of the Lesson in an informal learning environment: use of technology and environmental education
Lesson's title: Interdisciplinary approach
Thematic Unit: Virtual tour at Limassol Zoo
Technological Tools/ Media: digital application (Tour Creator, https://vr.google.com/tourcreator/) for creating a virtual tour, computer, camera, 360° images from the zoo, Google's virtual reality headset.
Lesson Development: During their visit at the zoo, pupils take 360° photos and then create a digital application of virtual tour at the zoo.

Lesson Plan 9

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson 3: Writing digital stories through pictures of their hometown	
Digital Competence Area: Interacting through digital technologies	
Grade Level: 2	**Timeframe: 120 minutes**

Lesson Overview (Please edit accordingly):
Through technology and, more specifically, StoryJumper pupils create their own virtual stories, using photos and texts from their research during the previous lesson (events and places in Limassol).

Objectives:
Upon completion of the lesson, pupils will be able to:

- choose photos for their own project
- put the photos of their story in order using time conjunctions (first, after that, then, finally, etc.), through StoryJumper
- write down and record their story based on their pictures order

Material/ Resources

- pupils' Greek language textbooks
- photos of historical landmarks in Limassol, e.g. Limassol Castle
- computers with Windows 7 or more.
- projector

Lesson Activities
Activities are planned in the classroom.
Approach/ teaching method: project-based learning
Group size: in groups of four or five pupils.

1. **Text Composition (20 minutes):** pupils compose their final text in their groups using various resources (kids google etc.)

2. **Selection of Pictures to Combine with the Text (20 minutes)**
   First, all pupils choose which photos they will use and which of them are more suitable to support their text. Then, they put them in order and write down a story with plot (beginning, middle and end) in their notebook, using relevant language and time conjunctions.

<u>More specifically:</u>
After writing down their texts (1 landmark per group), pupils will type them in word and save them in the folder created by the teacher on the digital platform of the classroom/ or on Drive, under the name of the corresponding landmark.

Then, the teacher will connect the pupils' computers to the StoryJumper digital narrative tool from her personal account. Pupils will find the travel guide "One day in Limassol city" and work in groups of X children. Each group will transform their text into electronic form on the pages that the teacher will have already assigned. For example, group A will work on pages 2-4, group B will work on pages 5-7, etc. In order to create the digital travel guide, pupils will need to open a Word file in the folder "Digital travel guide" found on the desktop. This folder contains two other folders named "Texts" and "Pictures". Pupils find their own file, open it and transfer the text from Word to the pages of the digital travel guide by using the Copy/ Paste option – Ctrl+C/ Ctrl+V). They will follow the same procedure to import the pictures.

3. **Importing Pictures to StoryJumper (60 minutes)**
   Pupils import the pictures to the software and put them in order based on the story they have created.

4. **Recording of the Story on StoryJumper (20 minutes)/ Writing of the story**
   After importing the pictures to StoryJumper, pupils write down their story next to each photo. In this way, art, cultural heritage and technology are combined for the purposes of creating an informative text, a travel guide with extracts.

Instructions for Teachers

Pupils need to choose the photos they will use beforehand in order to save time and allow pupils to create their texts more quickly.

Other Comments

https://www.storyjumper.com

Monuments and Landmarks:

1. Limassol Medieval Castle
   https://www.tripadvisor.com.gr/Attraction_Review-g190382-d527729-Reviews-Limassol_Castle-Limassol_Limassol_District.html
2. Kourion
   https://www.tripadvisor.com.gr/Attraction_Review-g190382-d527735-Reviews-Kourion-Limassol_Limassol_District.html
3. Zoo
   https://www.tripadvisor.com.gr/Attraction_Review-g190382-d2170204-Reviews-Limassol_Zoo-Limassol_Limassol_District.html

Lesson Plan 10

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson 4: Telling/Writing digital stories through famous art paintings and personal photos of the pupils	
Digital Competence Area: Interacting through digital technologies/ Digital Content Creation	
Grade Level: 2	**Timeframe: 120 minutes**

Lesson Overview (Please edit accordingly): Extending the previous lesson

Through the use of technology and, more specifically, StoryJumper, pupils create their own virtual stories using photos and art paintings of the world's cultural heritage as different types of virtual text and as teaching tools to compose postmodern creative narratives.

Objectives:

Upon completion of the lesson, pupils will be able to:

- choose the main characters of their story
- put the story pictures in order by using time conjunctions (first, after that, then, finally, etc.) through StoryJumper
- write down and record their story based on the way they have put pictures in order

Material/ Resources

- pupils' Greek language textbooks
- printed and electronic art paintings
- personal photos of the pupils or photos of historical landmarks at Limassol, e.g. Limassol Castle
- i-pads with Windows 7 or more
- computers with Windows 7 or more
- projector

Lesson Activities

Activities are planned in the classroom.
Approach/ teaching method: project-based learning
Group size: in groups of four or five pupils

1. **Writing of a Story through a Selection of Paintings (60 minutes)**
   First, pupils choose from a variety of famous art paintings and pictures of Limassol's landmarks. Then, they put them in order and write down a story with plot (beginning, middle, end) in their notebooks using relevant language and time conjunctions. When choosing art paintings, it is important to select portrait paintings as well, so as to include both characters and landscapes in their story.

2. **Importing Pictures to StoryJumber (20 minutes)**

Pupils import the pictures to the software and put them in order based on the story they have created.

3. Recording of the Story on StoryJumper (20 minutes)/ Writing of the story
After importing the pictures to StoryJumper, pupils write down their story next to each painting or photo. In this way, art, cultural heritage and technology are combined for the purposes of creating a narrative with plot (beginning, middle, end).

4. Presentation of the Stories (20 minutes):
Pupils present their work in class.

Instructions for Teachers
Pupils need to choose the art painting and photos they will use beforehand and print them. In this way, time is saved and pupils can create their stories more quickly. They also need to become familiar with the main characteristics of narrative stories (beginning, middle, end) and be able to use the time conjunctions.

Lesson Plan 11

Course: Developing Digital Competence of Primary School Children in Cyprus	
Lesson5: Using Augmented Reality to Explore Travelling	
Digital Competence Area: Communication and Collaboration	
Grade Level: 2	**Timeframe: 80 minutes**

Lesson Overview (Please edit accordingly):
This lesson plan is designed to teach pupils how travelling can open a whole new world of knowledge. Through Augmented Reality, pupils will explore and travel to different countries.

Objectives:
Upon completion of this lesson, pupils will be able to:

- get to know different countries and their main features
- interact and move according to specific instructions
- share information through digital devices
- collaborate through Augmented Reality

Material/ Resources

- iPad
- mobile devices (a tablet or mobile phone / Android or Apple)
- projector
- pupils' textbooks
- clever Books Augmented Reality powered map of the world poster
- Expeditions/Cardboard certified software content: free mobile application. For Android download HERE and for Apple devices HERE.
- no internet connection is required once the application is installed. No technical skills are needed to use the software.

Lesson Activities
Activities are planned in the classroom in groups of two.
Approach/ teaching method: project-based learning closing/ parent and pupil collaboration

1. **Discussion on Traveling/ Brainstorming (20 minutes)**
   First, the concept of travelling is discussed in class. Why do we travel? (migration purposes, studies, war, forcing, entertainment, work). Pupils choose which type of traveling they want to do. They choose traveling for entertainment and each one selects the country they want to travel to with their parent based an online map on their iPad and a quick tour in different countries.

2. Headset Trying Out (5 minutes)

Try the system out before continuing with the next activities. Launch the "Travelling" app. Click on continent and focus the camera of your mobile device on the country you have chosen. On the right side of your screen you can see different symbols which will help you experience different options of Augmented Reality. Click on each of them to check them out. This will help you switch between the modes during the next activities.

3. Tour (40 minutes)

Pupils, together with their parents, start their own tour around the country they have chosen. During every part of the tour, they write down the main points of their visit on a worksheet.

4. Presentation of Projects (15 minutes)

Instructions for Teachers

The mobile application is used to experience Augmented Reality. If pupils are not familiar with the term "Augmented Reality", the teacher should explain before the Lesson Plan activities start.

Augmented Reality (AR) is like Virtual Reality (VR) that you can see through the screen of your mobile device. In our case the "magic" map is powered by special pixel combination and this helps our mobile application "CleverBooks Geography" to recognize the pixels set and produce virtual objects right through your mobile screen. The magic happens when you point with the camera of your mobile device at specific picture on the map in front of you.

National Digital Citizenship Curriculum

Ireland: Digital Citizenship Lesson Plans

Outline

Course details:

Name of Partner: FIP		
Course: Developing Digital Competence of Primary School Children in Ireland	Grade/ Year: Grades 3 to 6 Learners should be 8 to 12 years old.	Timeframe: 7x40min lessons, 1x60min activity

Content Outline

This national curriculum has been developed by FIP to support primary school teachers in our region to develop key digital skills, competences and attitudes among young learners. Benchmarked to the DIG COMP 2.0 Framework, the following lesson plans describe a series of activities which will support young learners to develop knowledge, skills and competences in the areas of information and data literacy, communication and collaboration, digital content creation, problem-solving and safety. The activities have been designed also to address the key learning objectives of the Social, Personal and Health Education (SPHE) curriculum, which is a compulsory curriculum subject for all primary schools in Ireland. As such, the activities are relevant and applicable for assimilation into the teaching practice of primary teachers across Ireland.

Course Overview
The aim of this course is to support primary school teachers in Ireland to adopt some innovative teaching practices and methodologies to develop key digital skills in young learners. Throughout this course, teachers will be supported to use game-based learning techniques, challenge-based learning and digital storytelling to build digital competences among their learners. The course provides step-by-step instructions for teachers to use these innovative approaches to teaching digital skills to young learners.

Course Objectives:

Upon completion of this Course learners will develop some competence in:

- Browsing, searching and filtering information
- Evaluating data, information and digital content
- Interacting through digital technologies
- Collaborating through digital technologies
- Netiquette
- Developing digital content
- Copyright and licenses
- Protecting devices
- Protecting personal data and privacy
- Creatively using digital technologies

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Lessons in the Course:

Developing Digital Competence of Primary School Children in Ireland 5 Lessons – Duration: 5 hours 40 minutes	
Lesson 1: WebQuest for Critiquing Online Advertising	Timeframe: 60 minutes
Lesson 2: Online and Off-line Friends; and Communicating with Others Online	Timeframe: 80 minutes
Lesson 3: Using Canva and Pic Collage to Create Healthy Eating Posters	Timeframe: 80 minutes
Lesson 4: Creating Powerful Passwords	Timeframe: 40 minutes
Lesson 5: Telling digital stories to solve the problem of bullying in school	Timeframe: 80 minutes

Digital Citizenship Course Index

Course 1. Insert Title							
DigComp Competence Area	**Reference competence**	**Year 1** (6-7)[1]	**Year 2** (7-8)	**Year 3** (8-9)	**Year 4** (9-10)	**Year 5** (10-11)	**Year 6** (11-12)
1. Information	1.1 Browsing, searching and filtering information	☐	☐	☐	☐	☐	X
	1.2 Evaluating data, information and digital content	☐	☐	☐	☐	☐	X
	1.3 Managing data, information and digital content	☐	☐	☐	☐	☐	☐
2. Communication and Collaboration	2.1 Interacting through digital technologies	☐	☐	☐	X	☐	☐
	2.2 Sharing through digital technologies	☐	☐	☐	☐	☐	☐
	2.3 Engaging in citizenship through digital technologies	☐	☐	☐	☐	☐	☐

[1] ages

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3.Content creation	2.4 Collaborating through digital technologies	☐	☐	☐	X	☐	☐
	2.5 Netiquette	☐	☐	☐	X	☐	☐
	2.6 Managing digital identity	☐	☐	☐	☐	☐	☐
	3.1 Developing digital content	☐	☐	☐	☐	X	☐
	3.2 Integrating and re-elaborating digital content	☐	☐	☐	☐	☐	☐
	3.3 Copyright and licenses	☐	☐	☐	☐	X	☐
	3.4 Programming	☐	☐	☐	☐	☐	☐
4. Safety	4.1 Protecting devices	☐	☐	X	☐	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	X	☐	☐	☐
	4.3 Protecting health and well-being	☐	☐	☐	☐	☐	☐
	4.4 Protecting the environment	☐	☐	☐	☐	☐	☐
5. Problem solving	5.1 Solving technical problems	☐	☐	☐	☐	☐	☐
	5.2 Identifying needs and technological responses	☐	☐	☐	☐	☐	☐
	5.3 Creatively using digital technologies	☐	☐	☐	☐	☐	X
	5.4 Identifying digital competence gaps	☐	☐	☐	☐	☐	☐

Digital Citizenship Lesson Plans

Course: Using WebQuest Challenges to develop Information Literacy
Lesson 1: WebQuest for Critiquing Online Advertising

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Digital Competence Area: Information and Data Literacy

Grade Level: 6 – Ages: 11-12	**Timeframe: 60 minutes**

Lesson Overview:

This lesson plan will provide a description of a WebQuest Challenge for teachers to use in their teaching practice with learners aged 11-12 years. The aim of this WebQuest Challenge will be to support groups of 3-4 learners to work together to critique the advertising techniques used by 3 different online advertisement campaigns targeted at young people and tweens in their country.

Link to the Irish Primary School Curriculum:

This lesson plan is linked to the 'Media Education' strand of the SPHE Curriculum. This SPHE module is targeted at students aged 11-12 years, and has the following learning objective for students to "become increasingly critical and discerning in his/her own attitude to advertising and the techniques used to promote products, life-styles and ideas techniques: beauty and glamour to promote certain products, the use of music, associating personalities with certain products, giving free gifts on purchase, the use of attractive visual images, the repetition of certain advertisements."

Objectives:

Upon completion of this Lesson students will be able to:

- Use digital skills to complete a WebQuest Challenge;
- Browse, search and filter information;
- Evaluate data, information and digital content;
- Identify advertising techniques aimed at young people and tweens;
- Develop awareness to interpret advertisements aimed at young people.

Material/ resources

To complete this lesson, teachers will need access to:

- Classroom with space for smaller group sessions;
- iPads, tablet devices, laptops, PC or smart device for all groups – i.e. 8-10 devices required for each classroom.
- Printed copies of the WebQuest handout for all students.
- Internet/Wi-Fi Connection.

Lesson Activities

4. Description of Activity: WebQuest for Searching and Selecting Information Online

- This activity should be delivered in a classroom with students
- This activity will integrate different teaching methods which aim to encourage young learners to work together in groups, to engage in authentic learning by analyzing the information and advertisements that are directly targeted at them and also to develop their critical thinking, teamwork and digital skills.
- This lesson plan will provide a description of a WebQuest Challenge for teachers to use in their teaching practice with students aged 11-12 years.
- The aim of this WebQuest Challenge will be to support groups of 3-4 learners to work together to critique the advertising techniques used by 3 different online advertisement campaigns targeted at young people and tweens in their country.

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- Before introducing this WebQuest, teachers should set ground rules for using digital technology in the classroom and should ensure that Google Search and YouTube are set up with parental controls to ensure only age-appropriate content is viewed online.

5. Timeline for Activity: WebQuest for Searching and Selecting Information Online

- The WebQuest will begin by telling students that they will need to search online for 2 advertisement campaigns – one from a magazine and one video advert on YouTube.
- The Teacher will first lead a group discussion on what an 'advertisement campaign' is?
- Next, students will be prompted to review the following links online:
    - https://www.commonsensemedia.org/blog/sneaky-ways-advertisers-target-kids
    - https://www.commonsensemedia.org/blog/how-kids-can-resist-advertising-and-be-smart-consumers [VIDEO]
    - https://smallbusiness.chron.com/advertising-techniques-teenagers-21009.html
- Students will take a note of these terms, and will then be prompted to search for 2 online advertisements targeted at young people and tweens.
- The teacher will provide them with some support on how to complete searches online.
- Students will be supported to view the front page of an online magazine and to look up an advertisement on YouTube, and to list the techniques used for the 2 examples.
- The teacher allows each group 40 minutes to complete the WebQuest, followed by 20 minutes for presentation of the group's advertising campaigns and to discuss what techniques were identified.

1. Assessment of Activity: WebQuest for Searching and Selecting Information Online

- Learners will be assessed based on their ability to work as part of a team with their peers to complete the online tasks; and also, on their ability to critique the advertising techniques used.
- As an assessment for this lesson, the teacher asks all learners to complete a short-written assignment of 200 words maximum, to explain 2-3 things they have learned about online advertising techniques based on this activity.

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Instructions for teachers

- The teacher begins this lesson by dividing students into groups of 3-4, depending on the size of the class group.
- The teacher should ensure that where students have mixed abilities in terms of their digital skills and competence, that each group matches students with advanced skills and those with lower levels of competence, to work together to complete this task.
- The Teacher then begins a short discussion on what an 'advertisement campaign' is and asks the learners to describe what makes and advert attractive or interesting for learners in the class? The teacher can write the main features mentioned by the class on the blackboard/whiteboard as a reference for when they are completing the WebQuest activity.
- The teacher then introduces a short Web Quest activity, by providing the following scenario/task: "Your school principal has asked you to put together an ad campaign which will encourage students in your school to develop healthy eating habits. In order for you and your team to know what works best when advertising to young people, you will need to research common advertising techniques and put together a plan for an ad campaign that you and your team will present to your school principal.
- The teacher then introduces the process to all teams.
- They will first have to review the following links online:
    - https://www.commonsensemedia.org/blog/sneaky-ways-advertisers-target-kids
    - https://www.commonsensemedia.org/blog/how-kids-can-resist-advertising-and-be-smart-consumers [VIDEO]
    - https://smallbusiness.chron.com/advertising-techniques-teenagers-21009.html
- The next step in the process is for students to search online for 2 advertisement campaigns – one from a magazine and one video advert on YouTube. Both adverts should be accessed on moderated, child-safe versions of Google and YouTube.
- Once they have found their two online advertisements, learners should begin the task of identifying the different techniques used in the adverts and how they are specifically appealing to a younger audience.
- The next task for the group is to start designing their own ad campaign for the school. They much research online, and find how they can make healthy eating more appealing to young learners. They also need to decide if they will create a poster, a video, social media campaign, etc.
- At the end of this process, each group should be able to make a short 3-5 minute presentation on what they have learned from the WebQuest task and how they would plan their ad campaign for their school principal.
- If possible, the principal could be present for these presentations to make the experience more authentic for learners.
- As a homework assignment, young learners are asked to write a short account (200 words) on what they have learned from this WebQuest and to describe if they are more aware of advertising techniques following this activity.

Other Comments

N/A

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Course: Online Relationships and Netiquette	
Lesson 1: Online and Off-line Friends; and Communicating with Others Online	
Digital Competence Area: Communication and Collaboration	
Grade Level: 4 – Ages: 9-10 years	**Timeframe: 80 minutes – 40 minutes per activity**

Lesson Overview:

The aim of the activities in this lesson plan is to introduce students to the topic of understanding the differences between online and face-to-face friendships, and how we should treat our friends in online and face-to-face environments. Students will also be briefly introduced to 'netiquette' by developing a classroom netiquette charter.

This lesson plan has been developed to support the implementation of the 'Stay Safe Programme' in the primary school curriculum in Ireland. 'Stay Safe' is a mandatory personal safety skills programme for primary schools. It relates to online and face-to-face relationships with others, as part of the SPHE module on 'Myself and Others'. The activities of the lesson plan help to address the following objective of the SPHE Curriculum: to teach young learners to "practise and recognise the importance of care and consideration, courtesy and good manners when interacting with others…"

Objectives:

Upon completion of this Lesson students will be able to:

- Describe the difference between online and real-world friends;
- Understand why it is important to treat both types with respect;
- Understand how to appropriately interact through digital technologies;
- Develop and sign a classroom netiquette charter;
- Practice Netiquette.

Material/ resources

The teacher will need the following materials for this lesson:

- Overhead projector, screen and PC for the teacher.
- Internet/Wi-Fi Connection.
- A3 sheets of paper, colouring pencils and pencils for all students.

Lesson Activities

Description of Activity: Online and Off-line Friends and Introducing Netiquette

- These activities should be delivered in a classroom with students.
- These activities will introduce the topic of understanding the differences between online and face-to-face friendships, and how we should treat our friends in online and face-to-face environments to learners.
- Through group discussion, the teacher will focus on highlighting how young people should communicate with others through social media platforms such as Facebook, SnapChat, YouTube and Instagram, etc.
- The second activity presented below will also briefly introduce young learners to 'netiquette' by developing a classroom netiquette charter.

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- This lesson plan will provide a description of a some activities for teachers to use in their teaching practice with students aged 9-10 years to promote netiquette with their learners.
- As the use of digital technology by students is only permitted from Grade 5 onwards in Ireland, this activity has been planned so that the teacher can develop the students' digital competence without using smart devices in the classroom.

Timeline for Activity: Online and Off-line Friends and Introducing Netiquette

- The teacher begins this activity by asking students a series of 10 questions, asking each learner to reflect on the question and write their own answer in their notebook or copy book. The teacher should allow 15 minutes for this activity, with pauses after reading each question for the learners to write their short answers.
- The teacher then divides the students into pairs, and gets each pair to discuss their answers. The teacher should allow 10 minutes for this discussion.
- The teacher then brings the who class back together, and invites feedback from all learners. During groups discussion, the teacher is encouraged to focus the discussion with regard to online platforms for socialising – Facebook, SnapChat, YouTube and online gaming. The teacher should allow 10 minutes for this discussion.
- In the final 5 minutes of this lesson, the teacher asks the whole group to contribute to list 5 things that they have learned in this lesson.
- The teacher then introduces the topic of netiquette to learners by describing good and bad examples of netiquette and inviting other examples from the learners. The teacher should allocate 5 minutes for this introduction.
- The teacher then leads the learners in compiling a list of 10 simple rules to follow to practice good netiquette. This will become the class' Netiquette Charter. The teacher should invite rules from the learners but be on hand to offer examples if needs be.
- The teacher writes all 10 rules on the blackboard, whiteboard or flipchart.
- The teacher then divides all learners into smaller groups of 4-5, depending on the size of the class.
- The teacher gives all groups 30 minutes to copy the charter on an A3 sheet, and design their charter with appropriate pictures that show good netiquette.
- After 30 minutes, the teacher invites all groups to sign their Netiquette Charter, then the teacher signs all Charters and displays them around the classroom.

Assessment of Activity: Online and Off-line Friends and Introducing Netiquette

- Learners will be assessed based on their contribution to both activities, especially their contribution to writing the netiquette charter.
- As an assessment for this lesson, the teacher asks all learners to complete a short-written assignment of 100 words maximum, to explain 2-3 things they have learned about online friendships and how we should treat online friends.

Instructions for teachers

- This activity will begin with a short self-reflection by learners, where the teacher will ask them a series of questions, and instruct them to write down their own views and answers in their copy or notebooks. The teacher will allow sufficient time after each question for the learners to write down their answers – stressing, that the answers only need to be in bullet-point form for this activity.

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- The teacher begins this activity by asking students the following questions, asking them to answer each question on their own first. The teacher should allocate 15 minutes for this activity:
    - In what ways are online friendships different from face-to-face friendships?
    - If we have a lot of online friendships, does that mean we are well-liked or popular?
    - Is it possible to have too many online friends? Why could that be a problem?
    - Why do people sometimes behave differently online?
    - Is it necessary for online friendships to be built on respect? Why do you think this?
    - What might happen if we choose to treat our online friendships disrespectfully?
    - Is there ever a time when it is appropriate to act disrespectfully online?
    - Are there risks in having friendships with people whom you only come in contact with online?
- The teacher then divides the students into pairs, and get each pair to discuss their answers. Responses from students will vary depending on their experience of using digital technology.
- After 10 minutes, the teacher then brings the whole class back together, and invites feedback from all students.
- During groups discussion, the teacher is encouraged to focus the discussion with regard to online platforms for socialising – Facebook, SnapChat, YouTube and online gaming
- The teacher then asks the whole group to contribute to list 5 things that they have learned in this lesson. The teacher takes note of these on a blackboard, whiteboard or flipchart.
- As a follow-up activity to this group assignment on online and face-to-face friendships, the teacher introduces the topic of netiquette to the students, by watching this short video: https://youtu.be/Q5xlCNy37mI
- After this video, the teacher invites all students to contribute to a 'Netiquette Charter' which will outline 10 rules of netiquette that all students will sign-up to, to ensure that they act responsibly and with consideration for others, when they talk to online friends.
- The teacher writes the Charter on a Whiteboard/Flipchart.
- The teacher then gives groups of 4-5 young learners 20 minutes to copy the Charter Statements on a large A3 sheet, and to draw pictures on their Charter to represent what good netiquette means.
- Each learner and the teacher then signs their respective Netiquette Charters, and the teacher in invited to display the Charters around the classroom as a reminder to all students.
- Some sample rules for the Charter may include:
    (1) think before you post;
    (2) be respectful to others online;
    (3) only share if you would say it to the person's face, etc.

Other Comments
N/A

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Course: Using Digital Tools to Promote Healthy Eating
Lesson 1: Using Canva and PicCollage to Create Healthy Eating Pictures
Digital Competence Area: Digital Content Creation

Grade Level: 5 – Age: 10-11 years	**Timeframe: 80 minutes – 40 minutes per activity**

Lesson Overview:

The aim of the activities in this lesson plan is to support students to use digital media to create a poster and picture collage that can be used to promote healthy eating in their school. To create these digital posters and pictures, students will work in groups of 3-4, depending on class size, and will work together to create a poster and develop a digital collage to promote the food pyramid.

This lesson plan is linked to the SPHE Curriculum for students aged 10-11 years. Specifically, it is linked to the 'Myself' strand of the SPHE Curriculum, under the unit: 'Taking Care of my Body'. This unit has the following learning objectives, to: "support students to explore the importance of food for promoting growth…and to appreciate that balance, regularity and moderation are necessary in the diet such as the food pyramid, the need for a balanced diet..."

Objectives:

Upon completion of this Lesson students will be able to:

- Develop digital content
- Understand copyright and licencing for photographs online
- Use digital tools to create a poster and a picture collage
- Describe the different food groups in the food pyramid
- Create a poster to promote healthy eating and having a balanced diet
- Search online for copyright and licence-free photographs
- Create an image collage to promote healthy eating

Material/ resources

The teacher will also need the following materials for this lesson:

- iPads, tablet devices, laptops, PC or smart device for all groups – i.e. 8-10 devices required for each classroom.
- Internet/Wi-Fi Connection.
- Access to Canva and Pic Collage.
- Overhead projector, screen and printer.

Lesson Activities

Description of Activity: Using Canva to Create a Poster and Using Pic Collage to Create an Image Collage

- These activities should be delivered in a classroom with students.
- Before introducing this activity, teachers should set ground rules for using digital technology in the classroom.
- Before introducing this activity, the teacher should set up accounts for the class on the following two platforms:

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- https://www.canva.com/
- https://pic-collage.com/

- Through creative assignments, learners will be engaged in collaboration and teamwork activities, which also applying their digital skills to create posters and image collages which help to promote healthy eating, a balanced diet and the food pyramid in their schools.
- This lesson plan provides a description of these activities for teachers to use in their teaching practice with students aged 10-11 years to empower them to create digital content, through the responsible use of digital technologies.

Timeline for Activity: Using Canva to Create a Poster and Using Pic Collage to Create an Image Collage

- The teacher begins this activity with a short group discussion on the food pyramid – by asking young learners o identify and give examples of the different food groups. The teacher can make use of visual aids around the classroom for this section.
- The teacher then divides the students into smaller groups of 3-4 students.
- The teacher next uses an overhead projector and PC to 'create a design' on Canva and give students a short demonstration.
- The teacher then gives each group 20-25 minutes to create a 'healthy eating' poster for their school, which promotes having a balanced diet and referencing the Food Pyramid.
- After 25 minutes, the teacher asks all groups to share their posters with other students.
- The teacher can then print the posters and display them in the classroom.
- As a follow-up activity, and continuing to work in their groups, the teacher asks all groups to search online for photographs of healthy food, and food items from each group in the Food Pyramid.
- The teacher then supports all groups to log-in to the Pic Collage account created for the class.
- Students work in their groups to create an image collage using the Pic Collage application.
- Teacher gives all groups 30 minutes to create their image collage projects.
- After this, the teacher collects all collages from the students.
- The teacher is then encouraged to share these collages through the Facebook page of the group to display the students' work.

Assessment of Activity: Using Canva to Create a Poster and Using Pic Collage to Create an Image Collage

- Learners will be assessed based on their contribution to both activities.
- As an assessment for this lesson, the teacher asks all learners to complete a short-creative assignment where they are asked to use Canva or Pic Collage at home to create a poster to raise awareness of a social issue that is affecting people in their community.
- Before giving this homework assignment, the teacher can lead a short group discussion to highlight what social issues are and which ones are present in their local community – as such, this can raise the awareness of young people for issues in society.

Instructions for teachers:

- The teacher can open this workshop with a short presentation of the Food Pyramid – the teacher can use available teaching aids around the classroom to introduce the Food Pyramid to learners.

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- After this short presentation, the teacher leads a short group discussion about the food pyramid by asking young learners to identify the different food groups and to give examples of food in each group.
- The teacher can then explain the importance of a balanced diet and how our diets should be comprised from foods from all groups, in different quantities, before introducing the first activity.
- The teacher then introduces the activity and set some ground rules with learners about using digital technologies in the classroom, before beginning the first activity.
- The teacher then divides learners into smaller groups of 3-4.
- Once all smaller groups are formed, using an overhead projector and PC, the teacher gives a short demonstration on how to 'create a design' on Canva.
- The teacher will use the account that s/he has set up for the group activity during this demonstration.
- After the demonstration, the teacher ensures that each group has access to a PC, laptop, tablet or smart device with Internet access before explaining to all groups that they will now work together to create a poster about the food pyramid using Canva.
- The teacher gives each group 20-25 minutes to create a 'healthy eating' poster for their school, which promotes having a balanced diet, referencing the Food Pyramid.
- After 25 minutes, the teacher asks all groups to share their posters with other groups. The teacher can use the overhead projector to show the different posters.
- The teacher is encouraged to print the posters and display them in the classroom and around the school to promote healthy eating in the school.
- As a follow-up activity, and continuing to work in their groups, the teacher gives learners another short demonstration – this time showing them how to use Pic Collage to create image collages. The teacher can use the overhead projector and PC for this demonstration, and can log in using the account set up for the class.
- Working in their groups, learners collaborate to search online for photographs of healthy food, and food items from each group in the Food Pyramid.
- The teacher then supports all groups to log-in to the Pic Collage account created for the class.
- Learners work in their groups to create an image collage using the Pic Collage application.
- The teacher gives all groups 30 minutes to create their image collage projects.
- After this, the teacher collects all collages from the students.
- The teacher is then encouraged to share these collages through the Facebook page of the group to display the students' work.

Other Comments

N/A

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Course: Staying Safe Online and Protecting my Devices	
Lesson 1: Creating Powerful Passwords	
Digital Competence Area: Information and Data Literacy	
Grade Level: 3 – Ages: 8-9 years	**Timeframe: 40 minutes**

Lesson Overview:

The aim of the activities in this lesson plan is to introduce students to the topic of online safety, by discussing their 'digital footprint' and showing them how to create strong passwords to protect their online accounts and devices.

As part of the SPHE Curriculum, primary teachers are encouraged to introduce online safety to young students in 3rd and 4th class (Grade 3). This lesson plan is related to the SPHE module: Safety and protection, and the module unit: Personal Safety. The learning objectives of this unit are to support students to "identify people, places and situations that may threaten personal safety realising how and when to get help".

As the use of digital technology by students is only permitted from Grade 5 onwards in Ireland, this activity has been planned so that the teacher can develop the students' digital competence without using smart devices in the classroom.

Objectives:

Upon completion of this Lesson students will be able to:

- Describe what a 'digital footprint' is
- Discuss the importance of having a clean 'digital footprint'
- Discuss how to make a strong password for their devices and online accounts
- Write new passwords for their devices and accounts
- Discuss how to protect their devices
- Discuss the importance of protecting personal data and privacy

Material/ resources

The teacher will also need the following materials for this lesson:

- Overhead projector, screen and PC for the teacher.
- Internet/Wi-Fi Connection.
- Paper and pencils for all students.

Lesson Activities

- Description of Activity: Staying Safe Online and Protecting my Devices

- These activities should be delivered in a classroom with students.
- As the use of digital technology by students is only permitted from Grade 5 onwards in Ireland, this activity has been planned so that the teacher can develop the students' digital competence without using smart devices in the classroom.
- Through group discussion, learners will gain knowledge of what their 'digital footprint' is and why it's important to have a clean footprint online. Through a discussion activity, learners will also gain an understanding of why it is important to protect their devices and not to share passwords with others.

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- Through an individual activity to follow, learners will be supported to create strong passwords to protect their devices and online accounts.
- This lesson plan provides a description of these activities for teachers to use in their teaching practice with students aged 8-9 years to introduce them to the basics of online safety.

Timeline for Activity: Staying Safe Online and Protecting my Devices

- The teacher begins this lesson by asking learners: "What do we mean by the term 'digital footprint'?
- The teacher works with learners to develop their own definition for what 'digital footprint' means, highlighting what our online data is and also some of the ways that our data is stored and used.
- The teacher then discusses private vs. personal information and what is okay to share online.
- The teacher then shows the learners this short video on how to stay safe online:
- https://www.commonsensemedia.org/videos/5-internet-safety-tips-for-kids [VIDEO]
- The teacher then gives all learners pencils and paper and leads a short group activity on how to create strong passwords to protect accounts and devices.
- The teacher uses the following tips to support learners to create their passwords, and advises them not to share their passwords with other people:
    - Use special characters, capital letters and numbers.
    - Make passwords hard to guess but easy to remember.

Assessment of Activity: Staying Safe Online and Protecting my Devices

- Learners will be assessed based on their contribution to group discussions and their ability to create passwords and not share them.
- As a homework activity, learners can draw pictures to represent what they learned about their digital footprint. The teacher can collect the homework and display it around the classroom as a reminder to learners.

Instructions for teachers:

- The teacher introduces this lesson by asking learners: "What do we mean by the term 'digital footprint'?
- The teacher is aiming to find out what the learners know about their digital footprint. Through this discussion, the teacher should ask for examples from the learners which describe their digital footprint.
- The teacher can take note of key words mentioned on a whiteboard, blackboard or flip chart.
- The teacher works with learners throughout the discussion to develop a definition for what 'digital footprint' means. Here the teacher should also highlight what our online data is and also some of the ways that our data is stored and used.
- As a follow up, the teacher then discusses private vs. personal information and what is okay to share online.
- After this discussion, the teacher gives all learners 3-5 minutes to write down something that they have learned from this opening discussion that they will take home with them and remember. The teacher can invite learners to share what they have learned with the group.
- The teacher then shows the learners this short video on how to stay safe online:
- https://www.commonsensemedia.org/videos/5-internet-safety-tips-for-kids [VIDEO]

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- As a short follow-up activity, the teacher then gives all learners pencils and paper and leads a short group activity on how to create strong passwords to protect accounts and devices.
- The teacher uses the following tips to support learners to create their passwords, and advises them not to share their passwords with other people:
    - Use special characters;
    - Use capital letters;
    - Include numbers;
    - Make passwords hard to guess but easy to remember.

Other Comments

N/A

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Course: Problem Solving using Digital Technology	
Lesson 1: Telling digital stories to solve the problem of bullying in school	
Digital Competence Area: Problem Solving	
Grade Level: 6 – Ages: 11-12 years	**Timeframe: 80 minutes – 40 minutes per activity**

Lesson Overview:

The aim of this lesson is to teach the basics of problem-solving to young students and then to support them to apply what they have learned to develop digital stories of how they would tackle the problem in their school.

The majority of primary schools in Ireland have a problem with bullying, and in recent years, the threat of cyberbullying has worried teaching professionals and parents alike. The aims of this activity are to use techniques of digital storytelling to discuss bullying and cyberbullying with students, to assess their attitude towards the different roles in bullying, and to encourage the development of their digital skills and their problem-solving abilities.

Before introducing this activity, teachers should set ground rules for using digital technology in the classroom.

This lesson plan is linked to the 'Myself and Others' module of the SPHE Curriculum, under the module unit: 'My friends and other people'. This SPHE module is targeted at students aged 11-12 years and has the following learning objective for students to: "recognise, discuss and understand bullying and its effects what behaviour constitutes bullying… and to explore and discuss how individuals can deal with being bullied, knowing that others are being bullied and being a bully".

Objectives:

Upon completion of this Lesson students will be able to:

- Practice simple steps for problem-solving
- Practice problem-solving through groupwork
- Creatively use digital technologies
- Practice digital storytelling
- Create a digital story to discuss bullying
- Describe the different roles in bullying
- Think of solutions to bullying from different perspectives
- Use iMovie, Story Remix or Pic Collage to create a digital story

Material/ resources

The teacher will also need the following materials for this lesson:

- iPads, tablet devices or smart devices for all groups – i.e. 3-6 devices required for each classroom.
- Internet/Wi-Fi Connection.
- Access to video editor – for example, Story Remix.
- Overhead projector, screen and laptop for the teacher

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Lesson Activities

Description of Activity: Telling digital stories to solve the problem of bullying in school

- These activities should be delivered in a classroom with students.
- Before introducing this activity, teachers should set ground rules for using digital technology in the classroom.
- Through creative assignments, learners will be engaged in using techniques of digital storytelling to discuss bullying and cyberbullying, to assess their own attitude towards the different roles in bullying, and to encourage the development of their digital skills and their problem-solving abilities.
- This lesson plan provides a description of these activities for teachers to use in their teaching practice with students aged 11-12 years to empower them to develop their problem-solving skills and to help them to understand and tackle the instances of bullying in their school.

Timeline for Activity: Telling digital stories to solve the problem of bullying in school

- The teacher introduces the topic of problem-solving to students by teaching them the steps to problem-solving as an introduction to the process of trying to solve bigger problems affecting their school community.
- The teacher then introduces the topic of bullying and cyberbullying.
- The teacher then divides the class into three groups. Group 1 are the bullies; Group 2 are the victims of bullying; and Group 3 are the bystanders. If the class has over 18 students, teachers can consider creating six groups in the class rather than three.
- Working in their groups, students are asked to create a digital story to explain their role in bullying, and to come up with solutions for what could be done .
- The teacher gives each group access to an iPad, tablet or smart device.
- Working in their groups, students will develop their storyline for their digital story and will also brainstorm solutions to the problem of bullying.
- After this planning session, students work to take photographs that will tell their digital stories. The teacher allocated 30 minutes for this task.
- After 30 minutes, the teacher brings all students back into the classroom.
- Using a projector and screen, the teacher shows students how they can use Story Remix to create their own digital stories.
- Each group is then given 10 minutes to prepare their digital stories using Story Remix on their tablet devices.
- The teacher then invites all groups to share their digital stories.
- After each presentation, the teacher can lead a short discussion on the stories and the solutions found to tackle the problem of bullying.

Assessment of Activity: Telling digital stories to solve the problem of bullying in school

- Learners will be assessed based on their contribution to the group-work activity and on the quality of their digital stories.
- As an assessment for this lesson, the teacher asks all learners to complete a written assignment of 150 words to detail what they have learned about bullying in this activity, and a short statement outlining how they would like to prevent bullying in their school.

Instructions for teachers:

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- The teacher can open this workshop by introducing the topic of problem-solving to learners by teaching them the steps to problem-solving:
    (1) identify the problem;
    (2) name the emotion – how do I feel about the problem;
    (3) develop at least 3 possible solutions;
    (4) identify the pros and cons of each solution;
    (5) pick a solution;
    (6) try it out.
- The teacher can apply these steps through sharing some examples of problems. When examples of problems are provided, the teacher can lead the whole class in brainstorming how the problem could be solved using the 6 steps described.
- The teacher then introduces the topic of bullying and cyberbullying, and discusses with learners why this is such a big problem in schools. This discussion will allow teachers to explain some of the effects and consequences of bullying and cyberbullying – emotional, psychological, behavioural, physical, etc.
- The teacher then reminds learners of the different roles involved in cyberbullying and describes how different learners will take on these different roles for a group activity.
- The teacher then divides the class into three groups.
    Group 1 are the bullies;
    Group 2 are the victims of bullying;
    Group 3 are the bystanders.
- If the class has over 18 students, teachers will consider creating six groups in the class rather than three.
- The teacher leads a short discussion on the differences between these three roles and possible problems and emotions which each group might experience. The teacher takes note of the key words mentioned on a whiteboard/blackboard or flipchart.
- Working in their groups, students are asked to create a digital story to explain their role in bullying, and to come up with solutions for what could be done to solve the problem from the perspective of their role.
- The teacher then introduces digital storytelling by explaining what it is and how it can be used to tell personal stories.
- The teacher gives each group access to an iPad, tablet or smart device.
- Before the groups are allowed to use these digital devices, the teacher sets some ground rules with the learners for using digital technology on school grounds.
- Working in their groups, learners will develop their storyline for their digital story and will also brainstorm solutions to the problem of bullying.
- In this activity, the learners are encouraged to think of possible images and pictures that they could use to show this in a digital story.
- After this planning session, learners are allowed to walk around the school grounds to take photographs on their smart devices that can be used to tell their story and to show what they would do to solve the problem of bullying, from their perspective of either the bully, the victim or the by-stander.
- After 30 minutes, the teacher brings all learners back into the classroom.
- Using a projector and screen, the teacher shows learners how they can use Story Remix to create their own digital stories using the automatic digital story feature.
- Before giving this demonstration, the teacher should ensure that they have access to Story Remix, if using a Windows device. iMovie can be used for this activity if using Mac; or Pic Collage can also be used if neither is available. If using Pic Collage the teacher can use the same account that was used by learners to create the healthy eating collage in the previous lesson plan.

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[Project number: 2017-1-CY01-KA201-026739]

- Each group is then given 10 minutes to prepare their digital stories using Story Remix on their tablet devices – if using iPads, learners can also use iMovie or Pic Collage.
- The teacher then invites all groups to share their digital stories.
- After each presentation, the teacher can lead a short discussion on the stories and the solutions found to tackle the problem of bullying.
- The teacher is encouraged to collect the digital stories as part of the learners' assessment, and also to share through the school's intranet or social media pages (provided that the digital stories do not contain photographs of the learners).

Other Comments

N/A

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National Digital Citizenship Curriculum

Greece: Digital Citizenship Lesson Plans

Greek DC School Curriculum is based on the Digital Citizenship (DC) Programme which aims at empowering students to think critically, behave safely, and participate responsibly in our digital world. In this context, it follows the DigCom Framework for developing certain digital competence skills of individuals in Europe (Kluzer & Pujol Priego, 2018 pg. 12) grouped in five clusters:

6. Information and data literacy competencies;
7. Communication and collaboration competencies;
8. Digital content creation competencies;
9. Safety competencies in the digital world; and
10. Problem solving competencies in the digital world.

For each cluster, teachers/researchers of the 1st Primary School of Rafina developed certain teaching objectives taking into account the Interdisciplinary/Intergrative National Curriculum, the age level of the pupils, the cultural context of the school and the perceived wider social needs and the psychological needs of pupil population.

Considering that the Digital Citizenship Curriculum proposes innovative approaches to teaching digital skills, which allow individualized learning in content and pace and make for greater child involvement and interest, it is suggested that teachers progress in a fading scaffolding way (Morrison & Ridley, 1988):

Step One: Grouping of children; training of children in the use of materials; establishing discipline and control.

Step Two: Using one block of time, the teacher setting the task, the children choosing the order and timing.

Step Three: Teacher extending the periods of integration and number of tasks

Step Four: Reducing teacher direction, children work on their own

Step Five: Children become self-directed to their work.

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Under this spirit, group work is a critical parameter of the DC Curriculum. Within groups children learn to work collaboratively, learn from each other, get encouraged by peers to involve in activities, develop self-esteem and higher order thinking and manage efficiently the use of technological tools for learning.

Of course, time constraints, space and materials availability can have a large impact on the way curriculum lessons can be implemented. For example, some lesson plans require special equipment such as Arduino boards or Augmented Reality books/maps, while other lesson plans can be optimaly implemented in a ICT laboratory. Although this might deter teachers from adopting the curriculum, teachers/researchers of the 1st Primary School of Rafina decided to include specialized equipment like this, since it represents innovation they firmly believe that it will largely impact education in the future.

Description of the Course

Leaning activities of the DC Curriculum fit in the interdisciplinary nature of the Greek National Curriculum. Lessons 1 through 3, which address grades 3-4, are embedded in Environmental Studies of the National Curriculum (Seasons, Animal habitats, Greek mythology), while lessons 4-5 address grades 5-6 and focus in a more direct way in promoting digital skills (internet safety, problem solving with digital tools).

Outline

Course details:

Name of Partner: 1st Primary School of Rafina		
Course: Developing Digital Competence of Primary School Children in Greece	Grade/ Year: Grades 3 to 6 (8 to 12 years old)	Timeframe: 90 to 110 minutes / lesson

Content Outline

Lesson 1: Instructions on how to add content and organize folders and subfolders in Windows environment

Lesson 2: Information about habitats, instructions on how to use AR in classroom

Lesson 3: Information about the adventures of Odysseus, instructions on how to use digital story-telling tools.Z

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Lesson 4: Information about bullying and cyber-bullying behaviour, instructions on how to use concept map tools

Lesson 5: Information about programming, instructions on how to handle a well defined problem in digital environment.

Course Overview
The aim of this course is to support primary school teachers in Greece to infuse in their programme activities that cultivate key digital skills in young learners. It also proposes innovative ideas for classroom use that will sparkle pupil interest and foster critical and creative thinking skills.

Course Objectives:

Upon completion of this Course learners will develop some competence in:

- Managing Data, Information and Digital Content
- Interacting through digital technologies
- Sharing information through digital devices
- Collaborating through digital technologies
- Developing digital content
- Creatively using digital technologies
- select ways to protect self and others from dangers in digital environments.
- discuss on digital technologies for social well-being and inclusion.
- Resolve a well defined problem in the digital environment

Lessons in the Course:

Developing Digital Competence of Primary School Children in Greece 5 Lessons – Duration: 5 hours 40 minutes	
Lesson 1: "Managing Data, Information and Digital Content"	Timeframe: 110 minutes
Lesson 2: "Using Augmented Reality to Explore Habitats: Animals around us"	Timeframe: 80 minutes
Lesson 3: "History and heroes: Creating Digital Stories"	Timeframe: 90 minutes
Lesson 4: "Stop Cyber-Bullying"	Timeframe: 90 minutes
Lesson 5: "Arduino moving lights"	Timeframe: 90 minutes

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Digital Citizenship Course Index

Course 1. Insert Title							
DigComp Competence Area	**Reference competence**	**Year 1** (6-7)[2]	**Year 2** (7-8)	**Year 3** (8-9)	**Year 4** (9-10)	**Year 5** (10-11)	**Year 6** (11-12)
1. Information	1.1 Browsing, searching and filtering information	☐	☐	☐	☐	☐	☐
	1.2 Evaluating data, information and digital content	☐	☐	☐	☐	☐	☐
	1.3 Managing data, information and digital content	☐	☐	☐	☑	☐	☐
2. Communication and Collaboration	2.1 Interacting through digital technologies	☐	☐	☑	☐	☐	☐
	2.2 Sharing through digital technologies	☐	☐	☑	☐	☐	☐
	2.3 Engaging in citizenship through digital technologies	☐	☐	☐	☐	☐	☐
	2.4 Collaborating through digital technologies	☐	☐	☑	☐	☐	☐
	2.5 Netiquette	☐	☐	☐	☐	☐	☐
	2.6 Managing digital identity	☐	☐	☐	☐	☐	☐
3.Content creation	3.1 Developing digital content	☐	☐	☑	☐	☐	☐
	3.2 Integrating and re-elaborating digital content	☐	☐	☐	☐	☐	☐

[2] ages

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4. Safety	3.3 Copyright and licenses	☐	☐	☐	☐	☐	☐
	3.4 Programming	☐	☐	☐	☐	☐	☐
	4.1 Protecting devices	☐	☐	☐	☐	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	☐	☐	☐	☐
	4.3 Protecting health and well-being	☐	☐	☐	☐	☑	☐
	4.4 Protecting the environment	☐	☐	☐	☐	☐	☐
5. Problem solving	5.1 Solving technical problems	☐	☐	☐	☐	☐	☐
	5.2 Identifying needs and technological responses	☐	☐	☐	☐	☐	☐
	5.3 Creatively using digital technologies	☐	☐	☐	☐	☐	☑
	5.4 Identifying digital competence gaps	☐	☐	☐	☐	☐	☐

Digital Citizenship Lesson Plans

Course: Developing Digital Competence of Primary School Children in Greece	
Lesson 1: Managing Data, Information and Digital Content	
Digital Competence Area: Information and Data Literacy	
Grade Level: 4	**Timeframe: 110 minutes**
Lesson Overview: Students create in their personal computer folder (My Documents) a tree structure to show the four seasons and the 12 months of a year. They have to create four folders, one for each season and inside the season-folder they have to create 3 subfolders, one for each corresponding month of the season. Afterwards, they have to choose suitable photos from	

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another folder (My Pictures) and move or copy them to the folder of the appropriate month and change its name.

Objectives:

Upon completion of this Lesson students will be able to:

- Create folders and subfolders
- Know how to rename folders or files
- Copy or Move files at a specific folder
- Delete file or folders that we do not need

Material/ resources

- Computers with Windows 7 or more.
- A folder in each computer (My Pictures) with at least 10 pictures from nature during the year or with activities that people do during the year.
- Video projector or a Remote Control Program (e.g. NetOp)

Lesson Activities

6. Create folders and Subfolders (45 minutes)

This activity takes place in the computer lab. Students are organized in groups of 2-3. Each group must have a pc. Students should know the difference between a file and a folder and they must already understand the importance of organized the files into folders. The teacher can use either the video projector or a remote control program in order to explain to the pupils how we can create a new folder. Great attention should be paid to the location that we choose to create each folder, in order to have the desired path. Then the students, following the instructions of the worksheets should create 4 folders (Winter, Spring, Summer and Autumn) and inside each folder, 3 sub-folders, one for each month of the season. If they make a mistake they must either rename the folder or delete it, following the appropriate given instructions.

The method is the collaborative method since students work in groups of 2-3 members on each computer. In this scenario, also, guidance techniques are used, but the main role of the teacher is to help (scaffolding) and guide the students, more corrective rather than intrusive.

7. Copy or Move files at a specific folder and rename them (45 minutes)

This activity also takes place in the computer lab. Students keep the previous grouping of 2-3, using the same pc. In “My Pictures” folder of each pc, the teacher must paste a set of at least 10 pictures that present different things what we can do each month of the year (e.g. snowing, cutting flowers, swimming, raining). Then, the teacher can use either the video projector or a remote control program in order to explain to the pupils how they can cut and paste a picture from “My Pictures” to the appropriate month-folder. If they want to paste the same picture into more than one month-folders then they have to do copy and paste. Finally, the students have to change (rename) the original name of the pictures to a more appropriate

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[Project number: 2017-1-CY01-KA201-026739]

name that describes the content of the picture. This method is the collaborative method since students work in groups of 2-3 members on each computer. Teacher is helping students to create the exercise by advising them and not by giving them the right answer.

8. Repetition and understanding exercises (20 minutes)

Using a tool, like Kahoot or HotPotatoes, teacher creates a quiz with questions about files and folders. Each student should answer these questions on his own and be evaluated on the answers. This is possible only if we have one computer for each student. In the case that we don't have so many computers, this quiz can also be done in a paper. Some possible evaluation questions are:

- A folder is used in order to organize our files in a computer.
- A file can contain another file.
- A folder can contain another folder.
- We can rename a file with right click on it.
- After the orders cut & paste the original file exists both into the original and into the destination folder.

If this evaluation quiz is taking place in a computer, teacher can ask questions like:

- Each folder has a maximum amount of files that can contain *OR*
- We can have into the same folder files (two or more) with the same name *OR*
- With the orders copy & paste we can have copies of the original file into maximum 3 other folders

and students can have time to test each question before the answer, in order if it is True or False. This is α complex evaluation and students have to deal with each question as an exercise to explore.

Other Comments

Teacher provides pupils with the following leaflets:

Leaflet 1 - Activity Lesson 1 (see Appendix 1)

Leaflet 2 - Activity Lesson 2 (see Appendix 2)

Course: Developing Digital Competence of Primary School Children in Greece	
Lesson 2: Using Augmented Reality to Explore Habitats: Animals around us	
Digital Competence Area: 2. Communication and Collaboration	
Grade Level: 3	**Timeframe: 90 minutes**
Lesson Overview: Lesson plan created to teach children how Earth supports many different animal habitats, each of which has distinct features and distinct plant and animal populations. Children using augmented	

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reality will examine how animals and plants are adapted to the conditions of the habitats in which they live.

Objectives:

Upon completion of this Lesson students will be able to:

- identify different habitats,
- describe distinct features and distinct plant and animal populations of a certain habitat,
- identify animals that live in four different environments,
- interact through augmented reality,
- share information through digital devices and
- collaborate through augmented reality.

Material/ resources

1. Student's schoolbook
2. CleverBooks Augmented Reality powered map of the world poster
3. STEM certified software content: free mobile application for Android download HERE and for Apple devices HERE

No internet connection required once the app is installed.

No technical skills needed to use software.

4. Mobile devices (a tablet or mobile phone based on Android or Apple)
5. Students' Groups Worksheet
6. Pencils or pens

Please number all the instructional tools/recourses material you will in your lesson with a short title and source for copyright issues

Lesson Activities

Activities are planned in the classroom.

Approach/ teaching method: project-based learning

Group size: If class size and availability of resources permit, the ideal group size is four to five students.

Link with the relevant digital competence(-ies): Communication and collaboration

9. Groups Creation (5 min)

Divide students into groups as teams. Each team is to have a device. Select a captain in each team and make sure that this student will be using the device on behalf of the team. Other team members can guide the captain verbally. Name the teams.

The involvement of the teacher in the above activity may be limited depending on the degree of engagement maturity of the group of students.

Skip the activity, if the class is already divided into groups and allocate the time at need.

10. Discussion on habitats (10 min)

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Talk about different natural environments with the class. *What is a forest? What does it look like? How is a forest different from a desert?* Explain the term "habitat" and talk about the many kinds of animals that live in different habitats.

11. System test (5 min)

Try the system out before continuing with the next activities. Launch the “CleverBooks Geography” app. Click on continent and focus the camera of your mobile device in Africa. On the right side of your screen you can see different symbols which will help you to experience different options of Augmented Reality, click on each to check them out. This will help you to switch between the modes during the next activities.

12. Habitats (30 min)

Each group will research a different habitat of the world. Each group will produce a report on its habitat including the following information:

- A physical description of the habitat
- Examples of the habitat (geographical locations)
- Examples of animals and plants that live in the habitat.

The Worksheet is available in English HERE and in Greek HERE.

13. Students’ Presentations [4 groups X (5 min/group presentation time + 5 min Qs/As = 10min) = 40 min]

When students have completed their assignments, have each group present its project to the class. Allocate five minutes post each presentation for discussion.

Instructions for teachers

The mobile application is used to experience Augmented Reality. If students are not familiar with the term “Augmented Reality” the teacher must explain before the activities of the Lesson Plan start.

Augmented Reality (AR) is like Virtual Reality (VR) that you can see through the screen of your mobile device. In our case the “magic” map is powered by special pixel combination and this helps our mobile application “CleverBooks Geography” to recognize the pixels set and produce virtual objects right through your mobile screen. The magic happens when you point with the camera of your mobile device at specific picture on the map in front of you.

Adaptation for students with special educational needs

Have each group choose a habitat and draw pictures of plants and animals that would be found there.

Evaluation

Evaluate groups on their projects using a simple three-point rubric:

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Three points/Grade A 'Excellent': fulfills all requirements of assignment; project carefully prepared; group works well together; presentation well organized

Two points/ Grade B 'Very Good': fulfills most requirements of assignment; project satisfactorily prepared; group works well together most of the time; presentation satisfactory

One point/Grade C 'Good': fulfills few requirements of assignment; project carelessly prepared; group has problems working together; presentation disorganized

Grade	A	B	C	Comments
Group 1				
Group 2				
Group 3				
Group 4				

Suggestion for further activities

Animals Adaptation

In addition, each group will be given a specific assignment that will require the group to show how the animals in the assigned habitat are adapted for life there.

Mystery Animals

Have each group choose an unusual or unfamiliar animal from the habitat it has been assigned and prepare a card with the name of the animal, a description of the animal's physical and behavioral characteristics, and a picture of the animal. Mix up the cards and give one to each group, making sure that no group gets its own card. Then challenge each group to figure out, on the basis of the animal's physical and behavioral characteristics, whether the animal it has been given belongs in the habitat the group was assigned.

Other Comments

N/A

Course: Developing Digital Competence of Primary School Children in Greece	
Lesson 3: History and heroes: Creating Digital Stories	
Digital Competence Area: Digital content creation.	
Grade Level: 3	**Timeframe: 90 minutes**

Lesson Overview:

It's true that during the 21st century student's literacy skills must be improved, they should obtain the feeling of confidence, which concerns the creation of a digital content, to sense creators and to obtain a deeper understanding in the most areas of curriculum. Upon watching videos of other's

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pupils creations, start to work in classroom preferably in small groups in order to create their digital stories or poems on a subject of the course, e.g. History or Language.
The teacher gives the key-words to the students and ask from them to based on a History course topic: “Odysseus and Polyphemus”.
Then, they work in groups of four pupils in order to design their storyboard.
After they develop their digital story with the aid of the digital storytelling creation tool and the time it is completed, they present the story to the class.

Objectives:

Upon completion of this Lesson, students will be able to:

- develop digital content,
- create content in different formats (e.g. text: a story or a poem),
- edit and improve existing content,
- express oneself through digital means,
- correct or change some areas of the text,
- evaluate their product,
- Appreciate feedback from classmates

Material/ resources

Tablets, internet connection, projector (we have not one of this material, so we should visit, every time is available, the Computer Lab), StoryJumper.

Lesson Activities

“A modern Odysseus (1/2 hour).

Description of Activity including:

- Initially we are in a classroom, pupils have enabled their tablets and teacher his/her laptop.
- The teacher asks from pupils to remember the myth of “Odysseus and Polyphemus” as also the poem of Konstantinos Kavafis “Ithaka”, where the two first stanzas are attached below:

  Once you set out for Ithaka
  hope your road to be long,
  full of adventures, full of knowledge.

  Don't be afraid of the Laistrygonians and the Cyclops,
  the angry Poseidon
  you'll never find them on your way
  if you keep your thoughts high,
  if rare excitement touches your spirit and your body.

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They are the starting points in order to understand the pupils that their digital story will have a hero who at one time in his life run into a brick wall, but with the precious help of a deus ex machine, is rescued and realize that everything happens for a reason and the important in life is the travel and the experience, all someone gains from the route of the trip.

- The approach/ teaching method is: constructivism teaching methods, authentic learning, community based learning.

- engagement and active participation through hands-on practices

- each group consists of four pupils

- students' prior knowledge can help learning: students are not blank slates on which our words on inscribed. The students bring more to the interpretation of the situation than we realize. What they learn is conditioned by what they already know. What they know can be as damaging as what they don't know (Svinicki, 1993).

- resources/ digital tools:

1. Konstantinos Kavafis "Ithaka",

2. Adams, M.J. (1990). *Learning to read: Thinking and learning about print*. Cambridge, MA: MIT Press.

3. Lave, J (1988). *Cognition in practice: Mind, mathematics and culture in everyday life*. Cambridge University Press

4. Authentic learning: what, why and how? In *e-Teaching 2016 (10).* Retrieved from: http://www.acel.org.au/acel/ACEL_docs/Publications/e-Teaching/2016/e-Teaching_2016_10.pdf

"A modern Odysseus (1&1/2 hour).

Description of Assessment Activity includes:

- We are always in the classroom, pupils have enabled their tablets and teacher his/her laptop. Later we'll visit the computer lab, in order to work with the appropriate digital equipment.

- The teacher presents a digital story and blog of other pupils, such as to obtain children a first idea about how is expected to be their content.

- Then, start to work in groups of four pupils with their given words, which are about a kid, who is refugee, leaves from his country in order to live a better life.
With these words, pupils will create a story, where every drawing, photo and text will be installed in our first book (StoryJumper).

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- The approach/ teaching method is: constructivism teaching methods, authentic learning, community based learning.

- engagement and active participation through hands-on practices.
  Pupils use their own ability to write a text on a computer, to draw and, if they want to add music or their voices.

- students' prior knowledge shows progress, they realize the difference between the simple writing of a story in a paper and in digital frame.

These activities develop students' basic oral, written and digital skills, or content understanding. They feel the happiness of creation as something which belongs to them and only. It will also help to the global approach to the migration issue. Students improve their digital literacy and communication skills and enhance their creative thinking. More precisely, by implementing digital storytelling in the classroom, students practice skills such as research skills, writing skills, organizational skills, technology skills, presentation skills, problem-solving skills, assessment skills (Chan, Churchill & Chiou, 2017).

- resources/ digital tools:

1. (https://www.storyjumper.com/)

2. (https://www.storyboardthat.com/)

3. *Ertmer, P. A & Newby, T. J. (2013). Behaviorism, cognitivism, constructivism: Comparing critical features from an instructional design perspective.*
Performance Improvement Quarterly, 26 (2), 43 – 71.

Instructions for teachers

The following steps will be helpful for teachers:

- Decide on a topic and they announce the subject of the topic to the students.
- Create an account in one of the digital storytelling creation tools.
- Present the creation tool :StoryJumper(https://www.storyjumper.com/) to the students.
- Show examples of other students' creations.
- Provide instructions to students on how to use the tool.
- Ask students to write the narratives of their stories.
- Ask students to design their storyboards (https://www.storyboardthat.com/)

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- Create their digital storytelling.
- Present their story to the class.
- Discuss about the story.
- Students tell what liked them more in the story and suggest possible areas which need improvement.

Follows the drawing of conclusions or (in case it's possible) the moral of the story.

Other Comments

After the ending of lesson, pupils are expected to recognize that the title (A modern Odysseus) is metaphorical, because the students' hero leaves his country and believe that'll find a better life, while Odysseus in the ancient myth was away from his homeland, because he participated in a ten years during the war and he had to face a lot of obstacles and adventures for another ten years, since an ancient god, Poseidon, was angry with him. So, the two situations have got similarities and differences.

The completion of a questionnaire, which would be given to others pupils of the school about the evaluation of the third class digital story could be a very useful tool for teacher and pupils.

Course: Developing Digital Competence of Primary School Children in Greece	
Lesson 1: Stop Cyber-Bullying	
Digital Competence Area: Safety	
Grade Level: 5	**Timeframe: 90 minutes**

Lesson Overview:

Nowadays, even children of younger age tend to use social platforms and game-based platforms for social interaction and leisure activities. Nevertheless, on-line milieu is subject to similar negative behaviors we encounter in f2f interactions: offensive speech, threats, harassment, peer rejection. The "Stop Cyber-Bullying" lesson plan aims at making primary school children aware of bullying behavior and help them develop knowledge on how to respond and prevent bullying incidents.

Objectives:

Upon completion of this Lesson students will be able to:

- explain ways to how to avoid threats to physical and psychological health related with the use of technology
- select ways to protect self and others from dangers in digital environments.
- discuss on digital technologies for social well-being and inclusion.
- create a digital poster on cyberbullying and social exclusion for their school's digital learning platform, which helps their classmates to recognise and face up to violence in digital environments.

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Material/ resources

PC stations
PC projector
Video: https://www.youtube.com/watch?v=SbMVvUcMFZ0
Video: https://www.youtube.com/watch?v=muRVmsPCI94
Popplet platform: http://popplet.com/ or Coggle (https://coggle.it/) or MindMup (https://www.mindmup.com/)
Glogster platform: https://edu.glogster.com

Lesson Activities

1. Gaining attention on the topic (5 minutes)

The teacher draws pupils' attention on cyber bullying by showing a short video which depicts the negative psychological effects on cyber-bullying victims:
https://www.youtube.com/watch?v=muRVmsPCI94

2. Informing pupils on the objectives (2 minutes)

The teacher presents pupils with the objectives and explains them how this lesson is going to help them prevent cyber bullying behavior.

3. Stimulating recall of prior learning (6 minutes)

The teacher helps children recall knowledge about bullying in school: definition, people involved (bully, victim, bystander), types of bullying (verbal, physical, mental), effects of bullying, ways to stop bullying behavior. He/she can present the video up to 3' which summarises main points on how to prevent bullying behavior.

4. Presenting the concept of cyber bullying (8 minutes)

The teacher explains that cyber bullying is bullying through the use of technology, via computer, mobile and gaming networks. Then she/he asks pupils to describe cyber-bullying using bullying as an analogy and to identify the points of similarity and difference between the two concepts. Then the teacher presents the rest of the video which includes information about cyber bullying.

5. Encoding of information (15 minutes)

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The teacher supports children to organize information on cyber bullying behavior through creating concept maps on Popplet platform http://popplet.com/ or Coggle (fully online) (https://coggle.it/) or MindMup (https://www.mindmup.com/) (must be downloaded to device but is free to use and creates unlimited concept maps). Pupils work in groups of two in front of a PC in the computer lab. Information depicted on mindmaps may include:

a. Forms of Cyber Bullying such as:
    1. posting embarrassing or threatening comments, messages or photos
    2. posting "indirect" offensive messages (messages do not reveal any name but is evident by everyone who is the recipient of the offensive comments)
    3. Fake profiles
    4. Rejecting and excluding fellow pupils from online group activities
b. Reasons of Cyber-Bullying such as:
    1. Maltreatment by parents or other family members
    2. Retaliation towards a former cyber-bullying behavior
    3. Poor self-esteem, depression or anger
    4. Need to draw attention
    5. To feel powerful and in control
    6. To have fun
c. Ideas on how to help someone being cyberbullied such as:
    1. telling a trusted adult
    2. blocking the offender
    3. defend him/her against the bully

The teacher helps each group enrich its mind map.

6. Creating a poster on Cyber Bullying (40 minutes)

During this teaching step pupils demonstrate their knowledge through creating a digital poster on the Glogster platform using information retrieved from their mind maps. Pupils work in groups of two in front of a PC in the computer lab.

7. Pupil assessement (10 minutes)

Pupil teams present their posters and the teacher can use the evaluation rubric provided (source: https://oakdome.com/k5/lesson-plans/multi-media/rubric-for-presentation-or-poster.php) to assess pupils learning and provide them with feedback.

Instructions for teachers

A fan way teacher can use to introduce pupils the idea of spreading positivity through online conduct and eliminating cyber bullying behaviors is the online game "Be internet Awesome" provided by Google: https://beinternetawesome.withgoogle.com/en_us/interland/landing/kind-kingdom

According to Google "The Internet is a powerful amplifier that can be used to spread positivity or negativity. Kids can take the high road by applying the concept of "treat others as you would like to

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be treated" to their actions online, creating positive impact for others and disempowering bullying behavior."

Be Internet Awesome teaches kids the fundamentals of digital citizenship and safety so they can explore the online world with confidence. Interland is an adventure-packed online game that makes learning about digital safety and citizenship interactive and fun—just like the Internet itself. Here, kids will help their fellow Internauts combat badly behaved hackers, phishers, oversharers, and bullies by practicing the skills they need to be good digital citizens. The Be Internet Awesome curriculum gives educators the tools and methods they need to teach digital safety fundamentals.

Other Comments

N/A

Course: Developing Digital Competence of Primary School Children in Greece	
Lesson 5: Arduino moving lights	
Digital Competence Area 5: Problem solving 5.3 Creatively using digital technology	
Grade Level: 6	**Timeframe: 90 minutes**

Lesson Overview (Please edit accordingly):
The lesson "Arduino moving lights" engages children individually and collectively in some cognitive processing in order to understand and resolve well-defined and routine conceptual problems and problem situations in digital environments. The problem children need to resolve is to create a circuit with eight led lights and a scratch code that will turn on and off the eight led lights in succession.

Objectives:
Upon completion of this Lesson students will be able to:

- Resolve a well defined problem in the digital environment which involves: (a) constructing a complex circuit on an Arduino board, and (b) developing a scratch code for the circuit to run smoothly.

Material/ resources

Arduino boards, PCs, S4A software, Arduino software - the Arduino SDK (http://arduino.cc/download), breadboards, jumper wires, led lights

Lesson Activities

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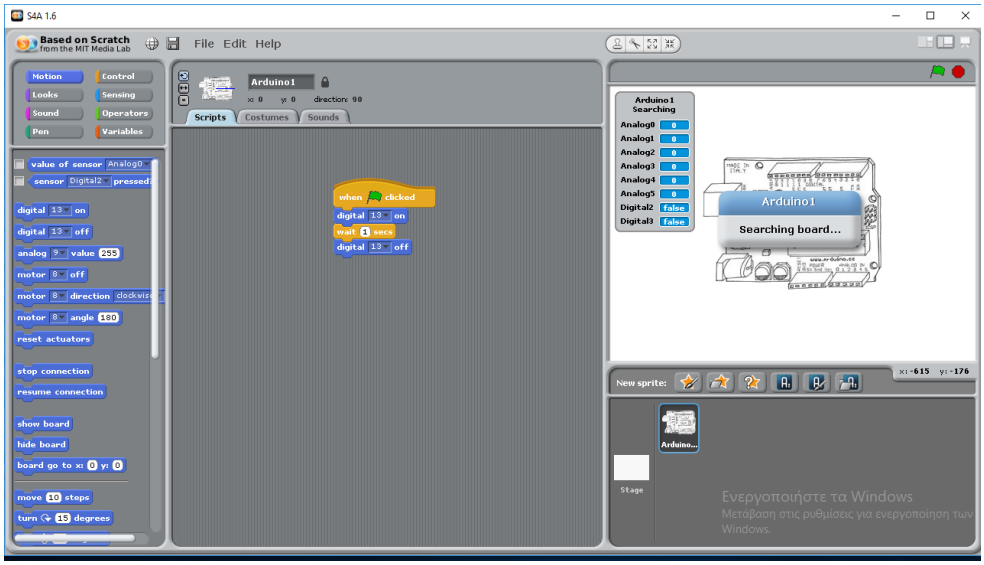
The teaching approach evolves in four phases based on “The looping command using Scratch programming language”, lesson plan of the Advanced Electronic Scenarios Operating Platform, http://aesop.iep.edu.gr/node/12196):

1. Exploration (10 minutes)

Pupils recall their previous knowledge on the Scratch programming language and how they can use it to control a blinking light on the Arduino board.



They implement the script on the Arduino while checking wirements:

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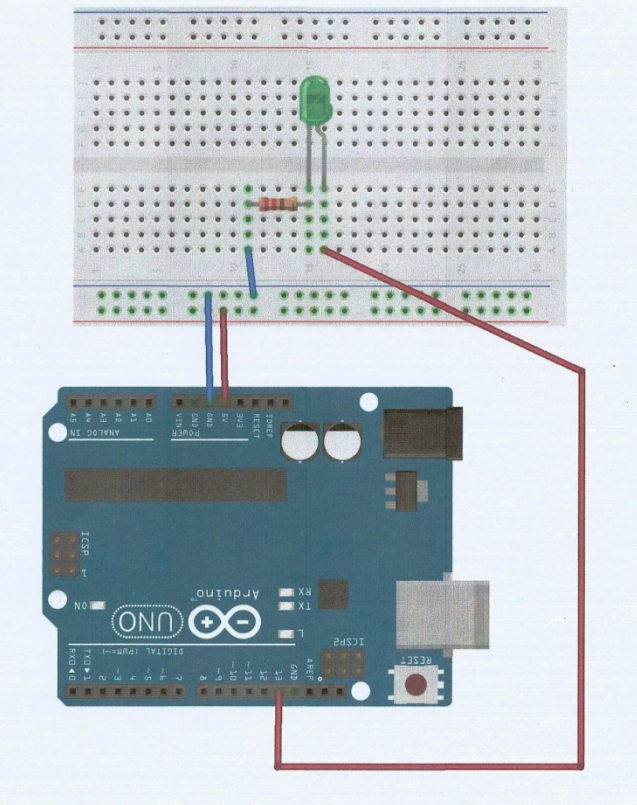
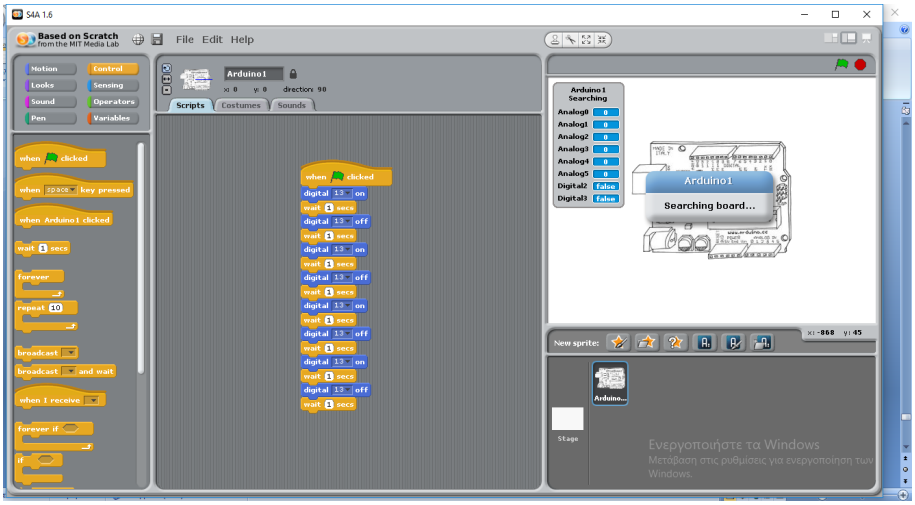


2. Presentation (15 minutes)

The teacher asks children to work out a way of making the led light blinking continuously. Children probably reach a solution such as the one presented in the picture below:



Children realize that their solution (a) can become too long and complicated and (b) is not effective since there is a limit on how many times the led light will blink. Then she/he introduces the looping command and discusses details with pupils:

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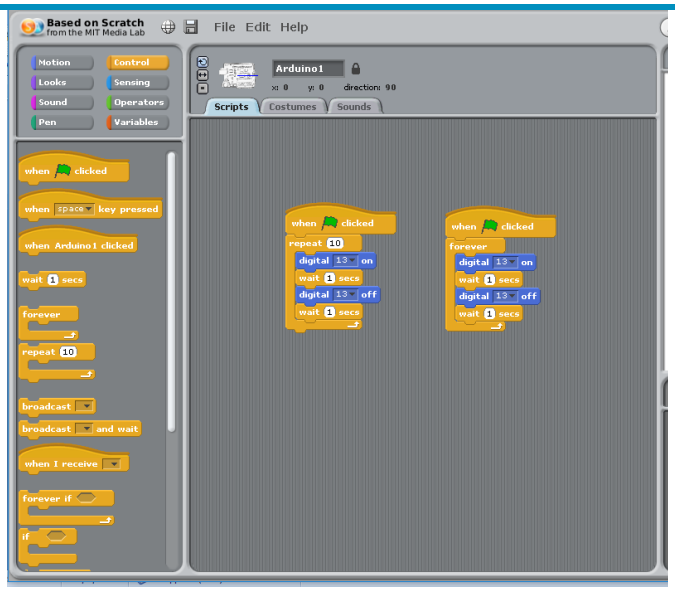

3. Implementation (15 minutes)

Pupils working in pairs use teacher instructions to experiment with the looping command, adjusting the duration of the control variables and implementing their scripts on Arduino boards.

4. Evaluation / Reflection (50 minutes)

   The teacher evaluates pupil knowledge through asking them to use their knowledge in a new Arduino project. Pupils working in pairs are challenged to connect led lights to all digital pins and create a scratch programme which will (a) activate and deactivate all led lights in succession and (b) use the looping command in their code.

   The teacher can present the following picture which pupils can use in order to complete their circuits.

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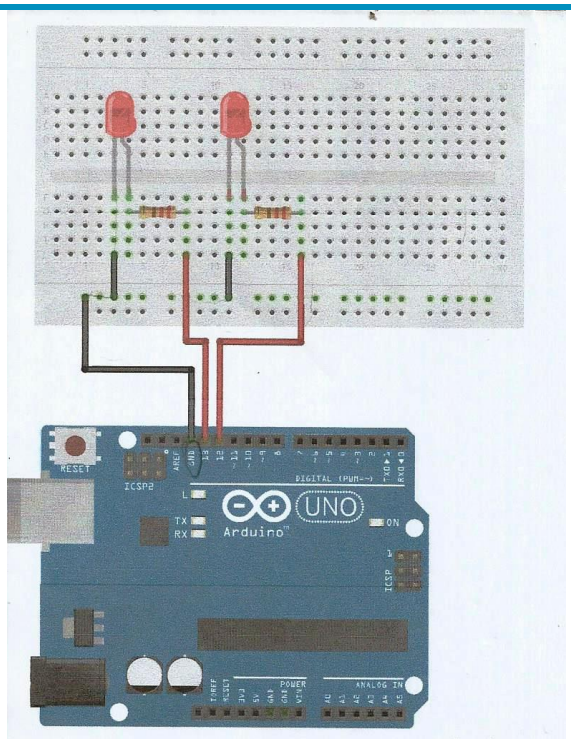
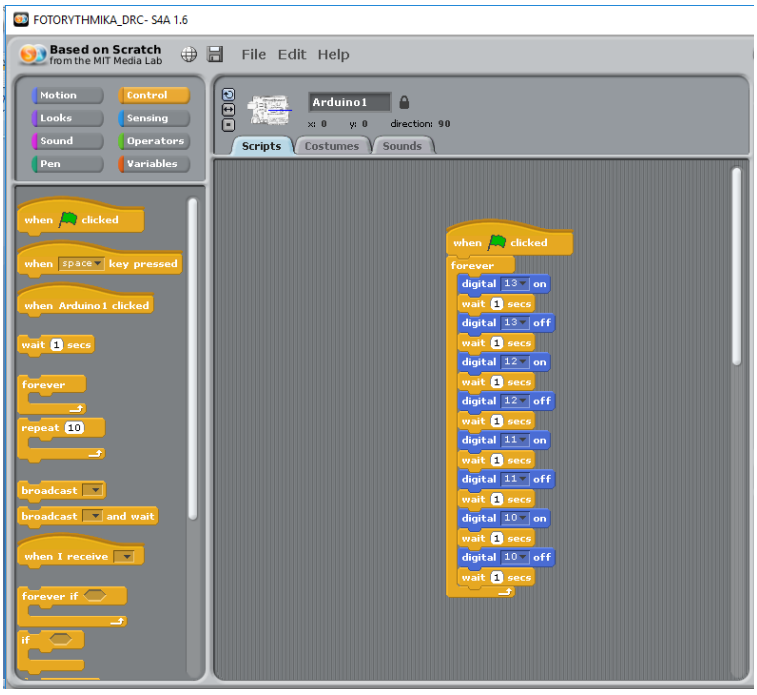


Pupils test their circuits evaluate their scratch codes against the following suggestion:



Instructions for teachers

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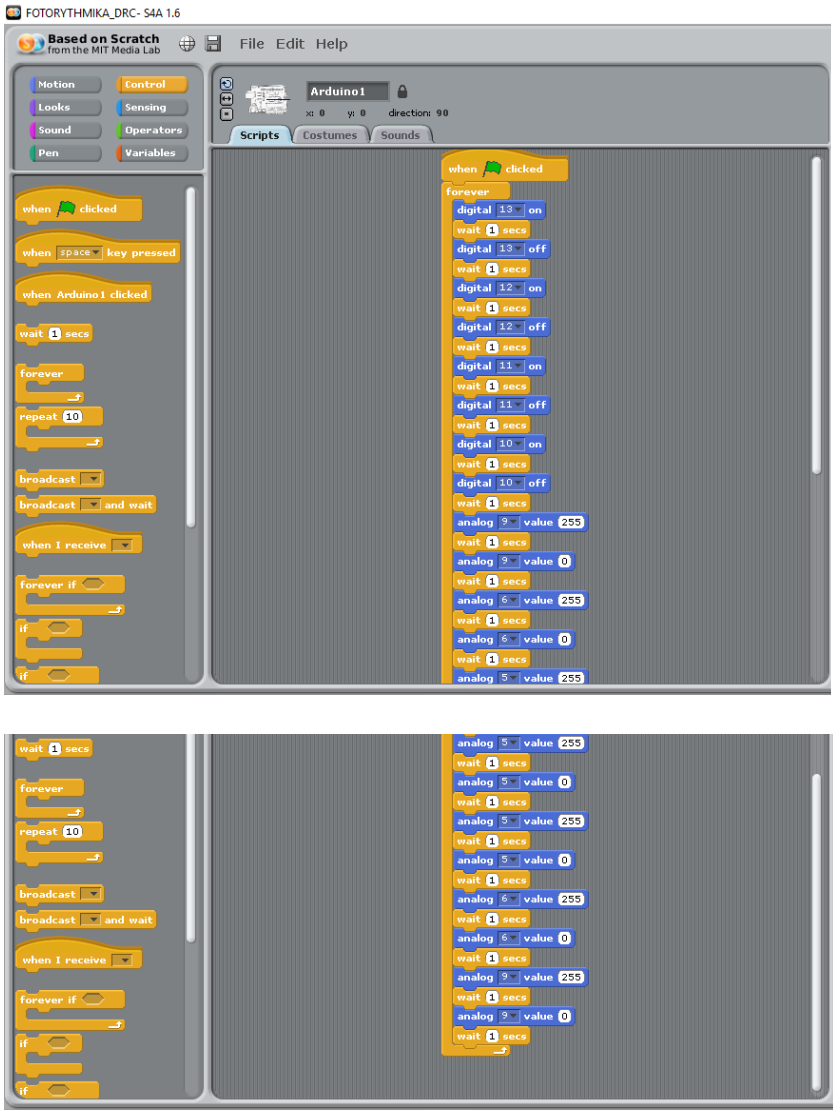
The teacher can add an extra challenge asking pupils to connect more led lights using the analog pins. Then a possible solution to this challenge can be the following:



The teacher explains the differences between analog and digital pins and how pupils can adjust variable values of analog pins to change led luminosity.

Other Comments

N/A

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National Digital Citizenship Curriculum

Italy: Digital Citizenship Lesson Plans

Outline Lesson Plans and Teachers Contacts

Lesson Plan	DigComp	School	Teachers Digital Educators	Class	Contacts
(1) "Let's grow up by respecting water"	1 & 3	IC Bevagna - Cannara	Massimiliano Petrini, Egizia Nizi, Luigina Minni	3° A - 3° B, primary school	Massimiliano Petrini: primariacannara@libero.it
(2) "D'arborea vita viventi"	2, 3 & 5	ICPg IV "Carducci - Purgotti"	Nicoletta Angeli	1° B, first degree secondary school	Nicoletta Angeli: nicoletta.angeli@libero.it
(3) "Journey through the news"	3 & 4	ICPg IV	Stefania Burubù Chiara Paoletti Martina Sabatini	4°, primary school	Chiara Paoletti: chia27@libero.it
(4) "A scuola di binario"	5	ICPg IV	Anna Locchi	1° A - 1° D primary school	Anna Locchi: annalocchi@gmail.com
(5) "Learning in Connection"	All	IC IV Foligno	Roberta Fusaro Savio Doronsio Cristina Castellani	Mixed classes, 1° degree secondary school	Roberta Fusaro: robertafusaro@libero.it

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Overview of the Lesson Plans

Lesson Plan	DigComp	Age group/ Classe	Duration	Main Activities	Equipment & Supporting Material	Tools	Expert(s)	Link to DRC curriculum
(1) **"Let's grow up by respecting water"**	1 & 3	Grade: 3rd Age-group: 8yr No: 40	16h	- Creation of stories connected to the myths on water - Creation of videos (work on tablet) - Research on good practices on water saving - Representation of good practices on water saving through digital storytelling	- No. 8 Tablets - Stationery - Lim - Documentation - Questionnaires	LearningApps Video Show-App "Hahai" – App	Flavio Sabbatini (*) Lab 1st session 16/05/19 10-11.30 3B 11.30-13 3A Lab 2nd session 17/05/19 11-13 3A 13.30-15 3B	The Lesson plan is consistent with the DRC curriculum, because it involves digital storytelling. Moreover, it assesses the topics of water saving and water responsible use, which are a very important issue in nowadays societies, and that each responsible citizen should be aware of. Finally, the activities of the lesson plan will be carried out in groups, thus stimulating cooperation and participation among the students.
(2) **"D'arborea vita viventi"**	2, 3 & 5	Grade: 6th Age-group: 11yr No: 20-25	40h (9.5h in school + approx. 10h	- Use of LMS (learning management system)	- PC and personal devices - Book "L'uomo che piantava gli alberi"	Tes-Blendspace WeSchool Edmondo		The lesson plan promotes many the skills highlighted as relevant in the DRC curriculum, such as: collaboration,

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			study visits + 20.5h at home)	- Plant-growth and online registration of growth progress - Video documentation and video production - Study visits to local botanical garden	- Seeds, topsoil and pot for plant			communication, participation, development of critical thinking, knowledge and use of the media language, use of communication and social media to analyze and connect knowledge spots.
(3) **"Journey through the news"**	3 & 4	Grade: 4th Age-group: 9yr No: 20-25	15h	- Analysing the concept of Fake News - Digital storytelling – reinventing well known fairy tales through fake news - Use of Scratch	- PC/ computers - Notebooks - Headphones (can belong to the students')	CODE.org Scratch		The lesson plan confronts in depth the concept of fake news and online safety (DigComp 4). To develop the topics, it uses the method of digital storytelling, that has been recognised as a very effective method throughout the DRC curriculum.
(4) **"A scuola di binario"**	5	Grade: 1st Age-group: 6yr No: 20-25	26.5h	- Work on the concept of recycling - Sharing of creative ideas with the classmates - Tinkering with recycling materials	- Informational leaflets from the municipality - Recycling materials - Stationary - Cardboard boxes - Notebooks - Posters and post-it		DENSA Coop. Soc. (**)	The lesson plan works on DigComp 5-Problem-solving, while developing in depth the pupils' computational thinking, a characteristic deemed as fundamental

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					- Pictures and images			throughout the DRC curriculum.
(5) **"Learning in Connection"**	All	Grade: 6th Age-group: 11yr No: 20	30h	- Group discussion and confrontation on topics related to the Web: social media and online communication, copyright policy, netiquette, cyber-bullying and hate speech - Production of videos on the topics treated throughout the course - Share of contents produced online: rules on online sharing and communication	- PC/ computers - Lim - Digital resources (documents, videos, images)	Open Shot Vlc Gimp Audacity Stop Motion Video- App		The lesson plan involves all of the five DigComp, and develops in depth the concepts of cyber-bullying, hate speech and web reputation, fundamental to develop awareness on the negative effects of Internet exposure among the pupils. To do so, the lesson plan foresees the use of methodologies such as digital storytelling, video making and web communication, which have been recognised as very effective by the DRC curriculum. Finally, the activities of the lesson plan will be carried out in groups, thus stimulating cooperation and participation among the students.

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(*) **Flavio Sabbatini** student of ICT and mathematics at the University of Perugia – Developer of the didactical App for primary school "Hahai" (meaning butterfly in Hawaiian language)
(**) **DENSA Coop. Soc.** (Developing Edutainment for New Skills and Attitudes) projects and develops innovative educational experiences for children, teenagers, families and teachers, with the objective to encourage the development of awareness and engagement in society in future citizens - https://www.kidsb.it Representatives: Elisa Di Toro & Giulia Paciello

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Curriculum (1): Let's grow up by respecting water

Curriculum Overview

Distribution of Courses:

Partner: Scuola Primaria Cannara **Lesson Plan "Let's grow up by respecting water"**			
Corso	Modulo	Classe	Durata
Course 1. "Myths in our view" about water		3rd	10h
	Module 1. Our "myths" about river, sea, rain and water sources		4h
	Module 2. A story in four images		2h
	Modulo 3. "Videomyth"		4h
Course 2. "Let's grow up by respecting water"		3rd	6h
	Module 4. Water… Friends		2h
	Module 5. Non giochiamoci l'acqua		2h

Introduction
Water represents to children a natural element to play and have fun with, something that offers the possibility to experience positive feelings, to know, to explore. Water is affection, emotion, memory. Water is also a key element to understand natural phenomena, life cycles, and it represents one of the fundamental elements of life, a unique resource- that is endangered by irresponsible use by human beings. Through this lesson plan, the team of teachers wishes to familiarise the students with the characteristics of the water element, to create a digital handbook on how to respect this resource, as it is of fundamental importance for everyone on planet Earth.

Objectives:

After the end of the curriculum, the students will be able to:

- Know the importance of water as an element fundamental for our life.
- Know the characteristics and properties of water.
- Know the water cycle and status change.
- Elaborate hypotheses and verbalize the experiences.
- Reflect on the daily use of water.

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- Develop awareness on the right to water.
- Understand the interdependence of phenomena and situations.
- Find the cause-effect relations, both direct and indirect, that influence daily choices about the use of water and the products that involve their use.
- Work in groups.
- Search for information and share it within the group.
- Use a digital App.

Modules per Course:

Course 1: "I miti secondo noi" sull'acqua	
Module 1. Our "myths" about river, sea, rain and water sources	Timeframe: 4 hours
Module 2. A story in four images	Timeframe: 2 hours
Module 3. "Videomyth"	Timeframe: 4 hours

Course 2: "Let's grow up by respecting water"	
Module 4. Water… Friends	Timeframe: 2 hours
Module 5. Non giochiamoci l'acqua	Timeframe: 2 hours

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Digital Citizenship Course Index

Lesson Plan: Cresciamo nel rispetto dell'Acqua							
DigComp Competence Area	**Reference competence**	**Year 1** (6-7)[3]	**Year 2** (7-8)	**Year 3** (8-9)	**Year 4** (9-10)	**Year 5** (10-11)	**Year 6** (11-11)
1. Information	1.1 Browsing, searching and filtering information	☐	☐	X	☐	☐	☐
	1.2 Evaluating data, information and digital content	☐	☐	☐	☐	☐	☐
	1.3 Managing data, information and digital content	☐	☐	X	☐	☐	☐
2. Communication and Collaboration	2.1 Interacting through digital technologies	☐	☐	☐	☐	☐	☐
	2.2 Sharing through digital technologies	☐	☐	X	☐	☐	☐
	2.3 Engaging in citizenship through digital technologies	☐	☐	X	☐	☐	☐
	2.4 Collaborating through digital technologies	☐	☐	☐	☐	☐	☐
	2.5 Netiquette	☐	☐	☐	☐	☐	☐
	2.6 Managing digital identity	☐	☐	☐	☐	☐	☐
3.Content creation	3.1 Developing digital content	☐	☐	X	☐	☐	☐
	3.2 Integrating and re-elaborating digital content	☐	☐	X	☐	☐	☐
	3.3 Copyright and licenses	☐	☐	☐	☐	☐	☐
	3.4 Programming	☐	☐	☐	☐	☐	☐
Safety	4.1 Protecting devices	☐	☐	☐	☐	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	☐	☐	☐	☐

[3] ages

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	4.3 Protecting health and well-being	☐	☐	☐	☐	☐	☐
	4.4 Protecting the environment	☐	☐	X	☐	☐	☐
5. Problem solving	5.1 Solving technical problems	☐	☐	☐	☐	☐	☐
	5.2 Identifying needs and technological responses	☐	☐	☐	☐	☐	☐
	5.3 Creatively using digital technologies	☐	☐	X	☐	☐	☐
	5.4 Identifying digital competence gaps	☐	☐	☐	☐	☐	☐

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Lesson Plans

Module 1

Course 1: "Myths in our view" about water	
Module 1: Our "myths" about river, sea, rain and water sources	
Digital Competence Area: 3. Digital content creation and 2. Communication and collaboration	
Grade Level: 3rd	**Timeframe:** 4 hours

Lesson Overview:
Each group is divided in diverse micro-groups that will cooperate all together to make stories about the mythic origin of the water from sea, rivers, rain and springs.

Objectives:
At the end of the lesson students will be able to:

- Know the structure and the main features of the mythical tale;
- Produce a mythical tale starting from some inputs;
- Team working.

Material/ resources

Stationery

Lesson Activities

14. Inventing a myth about rain, sea, river and water sources

Duration: 4 hours

Description:

- Working context: lessons take place in class by creating several cooperative working islands for small heterogeneous groups;
- Teaching method: cooperative learning
- Active involvements thanks to participatory practices: after the analysis of the myth structure and after assigning a scheme to each group, students are required to write a short text.
- Group size: micro-groups made up by 4/5 members
- Verification of the previous knowledge: oral conversation
- Resources, digital tools, equipment: tablets are not used in this phase
- Connection with the reference skill

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15. Insert Assessment Activity
    - Students participation
    - Respect for the ideas of others
    - Additional personal contents
    - Reporting with appropriate terms
    - Respect of the assigned time-schedules

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands

- Monitor students' learning:
  a) Observing behaviors inside the small groups
  b) Assessing the participation and the proposals made by the several members

- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done
  b) Valorizing the proposed ideas and the degree of participation
  c) Highlighting and valorizing the texts and the products presented.

- Provide feedback

- Refine instruction:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Reformulate the commands by presenting schemes on the board.

- Promote students' active engagement
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.

- Incorporate scaffolding techniques
  a) Tasks and roles rotate into the group in order to support each other in carrying out the activities

- Additional activities
  a) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Module 2

Course 1: "Myths in our view" about water	
Module 2: A story in four images	
Digital Competence Area: 3. Digital content creation and 2. Communication and collaboration	
Grade Level: 3rd	**Timeframe:** 2 hours

Lesson Overview (Please edit accordingly):
Each group is divided in diverse micro-groups that will cooperate all together to create a sequence of images that will represent the story they made.

Objectives:
At the end of the lesson students will be able to:

- Representing graphically in logical-temporal sequences the story they made on "myths about water".

Material/ resources

Stationery

Lesson Activities

1. Creation of sequences of images on the stories made by the small groups of students.

Duration: 2 hours

Description:
- Working context: lessons take place in class by creating several cooperative working islands for small heterogeneous groups;
- Teaching method: cooperative learning
- Active involvements thanks to participatory practices: after the design phase, students will create images representing the development of the story;
- Group size: micro-groups made up by 4/5 members
- Verification of the previous knowledge: observation of the graphic product.
- Resources, digital tools, equipment
- Connection with the reference skill

2. Insert Assessment Activity
   - Students participation

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- Respect for the ideas of others
- Additional personal contents
- Care of the documents
- Respect of the assigned time-schedules

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands

- Monitor students' learning:
  a) Observing behaviors inside the small groups
  b) Assessing the participation and the proposals made by the several members

- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done
  b) Valorizing the proposed ideas and the degree of participation
  c) Highlighting and valorizing the texts and the products presented.

- Provide feedback

- Refine instruction:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Reformulate the commands by presenting schemes on the board.

- Promote students' active engagement
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.

- Incorporate scaffolding techniques
  a) Tasks and roles rotate into the group in order to support each other in carrying out the activities

- Additional activities
  a) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Course 1: "Myths in our view" about water
Module 1: "Videomyth"
Digital Competence Area: 3. Digital content creation and 2. Communication and collaboration
Grade Level: 3rd / **Timeframe:** 4 hours
Lesson Overview (Please edit accordingly): Each micro-group will receive a tablet and after the presentation of the working phases, students will be led in the creation of a short digital video accompanied by music, special effect and audio clip.
Objectives: At the end of the lesson students will be able to: - Organizing the story in a logical-temporal sequence. - Applying diverse means to create and modify contents in digital format - Showing ways to express themselves through the creation of digital tools.
Material/ resources Tablet provided by the school
Lesson Activities 1. Designing a video on the story, through the use of the App VIDEO SHOW 2. Duration: 4 hours Description: - Working context: lessons take place in class by creating several cooperative working islands for small heterogeneous groups; - Teaching method: cooperative learning - Active involvements thanks to participatory practices: each micro-group should create a short video by using what they produced until now through the tablet with the specific "video show" App - Group size: micro-groups made up by 4/5 members - Verification of the previous knowledge: observation of the group dynamics and of the final product - Resources, digital tools, equipment, tablets - Connection with the reference skill: creation of digital context

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Insert Assessment Activity:

- Students participation
- Respect for the ideas of others
- Additional personal contents
- Care of the products
- Respect of the assigned time-schedules

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands

- Monitor students' learning:
  a) Observing behaviors inside the small groups
  b) Assessing the participation and the proposals made by the several members

- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done
  b) Valorizing the proposed ideas and the degree of participation
  c) Highlighting and valorizing the texts and the products presented.

- Provide feedback

- Refine instruction:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Reformulate the commands by presenting schemes on the board.

- Promote students' active engagement
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.

- Incorporate scaffolding techniques
  a) Tasks and roles rotate into the group in order to support each other in carrying out the activities

- Additional activities

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a) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Module 4

Course 2: "Let's grow up by respecting water"	
Module 4: "Water…Friend"	
Digital Competence Area: 3. Digital content creation and 2. Communication and collaboration	
Grade Level: 3rd	**Timeframe:** 4 hours

Introduction:
The problem of water has been identified by UN as the most serious among the environmental problems: the problem of the ineffective management and exploitation of resources is added to their unequal distribution worldwide. It is necessary to address attitudes on the use of water towards the awareness that "water is the most precious substance on the earth, and it plays everywhere an important role for all the ecosystems and for human life". This project aims to promote the concept of water as a precious and common good to raise students' awareness on the necessity of using water in a responsible way.

Objectives:
At the end of the lesson students will be able to:

- Acquiring social and ecological responsibility through the use of water
- Discovering the natural path of water
- Understanding the importance of water in our lives
- Promoting cooperation and teamworking
- Understanding problems related to the use of water
- Activating sustainable behaviours
- Improving the specific vocabulary
- Starting the development of observatory-logical and linguistic skills

Material/ resources
Interactive multimedia whiteboard
Didactical teaching method cards
Structured questionnaire to measure the habits related to the use of water

Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respect the copyright rule

Lesson Activities

1. "Use but not waste"
2. Duration: 4 hours

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Description:

- Working context: lessons take place in class
- Approach/Teaching method: lecture, cooperative learning and workshop
- Learning based on the project and learning by playing through the platform LEARNING APPS
- Group size: cooperative – learning groups according to the Rossi method
- Verification of the previous knowledge:
- Didactical cards, tests
- Resources, digital tools: Interactive multimedia whiteboard, learning apps, tablets, videos
- Connection with the reference skill: creation of digital context

Insert Assessment Activity

- Students participation
- Respect for the ideas of others
- Additional personal contents
- Care of the products
- Respect of the assigned time-schedules

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands
- Monitor students' learning:
  a) Observing behaviors inside the small groups
  b) Assessing the participation and the proposals made by the several members
- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done
  b) Valorizing the proposed ideas and the degree of participation
  c) Highlighting and valorizing the texts and the products presented

- Provide feedback
- Refine instructions:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Reformulate the commands by presenting schemes on the board.
- Promote students' active engagement
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project

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b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.

- Incorporate scaffolding techniques
  a) Tasks and roles rotate into the group in order to support each other in carrying out the activities
- Additional activities
  a) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Course 2: "Let's grow up by respecting water"	
Module 5: Don't gamble water	
Digital Competence Area: 3. Digital content creation and 2. Communication and collaboration	
Grade Level: 3rd	**Timeframe:** 3 hours per class

Introduction:
After collecting several suggestions and best practices aiming to save water and promote its responsible use, through the production of drawings and slogans (even in two languages), we will use an APP to create a storytelling to be published and promoted also on the school website.

Objectives:
At the end of the lesson students will be able to:

- Use a digital application
- Cooperate for a common goal

Material/ resources
Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respect the copyright rule:

- Tablet
- App
- Flyers

Lesson Activities

1. Playing with the App we will create a storytelling on the conscious use of water

Duration: 4 hours

Description:

- Working context: class – computer lab etc.
- Approach/Teaching method: innovative and digital lab activities
- Active involvement through participatory practices, learning based on the project and learning by playing: shared use of digital tools
- Group size: cooperative – learning groups according to the Rossi method
- Verification of the previous knowledge: Didactical cards, tests
- Resources, digital tools: tablets
- Connection with the reference skill: creation of digital context

Insert Assessment Activity

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- Students participation
- Respect for the ideas of others
- Additional personal contents
- Care of the products
- Respect of the assigned time-schedules

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands

- Monitor students' learning:
  a) Observing behaviors inside the small groups
  b) Assessing the participation and the proposals made by the several members

- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done
  b) Valorizing the proposed ideas and the degree of participation
  c) Highlighting and valorizing the texts and the products presented.

- Provide feedback

- Refine instructions:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Reformulate the commands by presenting schemes on the board.

- Promote students' active engagement
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.

- Incorporate scaffolding techniques
  a) Tasks and roles rotate into the group in order to support each other in carrying out the activities

- Additional activities
  b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Curriculum (2): D'Arborea Vita Viventi

Curriculum Overview

Distribution of Courses:

Partner: Tamat and ICPg 4 "Carducci-Purgotti" Lesson Plan: "D'arborea vita viventi"		
Module 1. Workshop on Collaboration and Sharing	Class: 6th grade	1.5h classroom 2.5h work at home
Module 2. The Kingdom of Plants	Class: 6th grade	1.5h classroom 2.5h work at home
Module 3. Problem-solving on Kingdom of the Plants	Class: 6th grade	1.5h classroom 2.5h work at home
Module 4. Flower IDs	Class: 6th grade	5h classroom 3h work at home
Module 5. Our Vegetal Kingdom	Class: 6th grade	1.5h classroom 4h work at home
Module 6. Observing the growth of the plants	Class: 6th grade	2h classroom 3h work at home
Module 7. Studying Medicinal Plants	Class: 6th grade	5h classroom
Module 8. Ecology of the Earth, Ecology of the Self	Class: 6th grade	1.5h classroom 3h work at home

Content Outline

Provide a high-level content outline of the Course. Give brief and descriptive titles for each lesson plan within that.

Course: "D'arborea vita viventi" (cit. da "La pioggia nel pineto" di G. D'Annunzio)

DigComp Area: 2 – Communication and Collaboration (main) + 3 – Digital Content Creation + 5 – Problem-Solving

Course Overview:

D'Arborea Vita Viventi Overview
The course aims to use the latest developments in the fields of technology and social networks offered by the Internet, that favour active participation to multimedia content production, using the educational digital resources

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available on the web, elaborated and shared in the school context. Thanks to the availability of video-lessons, multimedia products, informative resources, and interactive tools, it is also possible for each student to access contents outside the school, according to his/her own time and rhythm, and then dedicate the hours in class to develop in depth-analyses, reflections, implementation, under the teacher's guidance, applying the method of the flipped class. The pedagogical implications of the flipped class are many, from the customization of the learning process, to activism (Dewey) and **peer learning**, from **discovery learning** (Bruner) to **inquiry learning** (Rutherford), from **experiential learning** (Kolb) to constructivism (Jonasses) and connectivism (Siemens).
To implement the course, a LMS (Learning Management System) will be used to manage a virtual class, designed to create a community of teachers, students and parents, and to join resources for the learning process, managing interaction and evaluation in an easy and effective way.
This course promotes the following competences: cognitive, collaborative, communicative, participative, evaluative, of critical thinking, for the use of new languages and expressive forms, and for the connection of different knowledges through individual communication channels.
The teaching content chosen for this course regards the topic "The Vegetal Kingdom", and belongs to the discipline of Natural Sciences. The course foresees observations reported on documents shared by the students on the online platform. The use of the resources, as well as their production, aims to familiarize the students with a dimension that regards science, as well as its values, and to raise their respect and appreciation for vegetal species and their functions (e.g. transforming solar energy). Thus, the pupils will be educated also on an ecological and esthetical level, contemplating the beauty of flowers and discovering the symbolic and ethical meanings connected to the vegetal world. The digital tools will allow to collect and share with the class the products of each students' path, and to create digital products for forwarding new knowledge.

Course Objectives:
After completing the course, the students will be able to:

- Interact through the digital tools used in the activities;
- Share data, information and contents in the digital class environment;
- Create digital resources for learning;
- Use the correct behavioural rules when communicating in the virtual class;
- Plan and use the correct formal procedures to produce digital content;
- Identify and solve problematic situations in a digital environment, applying individual and/or collective strategies;
- Modify, improve and integrate information and content;
- Know and understand the basic principles of the natural and vegetal dimensions;
-

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- Know and interpret the interactions between the vegetal elements and other living beings
- Observe, explore and experience the development of the most common phenomena in the life of the plants;
- Promote ecological awareness and the values of sustainable development.

Modules in The Course:

Modules 8:	
Module 1. **Workshop on Collaboration and Sharing** In school – Introduction to the course, the digital resources on the online platform and to the access and use modalities of the platform. Practice on the tools. At home – Viewing of tutorials on the use of the digital platform and on seeding a plant.	Timeframe: 1,50 h Timeframe: 2,50 h
Module 2. **The Kingdom of Plants** In school – Seeding of seedlings to take home. Introduction to the methods of observation and documentation of the growth of the seedlings, and share of such material. At home – Viewing of the first set of material on the Kingdom of Plants present on the online platform (**TES-Blendspace** application). Observation of the growth of the plant and documentation to be shared on the platform.	Timeframe: 1,50 h Timeframe: 2,50 h
Module 3. **Problem-solving on the Kingdom of Plants** In school – Confrontation on the data from the observation of the seedling growth + problem-solving activity in groups + observation of the documentation on the growth of the seedling and hypothesis formulation. At home – Viewing of the second set of material on the Kingdom of Plants present online (**TES-Blendspace** application) + online tests. Observation of the growth of the seedling and documentation to be shared on the platform.	Timeframe: 1,50 h Timeframe: 2,50 h

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Module 4. **Flower IDs** Field trip: guided tour of the botanical garden and selection of a variety of plant/ flower by each student. At home – Filling out of an ID for a plant or a flower identified by each student during the field trip. Observation of the growth of the seedling and documentation to be shared on the platform.	Timeframe: 5,00 h (flexible) Timeframe: 3,00 h
Module 5. **Our Vegetal Kingdom** In school – analysis of the documentation on the growth of the seedling and hypothesis formulation + group activity: elaboration of an online conceptual map or of interactive poster or of mini-website on the different aspects of the life of a plant. At home – Observation of the growth of the seedling and elaboration of the data collected.	Timeframe: 1,50 h Timeframe: 4,00 h
Module 6. **Observing the growth of the plants** In school – Creation of a video showing the various phases of the growth of the seedling. Share of the final products on the online platform. At home – Viewing and evaluation of the works of the other groups.	Timeframe: 2,00 h Timeframe: 3,00 h
Module 7. **Studying Medicinal Plants** In school – Study of traditional medicinal plants (online or field trip) and creation of an online gallery.	Timeframe: 5,00 h (flexible)
Module 8. **Ecology of the Earth, Ecology of the Self** In school – Evaluation by the teacher. Viewing of the film "The Man Who Planted Trees" and distribution in class of the short story by the same title, by J. Giono, to be read at home. At home – Share of thoughts on the short story on the online platform + calculation of the family ecological footprint (presented on **Blendspace**). Final questionnaire + cognitive autobiography on the course.	Timeframe: 1,50 h Timeframe: 3,00 h

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Lesson Plan: D'Arborea Vita Vivendi

DigComp Competence Area							
2. Communication and Collaboration	1.1 Browsing, searching and filtering information	☐	☐	☐	☐	☐	X
	1.2 Evaluating data, information and digital content	☐	☐	☐	☐	☐	☐
	1.3 Managing data, information and digital content	☐	☐	☐	☐	☐	☐
	2.1 Interacting through digital technologies	☐	☐	☐	☐	☐	X
	2.2 Sharing through digital technologies	☐	☐	☐	☐	☐	X
	2.3 Engaging in citizenship through digital technologies	☐	☐	☐	☐	☐	X
	2.4 Collaborating through digital technologies	☐	☐	☐	☐	☐	X
	2.5 Netiquette	☐	☐	☐	☐	☐	☐
	2.6 Managing digital identity	☐	☐	☐	☐	☐	☐
	3.1 Developing digital content	☐	☐	☐	☐	☐	X
	3.2 Integrating and re-elaborating digital content	☐	☐	☐	☐	☐	X
	3.3 Copyright and licenses	☐	☐	☐	☐	☐	☐
	3.4 Programming	☐	☐	☐	☐	☐	☐
	4.1 Protecting devices	☐	☐	☐	☐	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	☐	☐	☐	☐
	4.3 Protecting health and well-being	☐	☐	☐	☐	☐	☐

[4] ages

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4.4 Protecting the environment	☐	☐	☐	☐	☐	X
5.1 Solving technical problems	☐	☐	☐	☐	☐	☐
5.2 Identifying needs and technological responses	☐	☐	☐	☐	☐	X
5.3 Creatively using digital technologies	☐	☐	☐	☐	☐	X
5.4 Identifying digital competence gaps	☐	☐	☐	☐	☐	X

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Lesson Plan

Module 1

Course: D'ARBOREA VITA VIVENTI	
Module 1: Workshop on collaboration and sharing	
Digital Competence Area: 2 – Communication and collaboration	
Grade Level: 6st grade	**Timeframe: 1,50 h (in school) + 2,50 h (at home)**

Lesson Overview

- The technical objective of the first lesson aims to prepare the context for work. It calls for the participation of all of the figures dedicated to the class: school leader, teachers, students and parents. It foresees the creation of an augmented multimedia work space, ruled by shared norms, positive reinforcement and negative sanctions. This phase foresees the assessment of the students' digital devices at home, and what devices can be used in class, eventually including the BYOD modality.
- This lesson has a methodological objective as well, because it employs the flipped lesson modality, that is permitted by the extension of the scholastic schedule and participation in the activity. The students are invited to integrate the work in school with study activities at home, that are propaedeutic for the following lesson.

Objectives:

At the end of the lesson, the students will be able to:

- Access the virtual class;
- Explore the virtual class environment;
- Post messages, textual documents, images and videos, links to web sources;
- Upload documents;
- Answer to a test/ questionnaire on a LMS;
- Surf TES-Blendspace to work on the lessons.

Material/ Resources

School headmaster's official communication or letter to parents.
Consent form for registering images and videos in agreement with the DGPR.
Laptops (of the school or personal).
Internet connection.
Projector/ IWB (interactive whiteboard).

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[Project number: 2017-1-CY01-KA201-026739]

LMS (Weschool or Edmodo) containing the virtual class setting and including the contents for the workshop.
Document showing the steps of the workshop, the programme, the tools, the arrangement of the class applying innovative methodologies.
Tutorials (videos and text) created by the teacher and already present online to support the students in using the tools according to the objectives of the workshop.

Module Activities

Presentation of the program, of the virtual class and of the skills necessary to use the digital resources.

- Setting:

The lesson takes place in the classroom. The students are grouped in groups of two/ three people, and each group is provided with a laptop. The teacher projects on the wall/ on the IWB of the digital contents of the workshop and presents them to the students.

- Approach/ teaching method:

Lesson that describes the virtual class environment and its resources.

Workshop on the digital environments guided by an instruction/ action greed and guidelines from the teacher.

Discussion to establish the behavioural roles for the virtual class, the positive reinforcements and negative sanctions.

Individual study to interiorise methods, tools and operational techniques inside the digital environment.

- Engagement and active participation through hands-on practices:

In this phase, those students more acquainted with the virtual class will be able to guide and support their classmates. Responsible students will be appointed to monitor and register the problems and difficulties of the class and groups, and will communicate them to the teacher through the virtual class or in school.

- Group size:

In this phase, the work will be carried out in small groups supported by two teachers. At home, the students will watch/ read the tutorials and will leave feedbacks for the rest of the class through the LMS.

- Monitor prior knowledge:

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[Project number: 2017-1-CY01-KA201-026739]

A questionnaire will be handed out to the students to test their digital skills, and observations will be carried out during the activities.

- Link with the relevant digital competence(-ies):

The class will learn to practice a distance-communication, distance-collaboration modality to work with their classmates and interact with the teacher outside the scholastic context.

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Acquisition of the skills necessary to access the workshop.
- Individual work at home.
- Execution of the tasks in a productive and complete manner.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Verify that parents understood the objectives of the workshop.
- Prepare the virtual class, inserting the materials, the links to web sources and the instructions for use, all in a language that will be easy to understand for the students.
- Monitor student's comprehension of the technical aspects.
- Give assignments.
- Clearly formulate the assignments.
- Explicate the reasons of the workshop.
- Explicate the rewards and the advantages of the workshop.

- Monitor students' learning
- Verify that the assignments are handed in on the virtual class and give feedback to students.
- Ask opinion and make sure that everybody understand the opinions of their classmates.
- Talk with the students that are appointed with special responsibilities.
- Verify that the activities in the virtual class are carried out and have positive results.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.

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[Project number: 2017-1-CY01-KA201-026739]

- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions.

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[Project number: 2017-1-CY01-KA201-026739]

Module 2

Course: D'ARBOREA VITA VIVENTI	
Module 2: The Kingdom of Plants	
Digital Competence Area: 2 – Communication and collaboration + n.3 – Digital Content Creation	
Grade Level: 6st grade	**Timeframe: 1,50 h in class + 2,50 h at home**

Lesson Overview

- Starting from the seeding of a plant, each student will monitor and digitally register the progress through images. In this phase, the actions for the experiment consist of: observing approach, formulation of hypothesis and scientific narration of the results, based on data collection, and, finally, statement of the conclusions.
- The digital platform will become an instrument for the elaboration of both qualitative and quantitative data.
- This phase also foresees studying at home, on the resources shared on the TES Blendspace platform, that also allows the teacher to monitor their students' activities and understanding of the contents.

Objectives:

At the end of the module, the students will be able to:

- Collect and express observations on a study subject, to acquire comprehensive information and operate generalizations
- Be able to use Blendspace
- Organize their personal method for observing and registering the growth of the seedling
- Create a short photographical slide-show
- Use the virtual class to photo-document and to share information (collect information on the web)
- Know the main characteristics of the plants and their classification

Materials/ Resources:

Digital camera/ mobilephone
Spreadsheet
Meterials for seeding (small vase, soil, seeds, water)
Laptop
Projector/ Interactive whiteboard (IWM)
Internet connection

TES – Blendspace App

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[Project number: 2017-1-CY01-KA201-026739]

Web sources (video, quiz, websites on plants for creating the content to be studies at home)
Virtual class

Module Activities

Each student seeds a plant in his/her personal vase and studies at home the information on TES-Blendspace related the plant kingdom, through the flipped class methodology.

- Setting:

Seeding should take place in an open space – possibly belonging to the school.
In class, group work (2-3- students), each group has a laptop. The teacher projects the digital contents that the students will find on Blendspace and the students visualize it on their devices.

- Approach/ teaching method:

Horizontal lesson to plan the seeding procedure.
Seeding and photographical reporting for content upload in the virtual class space.
Debate/ discussion on the procedure and formulation of hypothesis.

- Engagement and active participation through hands-on practices:

Each student seeds his/her own plant and will observe its growth at home, collecting pictures regularly and executing simple measurements. The results will be shared in the virtual class space.
When studying at home, students are required to formulate questions and express opinions/ ideas.

- Resources/ digital tools/ materials:

Besides the once explicated above, a simple app for creating photgraphic slide-shows to document the seeding moment.

- Link with the relevant digital competence(-ies):

Observation, description, deduction.
Communicate through the use of different expressive forms.

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Personal contributions.
- Individual work at home.

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[Project number: 2017-1-CY01-KA201-026739]

- Use of proper terminology.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activity.
- Prepare and verify the quality of the materials.
- Guide the students so that they will implement the activities without distractions.
- Monitor the understanding of the assignments.
- Assign homework.
- Give relevance and prise the products elaborated by the students.

- Monitor students' learning
- Observe the students' behaviour in the small groups, and whit the entire class group.
- Ask for opinions, hypothesis and solutions.
- Allow for new proposals to come up and assess their quality.
- Check for notifications and eventual responses during home study.
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.
- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

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[Project number: 2017-1-CY01-KA201-026739]

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions.

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Module 3

Course: D'ARBOREA VITA VIVENTI	
Module 3: Problem-solving on Kingdom of the Plants	
Digital Competence Area: 2 – Communication and collaboration + 3 – Digital Content Creation	
Grade Level: 6st grade	**Timeframe: 1,50 h in school + 2,50 at home**

Lesson Overview

- In this lesson, the focus will be on the learning process, working on conceptualization though problem-solving exercises, related to the contents studies the previous day on the online platform, and to be solved in small groups (2/3 pupils), using digital devices to support the activity (use of the material on the platform or research in the web)
- At home, each pupil will continue to study the Kingdom of the plants on Blendspace, to collect the information on the development of the seedling and to share such content and interact with the classmates.

Objectives:

At the end of the module, the students will be able to:

- Know the general functions of the plants and the functions of the plant sections, as well as the process of photosynthesis, respiration and transpiration.
- Be able to observe and elaborate hypothesis on the phenomena of the kingdom of plants.
- Use the resources on the platform to discuss with the classmates and plan solutions.

Materials/ Resources

Projector/ Interactive whiteboard
Laptop
Internet connection
Notebooks and pens

Blendspace App
Virtual class

Module Activities

Implementation of the information learnt during studying at home, through the solution of problematic situations in groups at school. Further study at home.

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- Setting:

Work in groups of 2/3 people, supplied with a laptop to be used as a support to make hypothesis of solution for phenomena pertaining the vegetal world. The pupils give their solutions on the virtual class within a certain time, and at the results are projected.
At home, the pupils continue to study the contents online, and to collect qualitative and quantitative data on the growth of their seedlings.

- Approach/ teaching method:

Laboratorial activity lead by two teachers.

- Engagement and active participation through hands-on practices:

At the end of the group activity, the solutions to the problems will be presented to the rest of the class, and these will have to be defended. The responses will receive a score.

- Group size:

In the first phase, small group (2/3 students), while in the second phase the entire the class.

- Resources/ digital tools/ materials:

Besides those cited above, useful supports.

- Link with the relevant digital competence(-ies):

Problem-solving and search for solutions.

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Acquisition of the skills necessary to access the workshop.
- Individual work at home.
- Percentage of correct answers
- Students' enjoyment of the activity

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the problem-solving exercises for the scientific field.
- Create the groups heterogeneously, depending on the what observed from the homework of the students.
- Give clear and specific rules.
- Verify that all students understood the tasks.
- Give assignments and give scores to the results.
- Give value to the participation in the virtual class.

- Monitor students' learning

- Observe the students' behaviour in the small groups, and whit the entire class group.

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- Ask for opinions, hypothesis and solutions.
- Allow for new proposals to come up and assess their quality.
- Check for notifications and eventual responses during home study.
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.
- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions.

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[Project number: 2017-1-CY01-KA201-026739]

Module 4

Course: D'ARBOREA VITA VIVENTI	
Module 4: Flower IDs	
Digital Competence Area: 2 – Communication and collaboration + 3 – Digital Content Creation	
Grade Level: 6st grade	**Timeframe: 5,00 h school trip + 3,00 h at home**

Lesson Overview

- Among the various plants, angiosperms are an astounding example of developmental success. Therefore, an experience of direct observation at the local botanical garden will allow to the students to develop more interest in the work, as well as get to know angiosperms better.
- During the field trip, a photographical game and a scavenger hunt will be proposed.
- Each student will create and ID for a flower or plant chosen during the field trip, to be shared with the virtual class. The ID will describe a peculiarity of the flower/ plant, and will include a picture and a list of its characteristics. These IDs will be then shared with the classmates and commented.
- At home, the students continue documenting the growth of their seedlings.
- There is a revision of some presentation tools in function of the following module.

Objectives:

At the end of the module, the students will be able to:

- Know many aspects of the angiosperms.
- Search information on the web, being able to identify and assess the sources.
- Fill in an ID.

Materials/ Resources:

Virtual class
Camera
Paper and pen
Recording device
Tools for taking notes

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[Project number: 2017-1-CY01-KA201-026739]

Module Activities

Collection of information on angiosperms during a field trip to the local botanical garden. Creation of IDs for a flower or plant.

- Setting:

Botanical garden.

- Approach/ teaching method:

Laboratorial didactics.
Experiential learning.

- Engagement and active participation through hands-on practices:

Each pupil is involved and active, thanks to the interest deriving from the field trip and experience. The game also invites the students to discover the flower dimension and environment.

- Group size:

Big group as well as small groups when developing the games.

- Resources/ digital tools/ materials:

PC o laptop.
Google documents or slides.
Brochure from the botanical garden.

- Link with the relevant digital competence(-ies):

Production of a learning object, solving eventual problems during its elaboration through the support of the classmates and the teacher on the virtual class.
Share of the work in the virtual class to receive an assessment from appointed classmates.

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Acquisition of the skills necessary to access the workshop.
- Individual work at home.
- Percentage of correct answers
- Students' enjoyment of the activity

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Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the scavenger hunt and the photographical game.
- Give clear instructions on the information to be collected during the field trip.
- Give clear and specific rules
- Verify that all the students understood the tasks.
- Give assignments.
- Give value to the participation in the virtual class.

- Monitor students' learning
- Observe the students' behaviour in the small groups, and whit the entire class group.
- Ask for opinions, hypothesis and solutions.
- Pay attention to the assessments made on the IDs of the flowers/ plants.
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.
- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.

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[Project number: 2017-1-CY01-KA201-026739]

- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions. eventuali suggerimenti degli alunni.

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Module 5

Course: D'ARBOREA VITA VIVENTI	
Module 5: Our Vegetal Kingdom	
Digital Competence Area: 2 – Communication and collaboration + 3 – Digital Content Creation + 5 – Problem-Solving	
Grade Level: 6st grade	**Timeframe: 1,50 h in class e 4,00 h at home**

Lesson Overview

Analysis of the data recorded on the growth of the seedlings and collective discussion, as to understand altogether the phenomena observed.
The module foresees the beginning of a group assignment, where the students will develop one of the topics emerged from the study of the kingdom of the plants. The final work will be organized in a digital presentation, created through an online app chosen by the students, that allows to collaborate online from home.

Objectives:

At the end of the module, the students will be able to:

- Recognise the phases of designing and planning a small project.
- Collaborate on a shared objective.
- Manage a presentation tool.

Material/ Resources:

A presentation tool to be chosen among:
- an interactive mental map online;
- a mini website;
- an online poster/ infographic;
- an interactive image.

Module Activities

The class, divided into groups, creates digital learning objects that constitute a dossier on the Vegetal Kingdom.

- Setting:

In the initial phase, there is a collective assessment on the growth processes of the seedlings and, in a second phase, the students create small groups to work on a task given by the teacher. The teacher has to develop such task according to the results of the monitoring of the activities of the previous modules. In the previous days, and according to the previous module, the students selected a presentation tool, and watched its tutorial.

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- Approach/ teaching method:

After verifying if the pupils understood the task and what kind of work it is asked from them to develop, the teachers support the groups in their work. The information for the work can be found at links and image repositories selected and shared by the teachers, as well as in the virtual class.
The students have 30 minutes to develop an idea for their project, 30 minutes to select the multimedia content, and 30 minutes to start editing their work, that will be finished at home.

- Engagement and active participation through hands-on practices:

Each student will have a specific role (editor, editing technician, responsible for selection)

- Group size:

Small group.

- Resources/ digital tools/ materials:

Laptop
Interactive whiteboard
Tutorials
Sheets to guide the work
Indications on how to access the online sources

- Link with the relevant digital competence(-ies):

Share of a project design
Planning phases
Selection of elements
Taking on responsibility

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Additional personal contributions
- Use of proper terminology
- Well-developed assignments
- Technical skills applied

Instructions for teachers

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[Project number: 2017-1-CY01-KA201-026739]

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Plan the modalities for the accession and use of the digital applications that the students will use, and clearly explain these to the pupils.
- Give clear instructions on the objectives and the production of the learning object.
- Give roles and functions to each student within the groups.
- Give clear and specific rules
- Verify that all the students understood the tasks.
- Give value to the participation in the virtual class.

- Monitor students' learning
- Observe the students' behaviour in the small groups, and whit the entire class group.
- Monitor that the students do their homework.
- Observe the competences and skills that each student presents when carrying out the activity
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.
- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques

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- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions.

Module 6

Course: D'ARBOREA VITA VIVENTI	
Module 6: Observing the growth of the plants	
Digital Competence Area: 2 – Communication and collaboration + 3 – Creation of digital content	
Grade Level: 6st grade	**Timeframe: 1,50 h in school + 1,00 h at home**
Lesson Overview Thanks to the pictures taken during the growth of the seedling, the students will work in small groups or couples to edit a video-documentary of the process. The students will also create simple infographics to represent the data collected and the conclusions to their analysis, and they will be included in the final video. These elaborations will be uploaded in the virtual class.	
Objectives: At the end of the module, the students will be able to: • Know the steps of the Scientific Method. • Cooperate to support each other. • Make quality assessments. • Create a simple video.	
Material/ resources: Spreadsheets Collected data App for video editing with pictures Virtual class Examples on how to assess and analyse the data	

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Module Activities

The students, divided in small groups, will edit small videos with the pictures of the growth of each one's seedling, including observations, tables, infographic that explain the phenomena observed.

- Setting:

Work in class, the students are divided in small groups and each group uses a laptop

- Approach/ teaching method:

Learning by doing.

- Engagement and active participation through hands-on practices:

The students collaborate to support each other in making the video-documentary.

- Group size:

Couples or small groups.

- Resources/ digital tools/ materials:

See above

- Link with the relevant digital competence(-ies):

Share a project design
Take up responsibilities
Cooperate to achieve communicational effectiveness

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Additional personal contributions
- Use of proper terminology
- Well-developed assignments
- Technical skills applied

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities.

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[Project number: 2017-1-CY01-KA201-026739]

- Prepare and verify the suitability of the materials.
- Support and guide the students to develop the activity with no distractions.
- Give indications on the functioning of the digital apps.

- Monitor students' learning
- Observe the students' behaviour in the small groups, and whit the entire class group.
- Ask for opinions, hypothesis and solutions.
- Allow for new proposals to come up and assess their quality.
- Check for notifications and eventual responses during home study.
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.
- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions.

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Course: D'ARBOREA VITA VIVENTI	
Module 7: Studying Medicinal Plants	
Digital Competence Area: 2 – Communication and collaboration + 3 – Digital Content Creation	
Grade Level: 6st grade	**Timeframe: 5,00 h**

Lesson Overview

Study on the local medicinal plants, their tradition, and use. If there is a local entity dedicated to growing and using medicinal plant, a field trip can be organized. The information collected, either on the internet or during the field trip, will be used by the students to find the medicinal plants naturally growing in the area of the school/ their homes, geo-map them and take a picture of them, and then create a virtual tour of the locations of such plants.

Objectives:

At the end of the module, the students will be able to:

- Use geotagging tools
- Communicate contents through a virtual tour

Material/ resources

Smartphones/ tablet
Geo-mapping function in Android or IOS
Google maps

Module Activities

The students will make research online on the medicinal plants pertinent to the local tradition of their territory. If it exists, the students can participate to a field trip to a local entity/ association/ pharmacy that cultivates and processes medicinal plants. After the online research or the field trip, by working in small groups, and communicating through the virtual class, the students will be able to find the medicinal plants in their natural environment, take pictures of them and register their location (Geotagging). The locations saved will then be processed to create a virtual tour of the medicinal plants growing in the area.

- Setting:

Classroom or field trip. At home the students will search for the medicinal plants growing in the surrounding of their houses.

- Approach/ teaching method:

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Learning by doing.

- Engagement and active participation through hands-on practices:

Each student will document 1 or 2 plants and in groups will create a virtual tour of their surroundings.

- Resources/ digital tools/ materials:

Smartphones to take pictures and geo-mapping.
App for the creation of the virtual tour.

- Link with the relevant digital competence(-ies):

Use creative communicational forms.

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Creative personal contributions
- Development of the assignment
- Efficacy of the communicational products

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities.
- Prepare and verify the quality of the materials.
- Give clear indications and tasks to the class on how to carry out the wrk at home.

- Monitor students' learning
- Observe the students' behaviour in the small groups, and whit the entire class group.
- Ask for opinions, hypothesis and solutions.
- Allow for new proposals to come up and assess their quality.
- Check for notifications and eventual responses during home study.
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.

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- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.

- Additional activities
- Implement students' suggestions.

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Course: D'ARBOREA VITA VIVENTI	
Module 8: Ecology of the Earth, Ecology of the Self	
Digital Competence Area: 2 – Communication and collaboration	
Grade Level: 6st grade	**Timeframe: 2,00 h in class + 2,00 h at home**

Lesson Overview

- The course will end with a reflective moment dedicated to ecology, through the reading of the text by J. Giono *"The man who planted trees"*.
- Starting from the text, there will be space to talk about the ecological footprint, documented on Blendspace.
- It is also an occasion to understand the experiences of the students and to collect their feedbacks.

Objectives:

At the end of the module the students will be able to:

- Identify the strengths and the weaknesses of the course.
- Use the scientific knowledge acquired through the course to reflect on environmental issues.
- Understand how the ecology of the planet is also the ecology of the self.

Materials/ resources

Online questionnaire in the virtual class.
Projector/ Interactive Whiteboard.
Laptop.

TES Blendspace App.
Web sources on the Ecological Footprint.
Printed text of J. Giono's *"The man who planted trees"*.

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Module Activities

Reflect on environmental issues, starting from the analysis of the text by J. Giono *"The man who planted trees"*. Awareness of the concept of Ecological Footprint. Filling out at home of a final questionnaire relative to the course. Final assessments of the teacher.

- Setting:

Collective work in class.

- Approach/ teaching method:

Confrontation on the final assessments of the teacher on the work, and presentation of J. Giono's *"The man who planted trees"* and of the concept of ecological print.

- Engagement and active participation through hands-on practices:

Each student will calculate his/her own ecological footprint and will answer a few questions that stimulate them to reflect on the environmental issues and their personal contributions to protect the environment.

- Resources/ digital tools/ materials:

"The man who planted trees" by J. Giono can be purchased, or distributed in class in printed copies.

- Link with the relevant digital competence(-ies):

Communicative skills for debate, confrontation and self assessment.

Parameters for the Evaluation of the Activity:

- Participation to the activities.
- Respect for others' ideas and opinions.
- Responsibility towards the tasks agreed on.
- Additional personal contributions
- Development of the homework
- Use of argumentative skills

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities.
- Prepare and verify the validity of the materials.

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- Support the students in developing the activities without distractions.

- Monitor students' learning
- Observe the students' behaviour in the small groups, and whit the entire class group.
- Ask for opinions, hypothesis and solutions.
- Allow for new proposals to come up and assess their quality.
- Check for notifications and eventual responses during home study.
- Monitor the interventions in the virtual class.

- Measure progress
- Before beginning the lesson, recall what has been done in the previous one, collecting the strengths.
- Hand out questionnaires/ tests to assess what has been learnt and understood by the students.
- Observe the skills acquired in using the digital tools.
- Monitor that the assignments are regularly completed and have positive results.

- Provide feedback
- Punctually respond to the requirements posed by the students on the virtual class.
- Reward/ welcome the ideas proposed by the students.
- Give value to the work carried out by the students.
- Reward participation to the virtual class.

- Refine instruction
- Verify that the instructions are clear and that they have been understood.
- Transform the instructions and make examples.
- Involve the students when further explanation is needed.

- Promote students' active engagement
- Allow the students to take initiative and make proposals.
- Welcome the student's opinions and avoid judgement.
- Repeat brainstorming.

- Incorporate scaffolding techniques
- Involve more expert classmates in peer tutoring.
- Share the work with a colleague teacher that shares the teaching hour with the main teacher.
- Additional activities
- Implement students' suggestions.

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Curriculum (3): Journey through the News

Curriculum Overview

Distribution of Courses:

Partner: Tamat and IC PERUGIA 4 **Lesson Plan: "Is it true?" Journey through the News**		
Course 1. "Is it true?" Journey through the News.	Grade: 4th	Timeframe: 10 modules x 90 min.

Content Outline

Course: "Is it true?" Journey through the News.

DigComp Area: 4. Security (main); 2. Communication and Collaboration; 3. Digital Content Creation.

Course Overview:

Course Overview
Starting from the concept of Fake News, the pupils revisit known fairy tales by modifying the events and the characters. The activities foresee the creation of a cartoon, where the pupils will learn the actions to be carried out in order to animate characters, objects and sounds inside a specific environment. The Course uses the Scratch program: through block graphic design it is possible to learn the logical-mathematical language, as well as to think creatively and to work in group.

Course Objectives:

Upon completion of the Course students will be able to:

- **Device protection -** Protect your device and digital content. Be aware of the safety issue and take the main measures in this regard;

- **Plan -** Design and develop sequences of instructions for a computer system in order to solve a given problem - or perform a task - and as a means of personal expression;

- **Collaborate through digital technologies -** Use digital tools and technologies to collaborate with others. Contribute to resource building.

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Modules of the Course:

10 Modules	
Module 1: First approach to *coding* through the CODE platform.	Timeframe: 1.5h
Module 2: SCRATCH Program presentation	Timeframe: 1.5h
Module 3: Choice of fairy tale and identification of some characters and environments	Timeframe: 1.5h
Module 4: Drawing up of the story chosen in the three fundamental parts.	Timeframe: 1.5h
Module 5: Completion of the story.	Timeframe: 1.5h
Module 6: Choice of characters and audio function.	Timeframe: 1.5h
Module 7: Begin characters animation with insertion of written dialogues.	Timeframe: 1.5h
Module 8: Voices recording and use of audio.	Timeframe: 1.5h
Module 9: Adjustments of programming blocks.	Timeframe: 1.5h
Module 10: Completion of the digital story.	Timeframe: 1.5h

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Digital Citizenship Course Index

Lesson Plan: Ma è vero? Viaggio tra le News							
DigComp Competence Area	**Reference competence**	**Year 1** (6-7)[5]	**Year 2** (7-8)	**Year 3** (8-9)	**Year 4** (9-10)	**Year 5** (10-11)	**Year 6** (11-11)
1. Information	1.1 Browsing, searching and filtering information	☐	☐	☐	X	☐	☐
	1.2 Evaluating data, information and digital content	☐	☐	☐	X	☐	☐
	1.3 Managing data, information and digital content	☐	☐	☐	☐	☐	☐
2. Communication and Collaboration	2.1 Interacting through digital technologies	☐	☐	☐	☐	☐	☐
	2.2 Sharing through digital technologies	☐	☐	☐	☐	☐	☐
	2.3 Engaging in citizenship through digital technologies	☐	☐	☐	☐	☐	☐
	2.4 Collaborating through digital technologies	☐	☐	☐	X	☐	☐
	2.5 Netiquette	☐	☐	☐	☐	☐	☐
	2.6 Managing digital identity	☐	☐	☐	X	☐	☐
3.Content creation	3.1 Developing digital content	☐	☐	☐	X	☐	☐
	3.2 Integrating and re-elaborating digital content	☐	☐	☐	X	☐	☐
	3.3 Copyright and licenses	☐	☐	☐	☐	☐	☐
	3.4 Programming	☐	☐	☐	X	☐	☐
Safety	4.1 Protecting devices	☐	☐	☐	X	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	☐	X	☐	☐
	4.3 Protecting health and well-being	☐	☐	☐	X	☐	☐
	4.4 Protecting the environment	☐	☐	☐	☐	☐	☐

[5] ages

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5. Problem solving	5.1 Solving technical problems	□	□	□	□	□	□
	5.2 Identifying needs and technological responses	□	□	□	X	□	□
	5.3 Creatively using digital technologies	□	□	□	X	□	□
	5.4 Identifying digital competence gaps	□	□	□	□	□	□

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Module 1

Course 1: "But is it true?" Journey through the News.	
Module 1: First approach to *coding* through the CODE platform.	
Digital Competence Area: 4. Security	
Grade Level: 4th class - Primary School	**Timeframe: 1,50h**

Module Overview:
The first lesson foresees the use of a game in the CODE.org platform which consists in programming a character through command blocks with increasing difficulty

Objectives:
Upon completion of this Lesson students will be able to:

- Turn on and turn off a PC.
- Enter a platform and enter an entry code.
- Knowing how to decipher a written programming command to guide the movements of a chosen character.
- Continue the game by programming increasingly complex commands.
- Save a password.

Material/ resources
PC of the School
Classroom

Module Activities

- Setting (in classroom, outdoor activity, computer lab etc.)

The lesson takes place in a classroom where the students receive a PC per couple.

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Learning through gaming: Students are asked to turn on a PC and explained how to reach a COD.ORG platform, that includes a programming game. The students are, also, asked to type in a password and memorize it/ save it, in order to accede the game profile in other occasions.

- Engagement and active participation through hands-on practices

After the students have turned on the PC and entered the platform with the password, they start the game autonomously, helping each other in moments of difficulty. The teacher plays a role of support and gives directions to

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overcome the difficulties encountered, without, however, giving a pre-established solution.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)

In this phase, the students work in pairs with the presence of 3 teachers.

- Monitor prior knowledge

In this initial phase, through observation and some preliminary questions, the teacher observe if the students have some knowledge on the use of a programming game.

- Link with the relevant digital competence(-ies)

Protect personal data in the device and digital content.
Collaborate through digital technologies.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups
- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

- Refine instruction
- Use a low and calm voice
- Welcome opinions without commenting on them

- Promote students' active engagement

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- Do not give a definitive proposal, but lead the pupils to reflect and take action to complete the project
- Keep in mind observations and do not delete silly or wrong ideas and proposals
- Repeat brainstorming

- Incorporate scaffolding techniques
- Present a proposal through different techniques

- Additional activities
- Apply disciplinary content inside the project to both elaborate ideas, and find solutions, in order to strengthen the learning process
- Present the project as a means to acquire ICT skills

Module 2

Course 1: "But is it true?" Journey through the News	
Module 2: SRATCH program presentation	
Digital Competence Area: 3. Digital Content creation	
Grade Level: 4th class - Primary School	**Timeframe: 1,50h**
Module Overview: SRATCH program presentation	
Objectives: Upon completion of this Lesson students will be able to: • Explore the Scratch program. • Understand which are the first steps to follow to choose characters, backgrounds and other functional elements of the project. • Use the commands to perform a simple animation. • Save the file you have worked on. • Encourage creative problem-solving. • Engage students as active and responsible participants in the learning process. • Offer opportunities for reflection and collaboration in a project.	
Material/ resources PC of the School	
Module Activities - Setting (in classroom, outdoor activity, computer lab etc.)	

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The lesson takes place in a classroom where the students are given a PC for each couple. The teacher explains the program and the main functions of SCRATCH 2.

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Learning based on gaming exploration: the students are asked to turn on the PC and explained how to open the program (which should be already installed on the device). Using simple commands, the first step for the students is to choose their virtual characters and the characters' background, as to interact with each other.

- Engagement and active participation through hands-on practices

After having guided the students to open the program and to follow the simple commands, they begin the game autonomously, helping each other in moments of difficulty and proceeding through the logic of exploration and trial-error. The teacher plays a role of support and gives directions to overcome the difficulties encountered, without, however, giving a pre-established solution.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)

In this phase, the students work in pairs with the presence of 3 teachers.

- Monitor prior knowledge

In this initial phase, through observation and some preliminary questions, is observed if the students have some knowledge on the use of a programming game.

- Link with the relevant digital competence(-ies)

Design and develop sequences of instructions for a computer system in order to solve a given problem or perform a given task and as a means of personal expression.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups

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- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

- Refine instruction
- Use a low and calm voice
- Welcome opinions without commenting on them

- Promote students' active engagement
- Do not give a definitive proposal, but lead the pupils to reflect and take action to complete the project
- Keep in mind observations and do not delete silly or wrong ideas and proposals
- Repeat brainstorming

- Incorporate scaffolding techniques
- Present a proposal through different techniques

- Additional activities
- Apply disciplinary content inside the project to both elaborate ideas, and find solutions, in order to strengthen the learning process
- Present the project as a means to acquire ICT skills

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Module 3

Course 1: "But is it true?" Journey through the News.	
Module 3: Select a fairy tale and identification of characters and environments	
Digital Competence Area: 2. Communication and collaboration	
Grade Level: 4th class - Primary School	**Timeframe: 1,50h**

Module Overview:

Explanation of the steps: the students will have to choose a fairy tale known in group, take the main elements of the narration, manipulate the features of the characters, review some events to give it a humorous look, overturn the situations and disseminate fake news.

The pupils identify the introduction, the development and the conclusion in broad terms of the fairy tale (plot of history); establish the characters and environments in which the characters will have to act; attribute new characteristics, that are different from the starting history.

Objectives:

Upon completion of this Lesson students will be able to:

- Listen to and accept the opinions of others
- Working together
- Manage the material to be written
- Monitor a range of information with others to advance a story.

Material/ resources

Classroom
Fairy Tales Books to take inspiration
sheets for writing

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Module Activities

Synthetically elaborate a first draft of the story, taking into consideration the fundamental parts of a narrative text (introduction-unfolding-conclusion) and foreseeing the progression of the moments, up to its conclusion, following a logical thread.

- Setting (in classroom, outdoor activity, computer lab etc.)

Classroom

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Project-based learning: the teacher explains to the students that they have to draw up a first plot of a story from the beginning to the end, elaborating as well some "fake news" to include in the plot. The time available to complete the task is half an hour, during which the teachers announce the remaining time every 10 minutes, in order to enable each group not to lose track of time and finish the job. At the end of the activity, the teachers read the elaborations and suggest adjustments.

- Engagement and active participation through hands-on practices

The topic is very interesting for students who conjecture and hypothesize very humorous news, therefore very engaging and fun, where gives his/her own contribution.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)

In this phase and in the subsequent ones, the work is in the small groups, with the presence of 3 teachers who intervene if needed.

- Monitor prior knowledge

During the writing of the stories, the participation of each student in the work is taken into account, followed by a careful reading of the product to verify that the three parts and the "fake news" requests are present.

- Link with the relevant digital competence(-ies)

• Communication and collaboration.
• Contribute to the construction of educational resources.

- Activity evaluation parameters:

• Participation in the activity by making a contribution.
• Respect for the ideas of others.
• Responsibility for the task to be completed within the required time.

Instructions for teachers

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- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups
- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

- Refine instruction
- Use a low and calm voice
- Welcome opinions without commenting on them

- Promote students' active engagement
- Do not give a definitive proposal, but lead the pupils to reflect and take action to complete the project
- Keep in mind observations and do not delete silly or wrong ideas and proposals
- Repeat brainstorming

- Incorporate scaffolding techniques
- Present a proposal through different techniques

- Additional activities
- Apply disciplinary content inside the project to both elaborate ideas, and find solutions, in order to strengthen the learning process
- Present the project as a means to acquire ICT skills

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Module 4

Course 1: "But is it true?" Journey through the News.	
Module 4: Drawing up of the story in the three fundamental parts.	
Digital Competence Area: 2. Communication and collaboration	
Grade Level: 4th class - Primary School	**Timeframe: 1,50 h**

Module Overview:

The students expand each part of the text by inserting descriptions and facts. The teacher reminds the students to share the plot of their stories and to add some description that characterizes both the characters and the settings. The teacher also ensures that everyone participates in the realization of the work and that the story has a logical sense in the narration of the facts.

Objectives:

Upon completion of this Lesson students will be able to:

- Listen to and accept the opinions of others
- Working together
- Manage the material to be written
- Monitor a range of information with others to advance a story.

Material/ resources

Classroom
Fairy Tales Books to take inspiration
sheets for writing

Module Activities

The students complete the three fundamental parts of the story: each student proposes his/her own idea and all the members of the group listen, then together they choose the most suitable one, consulting, when necessary, the teacher.
When that part is created, it is read out loud, inside the group, to verify that the content flows well and is consistent.

- Setting (in classroom, outdoor activity, computer lab etc)

Classroom

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Project-based learning: the teacher explains to the students that they have to expand the plot. The time available to complete the task is half

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[Project number: 2017-1-CY01-KA201-026739]

an hour, during which the teachers announce the remaining time every 10 minutes, in order to enable each group not to lose track of time and finish the job. At the end of the activity, the teachers read the elaborations and suggest adjustments.

- Engagement and active participation through hands-on practices
The students are invited to proceed logically in writing the story without focusing too hard on the many details.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)
In this phase, the work is in small groups, with the presence of 2/3 teachers.

- Monitor prior knowledge
During the writing of the stories, the participation of each student in the requested work is taken into account, followed by a careful reading of the product to verify that the three parts and the "fake news" requests are present.

- Link with the relevant digital competence(-ies)
• Communication and collaboration.
• Contributes to the construction of educational resources.

Activity evaluation parameters:
• Participation in the activity by making a contribution.
• Respect for the ideas of others.
• Responsibility for the task to be completed within the required time.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups
- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

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[Project number: 2017-1-CY01-KA201-026739]

- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

- Refine instruction
- Use a low and calm voice
- Welcome opinions without commenting on them

- Promote students' active engagement
- Do not give a definitive proposal, but lead the pupils to reflect and take action to complete the project
- Keep in mind observations and do not delete silly or wrong ideas and proposals
- Repeat brainstorming

- Incorporate scaffolding techniques
- Present a proposal through different techniques

- Additional activities
- Apply disciplinary content inside the project to both elaborate ideas, and find solutions, in order to strengthen the learning process
- Present the project as a means to acquire ICT skills

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Module 5

Course 1: "But is it true?" Journey through the News.	
Module 5: Extension of the fairy tale	
Digital Competence Area: 2. Communication and collaboration	
Grade Level: 4th class - Primary School	**Timeframe: 1,50 h**

Module Overview:

The students complete every fundamental part of their stories, by inserting further descriptions and facts.
The teacher checks that everyone is participating in the realization of the work and that the story has a logical sense in the narration of the facts.

Objectives:

Upon completion of this Lesson students will be able to:
- Listen to and accept the opinions of others
- Working together
- Manage the material to be written
- Monitor a range of information with others to advance a story.

Material/ resources

Classroom
Fairy Tales Books to take inspiration
sheets for writing

Module Activities

The students complete the three fundamental parts of the story: each student proposes his/her own idea and all the members of the group listen. Then, together, they choose the most suitable one, consulting, when necessary, the teacher.
When that part is created, the new version of the story is read out loud, inside the group, to verify that the content flows well and is consistent.

- Setting (in classroom, outdoor activity, computer lab etc.)

Classroom

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Project-based learning: the teacher explains to the students that they have to expand the plot. The time available to complete the task is half an hour, during which the teachers announce the remaining time every 10

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minutes, in order to enable each group not to lose track of time and finish the job. At the end of the activity, the teachers read the elaborations and suggest adjustments.

- Engagement and active participation through hands-on practices
The students are invited to proceed logically in writing the story without focus too much on the many details.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)
In this phase, the work is in the small groups, with the presence of 2/3 teachers.

- Monitor prior knowledge
During the writing of the stories, the participation of each student in the work is taken into account, followed by a careful reading of the product to verify that the three parts and the "fake news" are present.

- Link with the relevant digital competence(-ies)
• Communication and collaboration.
• Contributes to the construction of educational resources.

Activity evaluation parameters:
• Participation in the activity by making a contribution.
• Respect for the ideas of others.
• Responsibility for the task to be completed within the required time.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups
- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

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- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

- Refine instruction
- Use a low and calm voice
- Welcome opinions without commenting on them

- Promote students' active engagement
- Do not give a definitive proposal, but lead the pupils to reflect and take action to complete the project
- Keep in mind observations and do not delete silly or wrong ideas and proposals
- Repeat brainstorming

- Incorporate scaffolding techniques
- Present a proposal through different techniques

- Additional activities
- Apply disciplinary content inside the project to both elaborate ideas, and find solutions, in order to strengthen the learning process
- Present the project as a means to acquire ICT skills

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Course 1: "But is it true?" Journey through the News.	
Lesson 6: How to edit audio content.	
Digital Competence Area: 3. Digital Content Creation	
Grade Level: 4th class - Primary School	**Timeframe: 1,50 h**

Module Overview:
In this lesson and in the following the students return to work on the PC and use the Scratch program, with the definitive choice of the characters and experimenting the function of recording an audio and playing a sound.

Objectives:

Upon completion of this Lesson students will be able to:

- Recover the files where the work had previously been done.
- Use the controls to perform a simple animation.
- Use the controls to record an audio and insert it into the programming block.
- Encourage creative problem-solving.
- Engage students as active and responsible participants in the learning process to build digital content.
- Offer opportunities for reflection and collaboration.

Engage the students to making systematic and structured reasoning.

Material/ resources

Classroom
School PC
Personal headphones

Module Activities

Initially, the lesson takes place in the classroom where the students are divided into groups of 5, and each group works on a PC.
First step: children retrieve work files

Second step: the teacher explains how to record an audio or search for a musical audio and how to insert it into the project.

Students use headphones to be able to listen to music and to not disturb other groups. To record the voices of the students, other spaces/classrooms will be used inside the school building.

- Setting (in classroom, outdoor activity, computer lab etc.)

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Classroom and other spaces in the school

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Game-based learning and exploration: the teacher asks the students to recover the project files.
Through the use of commands, students will immediately understand how to record and recover audios and sounds.

- Engagement and active participation through hands-on practices

The students help each other in moments of difficulty and proceed through the logic of exploration and trial-error.
The teacher plays a role of support and gives direction to overcome the difficulties encountered, without, however, giving a pre-established solution.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)

In this phase, the students will work in groups of 5 and will have a PC at their disposal. Longer working hours: the groups count more people in this phase and, therefore, the time spent on the activities will be longer.

- Monitor prior knowledge

In this case, the students will have well understood how to carry out the task because it is very intuitive.

- Link with the relevant digital competence(-ies)

• Develop digital content.
• Program

Activity evaluation parameters:
• Collaboration and PC sharing
• Respect for the ideas of others
• Respect for the material
• Participation in the activity
• Program instruction sequences with audio.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

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- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups
- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

- Refine instruction
- Use a low and calm voice
- Welcome opinions without commenting on them

- Promote students' active engagement
- Do not give a definitive proposal, but lead the pupils to reflect and take action to complete the project
- Keep in mind observations and do not delete silly or wrong ideas and proposals
- Repeat brainstorming

- Incorporate scaffolding techniques
- Present a proposal through different techniques

- Additional activities
- Apply disciplinary content inside the project to both elaborate ideas, and find solutions, in order to strengthen the learning process
- Present the project as a means to acquire ICT skills

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Course 1: "But is it true?" Journey through the News.	
Module 7: Begin animating the characters and insert written dialogues. **Module 8:** Record the voices and use audio. **Module 9:** Adjustments of programming blocks. **Module 10**: Completion of the digital story.	
Digital Competence Area: 3. Digital Content creation	
Grade Level: 4th class - Primary School	**Timeframe: 1,50h**

Module Overview:

Starting from the plot of the story that each group has created, the teacher asks the students to continue the animation of their Sprite (character represented inside the Scratch platform), to change the backgrounds and to insert dialogues in the comics, musical audio and/or recordings. These lessons are all focused on programming with Scratch blocks.
All students are engaged in performing logical and structured reasoning in order to complete the animation work.

Objectives:

• Use the commands to perform a simple animation.
• Use the controls to record an audio and insert it into the programming blocks.
• Collaborate to identify the sequence of programming blocks.
• Engage students as active and responsible participants in the learning process to build digital content.
• Offer opportunities for reflection and collaboration.
• Commit to making systematic and structured reasoning.
• Save the file.

Material/ resources

Classroom
School PC
Personal headphones

Module Activities

- Setting (in classroom, outdoor activity, computer lab etc.)

The lesson takes place inside the classroom always in groups.
To make recordings with the voices, the students will use other spaces inside the school building.

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

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Game-based learning and exploration: the teacher asks the students to recover the project files.
Through the use of commands, students will immediately understand how to record and recover audio and sound.

- Engagement and active participation through hands-on practices
The students help each other in moments of difficulty and proceed through the logic of exploration and trial-error.
The teacher plays a role of support and gives direction to overcome the difficulties encountered, without however giving a pre-established solution.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)
The students will work in groups of 5, each one with a PC at their disposal.
Longer working hours: the groups count more people in this phase and, therefore, the time spent on the activities will be longer.

- Monitor prior knowledge
• at the end of each lesson the teacher takes stock of the situation, taking care that each student is sure of the steps taken.
• the teacher explains the next steps.

- Link with the relevant digital competence(-ies)
• Develop digital content.

Activity evaluation parameters:
• Collaboration and PC sharing
• Respect for the ideas of others
• Respect for the material
• Participation in the activity
• Program instruction sequences with audio.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities
- Make sure to have all the materials needed for the activity
- Monitor that the students understood the tasks they are given
- Assign and distribute tasks

- Monitor students' learning
- Observe the behaviors inside the big and the restricted groups

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- Ask opinions, ask the students to summarize and repeat the core concepts
- Assess the number and the quality of the interventions and the proposals made by the pupils

- Measure progress
- Before starting a lesson, summarize and review what has been said and done in the previous one.

- Provide feedback
- Give value to the proposals made by the students
- Highlight and give value to the intuitions and solutions proposed by the students

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Curriculm (4): A Scuola di Binario

Curriculum Overview

Organizzazione dei Corsi:

Partner: Tamat, ICPg IV teacher Anna Locchi and DENSA Coop. Lesson Plan: At school of Binary Calculation		
Course 1. Introduction to the digital path	Class: 1° A and 1° D of primary school	Timeframe: 9 h
Course 2. At school of binary calculation with Ruby	Class: 1° A and 1° D of primary school	Timeframe: 17.5 h

Definizione del Contenuto

Fornisci una descrizione di qualità dei contenuti del Curriculum. Assegna dei titoli brevi e descrittivi ad ogni piano di lezioni.

Lesson Plan: "At school of binary calculation"

Area of digital competence: 5- Problem-solving, through the Tinkering methodology and educational robotics

Introduction:

Course introduction
Through the "learning by doing" technique, students will be guided along a path of acquisition of digital skills. They will start from preliminary notions of the binary code and digital knowledge, and from unplugged activity and visual planning. The aim is the creation of a digital game.

Goals of the Lesson Plan:

After the course, students will be able to:

- manage a digital device to solve a concrete problem;
- abstract and synthetize complex concepts to make them more understandable;
- organize thought in a way that can be understood by the computer;
- understand algorithms and how they are expressed by using the programming language;
- understand how simple programs work and correct any operating errors;
- create stories based on mathematical concepts (divulgation);
- design, write and implement digital contents according to the given indications.

Courses of the Lesson Plan:

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Course 1: Introduction of the digital path	
Lesson 1: Garbage: this stranger	Timeframe: 1 h
Lesson 2: Classification of qualities and properties of the most common garbage	Timeframe: 1.5 h
Lesson 3: Sherlock hunting for garbage	Timeframe: 1 h
Lesson 4: Creative use of garbage: designing a robot	Timeframe: 1.5 h
Lesson 5: From the individual project to the collective one	Timeframe: 2 h
Lesson 6: Building a robot	Timeframe: 2 h

Course 2: At school of binary calculation with Ruby	
Lesson 1: Evaluation of the first path, introduction to the next one and sharing with the class group	Timeframe: 1 h
Lesson 2: Hello Ruby: a story for learning	Timeframe: 2 h
Lesson 3: Ruby in search of diamonds!	Timeframe: 1 h
Lesson 4: What's inside a computer?	Timeframe: 1.5 h
Lesson 5: B-robot brushes his teeth!	Timeframe: 1.5 h
Lesson 6: Algorithms and body expression	Timeframe: 2 h
Lesson 7: Let's play with the Cartesian grid	Timeframe: 2 h
Lesson 8: In the school garden, Cartesian grid becomes a vegetables' field	Timeframe: 1.5 h
Lesson 9: A scenography for a magic bee bot	Timeframe: 1.5 h
Lesson 10: Building paths for the bee	Timeframe: 2 h
Lesson 11: Big party for Bee bot	Timeframe: 1.5 h

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Digital Citizenship Course Index

Lesson Plan: Apprendimenti in Connessione							
DigComp Competence Area	**Reference competence**	**Year 1** (6-7)[6]	**Year 2** (7-8)	**Year 3** (8-9)	**Year 4** (9-10)	**Year 5** (10-11)	**Year 6** (11-11)
1. Information	1.1 Browsing, searching and filtering information	☐	☐	☐	☐	☐	☐
	1.2 Evaluating data, information and digital content	☐	☐	☐	☐	☐	☐
	1.3 Managing data, information and digital content	☐	☐	☐	☐	☐	☐
2. Communication and Collaboration	2.1 Interacting through digital technologies	☐	☐	☐	☐	☐	☐
	2.2 Sharing through digital technologies	☐	☐	☐	☐	☐	☐
	2.3 Engaging in citizenship through digital technologies	☐	☐	☐	☐	☐	☐
	2.4 Collaborating through digital technologies	☐	☐	☐	☐	☐	☐
	2.5 Netiquette	☐	☐	☐	☐	☐	☐
	2.6 Managing digital identity	☐	☐	☐	☐	☐	☐
3.Content creation	3.1 Developing digital content	☐	☐	☐	☐	☐	☐

[6] ages

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	3.2 Integrating and re-elaborating digital content	☐	☐	☐	☐	☐	☐
	3.3 Copyright and licenses	☐	☐	☐	☐	☐	☐
	3.4 Programming	☐	☐	☐	☐	☐	☐
Safety	4.1 Protecting devices	☐	☐	☐	☐	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	☐	☐	☐	☐
	4.3 Protecting health and well-being	☐	☐	☐	☐	☐	☐
	4.4 Protecting the environment	X	☐	☐	☐	☐	☐
5. Problem solving	5.1 Solving technical problems	X	☐	☐	☐	☐	☐
	5.2 Identifying needs and technological responses	X	☐	☐	☐	☐	☐
	5.3 Creatively using digital technologies	X	☐	☐	☐	☐	☐
	5.4 Identifying digital competence gaps	X	☐	☐	☐	☐	☐

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Lesson Plan

Course 1

Module 1

Course 1: Introduction to the digital path	
Module 1: Garbage: this stranger	
Area of digital skill: 5 - Problem-solving	
Grade Level: 1st	**Timeframe: 1,30 h**
Lesson Overview • Since school is obliged to differentiate waste, we will discuss the contents of the Executive Director's Circular, its requests and their meaning	
Goals At the end of the lesson students will be able to: • Understand the importance of differentiating wastes; • Find solutions to solve the waste problem.	
Materials/resources Executive Director's Circular Municipality brochure Boxes for the differentiate waste collection	

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[Project number: 2017-1-CY01-KA201-026739]

Lesson Activities

- Working context:

Lesson will be held inside the school, in front of the classrooms. Children and teachers will stay in circle.

- Approach/ teaching method:

Project-based learning: While in the circle, the Executive Director's Circular will be read, and family experience and stories based on the familiar experiences will be gathered.
Each intervention will be of almost 30 minutes and will be led in an autonomous way from children through a totem.
Listening and discussion
Workshop activities

- Engagement and active participation through hands-on practices:

Through a totem which will regulate interventions, each child will express his thought (brainstorming) and all the contributions will be written.
Teachers will present some materials to give them a name and will show their distinctive aspects.
A mix of waste materials will be thrown on the ground and each child will contribute to the divide them in sets.
Each set will receive a name and it will be put in a corresponding box, as established by the Executive Director's Circular. Each child will be invited to put the differentiated waste in the right box.

- Group size:

In this phase we will work in big groups controlled by two teachers.

- Verification of the previous knowledge:

The most significant children's interventions will be recorded as previous knowledge. Afterwards, children's interventions will be read to verify the coherence with the thought they have expressed.

- Connection with the reference skill:

Understanding and research of solutions.

Assessment of the activity

- Students participation
- Respect for the ideas of others
- Responsibility towards the commitments
- Additional personal contents
- Reporting with appropriate terms
- Care of the elaborations

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Instructions for teachers

Please describe (100-150 words) how teachers can:

- Provide differentiate instructions to match all the students' needs (abilities, learning styles, range of roles to students etc.):

a) Planning activities carefully
b) Checking for the presence of the necessary equipment
c) Giving lessons with clear and simple requests
d) Monitoring the understandings of commands
e) Distributing tasks

- Monitor students' learning:

a) Observing behaviors inside the groups
b) Assessing the participation and the proposals made by the diverse members

- Measure students' progress:

a) Observing behaviors in the groups
b) Asking opinions and restate ideas expressed by others
c) Assess the number of interventions, proposals and their quality
d) Providing simple forms to fulfill, in order to check the acquired knowledge

- Measure the progress of the activity:

a) Before starting a lesson, making a short summary of what has already been done
b) Checking, also through creative strategies (traffic light), the awareness of the tasks that have already been performed and of those to be done

- Providing feedback:

a) Recording verbalizations and making copies for everybody
b) Rewarding and valorizing the ideas which have been proposed
c) Highlighting and valorizing the products that have been presented

- Refine instructions:

a) Checking if instructions are clear and if they have been understood, even by repeating them many times
b) Using a calm and serene tone of the voice
c) Welcoming opinions without making comments
d) Reformulate commands, using more visual, verbal and manual tools

- Promote students' active engagement

a) Do not presenting an already defined proposal, but leading children to reflect and intervene to compose the project

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[Project number: 2017-1-CY01-KA201-026739]

b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.
c) Conducting several brainstorming

- Incorporate scaffolding techniques:
a) Using manual activities and reflecting on them
b) Presenting the proposal with diverse techniques

- Additional activities:
a) Improve the learning process by using didactical knowledge both for ideas and for the research of solutions.
b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Module 2

Course 1: Introduction to the digital path	
Module 2: Classification of qualities and properties of the most common garbage	
Digital Competence Area: 5 - Problem-solving	
Grade Level: 1st	**Timeframe: 1.30h**

Lesson overview

Interdisciplinary lessons are conducted in class by the teaching team. Lessons aim to know in depth the aspects, the properties and the purpose of the diverse materials used for the snack wraps.

Objectives

At the end of the lesson students will be able to understand the importance of differentiating wastes.

Materials/resources

Wastes that are daily produced at school
Prearranged forms
Poster on the Interactive multimedia whiteboard

Lesson Activities

Classification of the qualities and properties of the most common garbage (1,30 h).
Wastes produced at school will be examined during the lesson.

- Working context:
  Lessons take place in class by using recycled materials.

- Teaching method:
  Observing and describing the analyzed materials (paper, plastic, aluminum, Bric, wood, glass) according to the sensory perceptions and sharing the purpose of each one. Every student intervenes to indicate the main qualities (colors, form, dimension, consistency…) of the analyzed materials.
  Materials will be observed, drawn as faithfully as possible and described both orally and by writing.

- Active involvements thanks to participatory practices:
  Everybody will receive a prearranged form and a sample of material on which he/she will write all the "words-feature" related to the material's

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[Project number: 2017-1-CY01-KA201-026739]

aspects.

- Group size:

After the first collective phase in which students observe materials, children will be divided in micro-groups made up by 2/3 children. At the end, teacher will summarize in a prearranged poster all the "words-feature" emerged and will reflect with the macro-group on the words that did not emerge.

- Resources, digital tools, equipment:

Waste materials and snack wraps.

- Connection with the reference skill:
  observation, description and deduction.

Assessment activity:

a) Students participation
b) Respect for the ideas of others
c) Responsibility towards the commitments
d) Additional personal contents
e) Reporting with appropriate terms
f) Care of the elaborations

Instructions for teachers

Please describe (100-150 words) how teachers can:

- Provide a differentiate instructions to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands
  e) Distributing tasks

- Monitoring student's learning:
  a) Observing behaviors inside the main group
  b) Asking opinions and restate ideas expressed by others
  c) Assessing the participation and the proposals made by the diverse members
  d) Providing simple forms to fulfill in order to check the acquired knowledge

- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done

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[Project number: 2017-1-CY01-KA201-026739]

b) Checking, also through creative strategies (traffic light), the awareness of the tasks that have already been performed and of those to be done

- Providing feedback:
  a) Recording verbalizations and make a copy for everybody
  b) Rewarding and valorizing the ideas which have been proposed
  c) Highlighting and valorizing the products which have been presented

- Refine instructions:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Reformulate the commands by presenting schemes on the board
  c) Using a calm and serene tone of voice
  d) Welcoming opinions without making comments
  e) Reformulate commands by using more visual, verbal and manual tools

- Promote students' active engagement:
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by students and reflecting on their solutions, even in case of mistakes.
  c) Conducting several brainstorming

- Incorporate scaffolding techniques:
  a) Using manual activities and reflecting on them
  b) Presenting the proposal with diverse techniques

- Additional activities:
  a) Improving the learning process by using educational knowledge both for ideas and for problem solving.
  b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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[Project number: 2017-1-CY01-KA201-026739]

Module 3

Course 1: Introduction to the digital path	
Module 3: Sherlock hunting for garbage	
Area of digital skill: 5 - Problem-solving	
Grade Level: 1st	**Timeframe: 1,00 h**

Lesson Overview
Continuation of the activities to analyze the possible solutions and to reduce waste materials

Objectives

At the end of the lesson students will be:

- aware that each material has its own task
- able to use the hypothetical method in order to validate the most efficient choice

Materials/ resources
Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respect the copyright rule:

- Garbage daily produced at school
- Post-it
- Poster
- Notebooks

Lesson activities

- Working context:
  In class with recuperated materials; in the entrance of the school to assess the differentiation progress.

- Approach/Teaching method:

a) Workshop: a box of waste will be thrown on the floor to check if the group is respecting the rules of waste differentiation. Also, some ludic punishments will be established for who do not respect the rules. in order to be executed in group.
b) Brainstorming on the possibility to reduce wastes, especially for what concerns snacks.
c) Teacher will collect the most shared ideas in a ruling text aiming to the reduction and the recycling of garbage. All the students will reproduce the ruling text in their notebooks.

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[Project number: 2017-1-CY01-KA201-026739]

- Active involvement through participatory practices:
  In the research phase, children will be invited to identify possible solutions to avoid wastes (it has been established together with parents to avoid plastic bottles and double snack wraps, and to use small towels instead of paper tissues…)

- Group size:
  This lesson is dedicated to the big group and to the individual work with the notebook.

- Resources/ digital tools/ materials:

Pieces of paper
Interactive multimedia whiteboard
Notebook
Waste box

- Connection with the reference skill: problem solving

Assessment of the activity

a) Students participation
b) Respect for the ideas of others
c) Responsibility towards the commitments
d) Additional personal contents
e) Care of the elaborations
f) Reporting with appropriate terms

Instructions for teachers

- Provide differentiate instructions to match all students' needs (abilities, learning styles, range of roles to students etc.):

a) Planning activities carefully
b) Checking for the presence of the necessary equipments
c) Giving lessons with clear and simple requests
d) Monitoring the understandings of commands

- Monitor students' learning:

a) Observing behaviors inside the group
b) Asking opinions and restate ideas expressed by others
c) Assessing the number and the quality of the proposals made by the diverse members
d) Providing simple forms to fulfill in order to check the acquired knowledge

- Measure progress:

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[Project number: 2017-1-CY01-KA201-026739]

a) Before starting a lesson, making a short summary of what has already been done
b) Checking, also through creative strategies (traffic light), the awareness of the tasks that have already been performed and of those to be done

- Provide feedback:

a) Recording verbalizations and making copies for everybody
b) Rewarding and valorizing the ideas which have been proposed
c) Highlighting and valorizing the texts and the products presented.

- Refine instructions:

a) Checking if instructions are clear and if they have been understood, even by repeating them many times
b) Using a calm and serene tone of the voice
c) Welcoming opinions without making comments
d) Reformulate the commands by presenting schemes on the board.

- Promote students' active engagement:
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.
  c) Conducting several brainstorming

- Incorporate scaffolding techniques:
  a) Using manual activities and reflecting on them
  b) Presenting the proposal with different techniques

- Additional activities:
  a) Improve learning process by using educational knowledge both for ideas and for problem solving.
  b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Course 1: Introduction to the digital path	
Module 4: Creative use of garbage	
Digital Competence Area: 5- Problem-solving	
Grade Level: 1st	**Timeframe: 1,30 h**

Lesson Overview

After reading and following the implementation of small daily changes – useful to check the knowledge acquired – attention will be focused on imagination and fantasy, that will play a concrete role.

Objectives

At the end of the lesson students will be able to:

- Recognize the different phases of a project planning
- Cooperate for a shared goal
- Be responsible of their personal commitments.

Materials/ resources

Notebook

Lesson activities

- Working context:
  Lessons take place in class

- Approach/teaching method:

Teacher proposes to use waste in a creative way. So, he/she collects all the proposals through the oral brainstorming technique, and he/she writes the ideas on the blackboard.
Afterwards, teacher invites each child to create his own product (a monster, a robot, a mask, etc.) representing a character of the class.

- Active involvement through participatory practices:

Each child is invited to share his ideas with the rest of the class group.

- Group size:
  This lesson is dedicated to the big group and to the individual work with the notebook.

- Resources, digital tools, materials: notebook

- Connection with the reference skill: creation

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[Project number: 2017-1-CY01-KA201-026739]

Assessment of the activity

a) Students participation
b) Respect for the ideas of others
c) Responsibility towards the commitments
d) Additional personal contents
e) Reporting with appropriate terms
f) Care of the elaborations

Instructions for teachers

Please describe (100-150 words) how teachers can:

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.):

a) Planning activities carefully
b) Checking for the presence of the necessary equipment
c) Giving lessons with clear and simple requests
d) Monitoring the understandings of commands
e) Distributing tasks

- Monitor students' learning:

a) Observing behaviors in the major group
b) Asking opinions and restate ideas expressed by others
c) Assess the number of interventions, proposals and their quality
d) Providing simple forms to fulfill in order to check the acquired knowledge

- Measure progress:

a) Before starting a lesson, making a short summary of what has already been done
b) Checking, also through creative strategies (traffic light), the awareness of the tasks that have already been performed and of those to be done

- Provide feedback:

a) Recording verbalizations and make a copy for everybody
b) Rewarding and valorizing the ideas which have been proposed
c) Highlighting and valorizing the products which have been presented

- Refine instructions:

a) Checking if instructions are clear and if they have been understood, even by repeating them many times
b) Using a calm and serene tone of the voice
c) Welcoming opinion without making comments
d) Reformulate the commands, using more visual, verbal and manual tools

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- Promote students' active engagement

a) Do not present an already defined proposal but leading children to reflect and intervene on the project
b) Taking into consideration observations and ideas proposed by students and reflecting on their solutions, even in case of mistakes.
c) Conducting several brainstorming

- Incorporate scaffolding techniques:

a) Using manual activities and reflecting on them
b) Presenting the proposal with diverse techniques

- Additional activities:

a) Improve the learning process by using the educational knowledge both for ideas and for the research of solutions.
b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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[Project number: 2017-1-CY01-KA201-026739]

Course 1: Introduction to the digital path	
Module 5: From the individual project to the collective one	
Digital Competence Area: 5- Problem-solving	
Grade Level: 1st	**Timeframe: 2,00 h**

Lesson Overview

From the individual hypothesis, we move towards the creation of the collective project through an initiative of analysis and assessment of the products.

Objectives

At the end of the lesson students will be able to:

- Recognize the different phases of the project planning
- Cooperate for a shared goal
- Formulate motivated assessments

Materials/ resources

Scanner
Interactive multimedia whiteboard
Notebooks

Lesson Activities

- Working context: Lessons take place in class

- Approach/Teaching method:

After collecting all the drawings and scanning them to allow the group class to view them, teacher assigns the first commitment. In this way, he/she can verify if the proposal fosters a creative use of the waste.

Afterwards, a "critical friend" debate will start, by proposing suggestions and changes.

Large part of the children prepared at home some models that will represent prototypes explaining their individual ideas.

The second commitment is related to the choice of the most original and shared ideas. So, drawings and prototypes are reviewed from this perspective and the teacher reports on the whiteboard all the changes proposed by students. In the end, there will be the assessment of the project.

- Active engagement through participatory practices:

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[Project number: 2017-1-CY01-KA201-026739]

Each student is invited to express his/her own ideas and to share them with the class group in a debate, by respecting the ideas and the everybody's points of view.

- Group size: Big groups.

- Resources, digital tools:

Interactive multimedia whiteboard
Poster
Markers

- Connection with the reference skills:

a) Sharing of a design planning
b) Design phases
c) Selection of elements
d) Responsibility

Assessment activity:

a) Students participation
b) Respect for the ideas of others
c) Responsibility towards the commitments
d) Additional personal contents
e) Reporting with appropriate terms
f) Care of the elaborations

Instructions for teachers

Please describe (100-150 words) how teachers can:

- Provide differentiate instructions to match all students' needs (abilities, learning styles, range of roles to students etc.):
  1. Planning activities carefully
  2. Checking for the presence of the necessary equipment
  3. Giving lessons with clear and simple requests
  4. Monitoring the understandings of commands
  5. Provide simple schedules

- Monitor students' learning:
  a) Observing behaviors inside the groups
  b) Asking opinions and restate ideas expressed by others
  c) Assess the number of the interventions, proposals and their quality

- Measure progress:

a) Before starting a lesson, making a short summary of what has already been done
b) Checking, also through creative strategies (traffic light), the awareness of the tasks that have already been performed and of those to be done

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[Project number: 2017-1-CY01-KA201-026739]

- Provide feedback:

a) Recording verbalizations and making copies for everybody
b) Rewarding and valorizing the ideas which have been proposed
c) Highlighting and valorizing the products which have been presented

- Refine instruction:

a) Checking if instructions are clear and if they have been understood, even by repeating them many times
b) Using a calm and serene tone of the voice
c) Welcoming opinion without making comments
d) Reformulate commands, by using more visual, verbal and manual tools

- Promote students' active engagement
  a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
  b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.
  c) Conducting several brainstorming

- Incorporate scaffolding techniques:
  a) Using manual activities and reflecting on them
  b) Presenting the proposal with diverse techniques

- Additional activities:
  a) Using the educational knowledge both for ideas and for the research of solutions, in order to strengthen the learning process
  b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective.

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Course 1: Introduction to the digital path	
Module 6: Building a robot	
Digital Competence Area: 5- Problem-solving	
Grade Level: 1st	**Timeframe: 2,00 h**

Lesson Overview

Every child will bring waste materials from home to build a robot with the help of the teacher.
So, students will assemble the parts of the robot with the teacher's help for what concerns the most complex aspects.
Afterwards, children will add furthers details (drawings, paper chains, etc.) and the work will be concluded with a meta-reflection process about all the actions accomplished, according to the planning process.

Objectives:

At the end of the lesson students will be able to:

a) Recognize the different phases of a project planning
b) Cooperate for a shared goal
c) Motivate assessments
d) Manipulate materials

Material/ resources

Waste materials
Hot glue
Iron wire and string
Glue
Cutter
Paper tape
Pictures
Color copies
Notebook

Lesson Activities

- Working context: lessons take place in class
- Teaching method:
  Activities of the manipulative workshop: children divided into pairs and teachers prepare the parts to be assembled, according to the shared model.

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[Project number: 2017-1-CY01-KA201-026739]

At the end of the work, children retrace the whole activity and create a rulebook including the planning phases. Teachers will prepare the color copies of the collective project and of the product.

- Active involvements thanks to participatory practices: the activity is carried out in the manipulative workshop.

- Group size: this lesson is dedicated to the couple and team work.

- Resources, digital tools, equipment:

  Waste materials
  Hot glue
  Iron wire and string
  Glue
  Cutter
  Paper tape
  Pictures
  Color copies
  Notebook

- Connection with the reference skill:

  Sharing of a project
  Design phases
  Responsibility

Assessment activity

a) Students participation
b) Respect for the ideas of others
c) Responsibility towards the commitments
d) Additional personal contents
e) Reporting with appropriate terms
f) Care of the elaborations

Instructions for teachers

Please describe (100-150 words) how teachers can:

- Provide differentiate instructions to match all students' needs (abilities, learning styles, range of roles to students etc.):
  a) Planning activities carefully
  b) Checking for the presence of the necessary equipment
  c) Giving lessons with clear and simple requests
  d) Monitoring the understandings of commands

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e) Distributing tasks

- Monitor students' learning:
  a) Observing behaviors inside the groups
  b) Asking opinions and restate ideas expressed by others
  c) Assess the number of interventions, proposals and their quality
  d) Providing simple forms to fulfill in order to check the acquired knowledge

- Measure progress:
  a) Before starting a lesson, making a short summary of what has already been done
  b) Checking, also through creative strategies (traffic light), the awareness of the tasks that have already been performed and of those to be done

- Provide feedback:
  a) Recording verbalizations and making copies for everybody
  b) Rewarding and valorizing the ideas which have been proposed Highlighting and valorizing the products which have been presented

- Refine instruction:
  a) Checking if instructions are clear and if they have been understood, even by repeating them many times
  b) Using a calm and serene tone of the voice
  c) Welcoming opinion without making comments
  d) Reformulate the commands, using more visual, verbal and manual tools

- Promote students' active engagement:

a) Do not presenting an already defined proposal but leading children to reflect and intervene to compose the project
b) Taking into consideration observations and ideas proposed by the students and reflecting on their solutions, even in case of mistakes.
c) Conducting several brainstorming

- Incorporate scaffolding techniques:

a) Tasks and roles rotate into the group in order to support each other in carrying out the activities
b) Presenting the proposal with diverse techniques

- Additional activities:

a) Using didactical knowledge within the path bot for ideas and for the research of solutions, in order to improve the learning process
b) Placing the project among the ways to learn historical, scientific and technological contents in a cooperative perspective

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[Project number: 2017-1-CY01-KA201-026739]

Course 2

Module 1

Course 2: At School of Binary Calculation	
Module 1: Evaluation of the first path, introduction to the next one and sharing with the class group	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 1,00 h**
Lesson Overview It will be asked to the students to tell the path they underwent during course 1, putting the stress on the phases of the project, the typology of work done, and the products realized. The creation of "robot" objects with recycled material build a bridge between the robotics path and the effective computational thinking. Robots represent an interesting element, so for children it will be exciting to understand their functioning and use.	
Objectives: By the end of the module, the students will be able to: • Review the most important phases of a past experience; • Describe appropriately what has been done; • Verify the correctness of the statements of others; • Self-evaluate the actions developed to achieve the appointed task	
Materials/ resources: IWB to project documentation materials	

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[Project number: 2017-1-CY01-KA201-026739]

Module Activities

Circle time of self-evaluation

- Setting

Work in class

- Approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Guided debate through questions and rules for intervening, promoting the participation of all the students.
At the end of the self-evaluation process, the students carry put a graphic/ painting activity that can describe/ imply the feelings of each student.

- Group size (e.g. How will you plan group students for a project-based activity in a group or the class as a whole)
- Monitor prior knowledge
- Resources/ digital tools/ materials

The materials named during the preparation of the module.

- Link with the relevant digital competence(-ies)

Self-assessment.
Take up responsibilities.

Assessment activity

- Participation to the activity
- Respect for others' ideas
- Responsibility towards the assignment
- Personal contributions
- Use of appropriate terms
- Care of the elaborations

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[Project number: 2017-1-CY01-KA201-026739]

Course 2: At School of Binary Calculation	
Module 2: Hello Ruby: a story for learning	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 2,00 h**

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[Project number: 2017-1-CY01-KA201-026739]

Lesson Overview

10' What will we do together? Presentation of the course.

10' Who is Ruby!?

Sitting in a circle, the students and the educator read collectively the first chapter of the book "Hello Ruby" by Linda Liukas (http://www.helloruby.com/), and the children will get to know Ruby, her imaginary, and how she will be the main character guiding them through the ways, methodologies and languages of the computational language.

40' Secret code and Secret Language.

The pupils get to know some of Ruby's friends, among which the Penguins, that do not know the human language but communicate through a language made of different signs. Ruby found a (secret!) code, that allows her to decipher what the Penguins tell her and to communicate with them. The students will be encouraged to play with Ruby and the Penguins, learning their mysterious language through a few sheets:

- secret code: what do you think of when you hear the words *secret code*? Would you like to draw it?
- secret language: this is the code that associates our alphabet with the signs used by the penguins!
- Ruby and the Penguins chatting: what are they talking about?
- Hello! : what would you like to tell to the penguins? Use the code you just learned (Key word CODE-CODING)

10' Share of the activity just implemented

20' Collage MY MAGICAL COMPUTER

The children receive some illustration hints on coloured paper to build their own magical computer. The participants will be able to choose the shape (on red paper), 3 buttons (light blue paper), movement (yellow paper) and emotions (white paper).
After building their own magical computer, they will be asked to identify:
- the functioning of the three buttons: what can make your computer magical?
- what is it that you cannot do?
- who can use it? (key word USER)
- in which hardware component can you insert the emotion that you chose?
Share of the collages.

Objectives:

By the end of the module, the students will be able to:

- Understand the term code/ coding
- Know the main elements of a computer by using creativity

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[Project number: 2017-1-CY01-KA201-026739]

Material/ Resources

- Hello Ruby book (http://www.helloruby.com/)
- Paper in three different colors
- Glue
- Markers

Module Activities

- Setting

In the classroom

- approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Reading, listening and understanding a text
Guided conversation with ad hoc questions that stimulate reasoning in the pupils, and with the educator's facilitation for the engagement of all the members of the group
Individual collage activity
Confrontation with everybody's works

- resources/ digital tools/ materials

Materials indicated above

- Link with the relevant digital competence(-ies)

Listening and understanding a text and a task
Coding digital language
Creativity

Assessment activity

- Participation to the activity
- Respect for others' ideas
- Responsibility towards the assignment
- Care of the elaborations

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Course 2: At School of Binary Calculation	
Module 3: Ruby in search of diamonds!	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 1,00 h**

Lesson Overview

15' After the initial greetings, the pupils sit in a circle to read the second chapter of *Hello Ruby* by Linda Liukas (http://www.helloruby.com/).
Collective moment to return to the dimension od coding and to present the illustration on the blackboard that introduce the activities and the exercises of the lessons.

35' Secret code and Secret Language.

The educator reintroduces the penguins and the pupils learn how to translate their favourite word!

35' Collage: MY MAGICAL COMPUTER.

We continue to create a magical computer and write a sentence regarding what can be done with it.

5' Share of the works and saying goodbye

Objectives

By the end of the module, the students will be able to:

- Remember the term code/ coding
- Know the main elements of a computer thanks to their creativity

Materials/ Resources

- Hello Ruby book
- pencils
- Glue
- Markers

Module Activities

- Setting

Work in the classroom

- approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Reading, listening and understanding a text

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Guided conversation with ad hoc questions that stimulate reasoning in the pupils, and with the educator's facilitation for the engagement of all the members of the group
Individual collage activity to finish the "fake" computer
Confrontation with everybody's works

- resources/ digital tools/ materials

Materials indicated above

- Link with the relevant digital competence(-ies)

Listening and understanding a text and a task
Coding digital language
Creativity

Assessment activity

- Participation to the activity
- Respect for others' ideas
- Responsibility towards the assignment
- Care of the elaborations

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[Project number: 2017-1-CY01-KA201-026739]

Course 2: At School of Binary Calculation	
Module 4: What's inside a computer?	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 1,5 h**

Lesson Overview

15' The children sit in a circle and read the third chapter of the book "Hello Ruby" by Linda Liukas.
Collective moment to return to the dimension od coding and to present the illustration on the blackboard that introduce the activities and the exercises of the lessons.

30' What's inside a computer?

Through drawings and questions, the students will be asked what is a computer for them, and what are the objects that they use every day that have a computer inside.
Reflection on the object "computer" with regard to the concepts of *hardware* and *software*: what are the shapes, the dimensions and what happens inside them.
The students will receive the sheet "What's inside a computer?", that will be filled out with drawings.

40' b-ROBOT brushes his teeth!

Reflection on the breakdown of a command and analyses of the action of brushing teeth.
The students will receive a sheet where the students have to count how many commands it is necessary to give to b-ROBOT to have him brushing his teeth, without making a mess!
Then, the each student will breakdown and draw an action of his/her choice.

5' Share of the works and saying goodbye

Objectives:

By the end of the module, the students will be able to:

- Widen their knowledge of digital terms, hardware and software
- Know the main elements of a computer

Material/ Resources

- Hello Ruby book
- Sheets
- Markers
- Copies of the sheets to be filled in

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[Project number: 2017-1-CY01-KA201-026739]

Module Activities

- Setting

Work in the classroom

- approach/ teaching method (i.e. authentic learning, project-based learning and gamified learning)

Reading, listening and understanding a text
Guided conversation with ad hoc questions that stimulate reasoning in the pupils, and with the educator's facilitation for the engagement of all the members of the group
Activities in a small group and in the big group to identify the "objects" of a PC
Motorial game where an action is broken down in sequences and the pupils have to reproduce these one by one (the command is divided in small and minimum commands)
Confrontation with everybody's works

- resources/ digital tools/ materials

Materials indicated above

- Link with the relevant digital competence(-ies)

Listening and understanding a text and a task
Coding digital language: hardware and software
Orientation
Divisione in sequenze

Assessment activity

- Participation to the activity
- Respect for others' ideas
- Responsibility towards the assignment
- Care of the elaborations

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[Project number: 2017-1-CY01-KA201-026739]

Course 2: At School of Binary Calculation	
Module 5: b-ROBOT brushes its teeth!	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 2,00 h**

Lesson Overview

15'

Now we improve the new skills acquired by children through the introduction of a digital character that we will call b-robot. Students are used to surprises and they wait for the lesson to see what will happen.

We will sit in a circle to read the third and the fourth chapter of the "Hello Ruby" text by Linda Liukas. This is a starting moment to stay together, to light the reading candle and to create continuity with the daily-routine of the class.

It is also a collective moment useful to bring students in the coding world and to show on the blackboard all the illustrations of the activities and the exercises planned for the lesson.

75'

b-ROBOT brushes its teeth!

We proceed with the experimentation activity related to the commands management and we deal with daily action, understood as the set of all the spontaneous activities resulting from the autonomous cognitive elaborations produced by our brain.

Then there will be a conversation about an activity close to students' experience and easy to understand. The conversation will be accompanied by stimulating phrases, such as:

WE CAN BRUSH OUR TEETH WITHOUT THINKING TOO MUCH ABOUT IT!!!

If human beings are able to collect experiences and apply them when they receive an input, can we expect the same behavior from a computer? And from a robot?

WHAT DO YOU DO WHEN YOUR MOM AND YOUR DAD TELL YOU TO GET READY?

Ruby teaches us that a child like you answers to a request by elaborating the past experiences and by deciding what are the necessary, practical and easiest actions.

RUBY, AS A COMPUTER, DOES WITH GREAT PRECISION EVERY COMMAND SHE RECEIVES.

DO YOU REMEMBER THE POLKA DOT PAJAMAS!?!

We search together the clearest and most simple actions to teach to b-Robot to brush its teeth.

Afterwards each child will receive a preset form. In mode 1:1 we will give b-Robot the right indications to develop the command.

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We will use different colors to identify the different phases. So, it will be easy to understand how the same command can be executed in different ways and how to achieve the shortest, easiest and best path.
In other words, the form for this exercise is given to each student and the activity is executed on the blackboard in cooperation with a second professor; the shared concepts are the same, the exercise is modulated in a different manner according to the class' skills.

Objectives

At the end of the lesson students will be able to understand how daily activities are made by different micro-actions, of which they are often unaware.

Materials/ resources

Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respecting the copyright rules:

- Book "Hello Ruby"
- Preset forms
- Markers
- Copies of the forms to be filled

Lesson activities

- Working context:

In class

- Approach/Teaching method:

Reading, writing and text comprehension.
Conversation in which stimulating questions facilitate the participation of all the group components.
Game activity in which commands are organized in paths made up by small/sequences.
After having fulfilled the forms, children will discuss in a big group.

- Resources/ digital tools/ materials:

Book "Hello Ruby"
Preset forms
Markers
Copies of the forms to be filled

- Connection with the reference skill:

Listening and comprehension of the text and commands
Orientation
Division in sequences of complex activities

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Assessment of the activity

- Students participation
- Attention and concentration
- Analysis and division in sequences
- Care of the products

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Course 2: At School of Binary Calculation	
Module 6: Algorithms and body expression	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 1,30 h**

Lesson Overview

15'
After greeting, children will be informed of a change for the forthcoming lesson, or rather that we will go outside the class! If in the last two lessons students have commanded b-robot, today they will become micro-robots.
They will work outside the classes and they can move only inside the square drawn on the floor (which has been prepared previously).
A square will be drawn on the blackboard. Its dimension will be proportionated with the one drawn on the floor. Students will insert red paper circles inside the square.
Each circle reminds a small node. Teachers will tell the students that there are as many circles as the students and circles represent micro-robots!
Students will enter in the square – already knowing their position – and they will put off shoes and smocks!

15'
When we will be inside the square, we will read the fourth chapter of the book "Hello Ruby" by Linda Liukas.
Even if the places are different, our lesson routine does not change. So, we light the reading candle and introduce the activities.

50'
Body exercises related to the command execution:

1. Relax on the floor: respiration, contact with the floor.
2. Experimentation of the space: near and far.
3. Movement: big and small steps.
4. Movement: staying in the same place we will stand and sit slowly and quickly.

(for these first four exercises the expert participates intermittently to the exercises, in order to transmit security, lead concentrations and limit possible moments of distraction inside the group)

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5. Movement, space: mini-Robot move to the farthest place inside the square
6. Interaction with the other: students meet their mates, they look into each other's eyes and touch their hands.
7. Interaction with the other: with the feet on the square, each child switches his/her position with child who is in front. When they meet each other they say "hello".
8. Rhythm, loop, voice: sitting on the square, mini-Robots repeat the expert's actions → ground beat, repeating ground beat, using voice to create rhythm.
9. Listening and tuning: sitting in circle, mini-Robots shake their hands. The aim of the exercise is creating internal concentration and attention towards the quality of their actions and, at the same time, listening the others in order to perform a collective exercise.

From the single activity to the creation of a collective and participated movement.

At the beginning, the expert's role is to help children to focus on the movement produced by the mini-Robot nearby and reproduce this stimulus transferring it to the other children, from hand to hand.
This activity is useful to underline the qualitative change of the exercise and to highlight any break of concentration.

10'
Going back to the blackboard, with the aim of fixing and rationalizing the just experienced movements, we move the red paper circles and reproduce together the exercises performed on the blackboard.

Objectives:

At the end of the lesson students will be able to:

- Use symbolic spaces recognized as a geometrical reticulate
- Develop attention and concentration
- Execute commands
- Consolidate lateralization
- Move in the space according to a rhythm scanned by commands
- Identify themselves in the robot's actions

Material/ resources

Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respecting the copyright rule:

- Reticulate composed by at least 8 boxes for each side
- Scotch tape

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- Blackboard
- Colored paper

Lesson activities

- Working context:
  gym or another wide space

- Approach/Teaching method:
  Sharing the activities in a big group
  Individual and in pairs exercises
  Team play
  Final sharing in the big group
  Movement play with preset schemes

- Resources/ digital tool/ materials

  Reticulate composed by at least 8 boxes for each side
  Scotch tape
  Blackboard
  Colored paper

- Connection with the reference skill:

  Listening and understanding of the command
  Orientation
  Role play

Assessment of the activity

- Partecipazione alle attività
- Attenzione e concentrazione

Instructions for teachers

These experiences represent an introduction to the work of the block programming experienced with the body, they prepare students to move inside the square in a constructive way and are useful to the adults around to see how single children react to space-movement-expression stimulations.
While the aim of the first experience into the square is welcoming movements, voice and expression of every single child, the next lesson has greater opportunities for participation and achievement of objectives.
Furthermore, the introduction of a checkerboard structure in a space that has already been explored in its "free" dimension is considered as an additional item that can bring new experiences.

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Course 2: At School of Binary Calculation	
Module 7: Let's play with the Cartesian grid	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 2,00 h**

Lesson Overview

15'
After greeting, teachers will propose to the children to go back to the game of the previous lesson, in order to stress the concept of reticulate before assigning the specific terminology both to the reticulate and to the paths.

60'
Then we will propose a motor activity and its reproduction on preset forms, by working in pairs and signing the path through symbols that indicate commands. Students, in turns, execute the commands and mark the path from the start to the end and, afterwards, they write the commands.

15'
The concept of algorithm is introduced as a set of instructions that can be executed with or without computer. Afterwards, there will be an activity of reflection in the big group, through the guided conversation.

30'
In the final phase, we will propose to the students a set of exercises related to the body expression and to a command which are useful for the phases of relax and consolidation of the former lesson's activities.

1. Relax on the ground: breath, contact with the floor.
2. Experimentation of the space: near and far.
3. Movement: small and big steps.
4. Movement: we stand and sit down on the spot slowly and quickly.
5. Movement, space: mini-Robot moves to the farthest place in the square.
6. Interaction with the other: students meet their mates, they look into each other's eyes and touch their hands.
7. Interaction with the other: with the feet on the square, each child switches his/her position with child who is in front. When they meet each other they say "hello".
8. Rhythm, loop, voice: sitting on the square, mini-Robots repeat the expert's actions → ground beat, repeating ground beat, using voice to create rhythm.

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9. Listening and tuning: sitting in circle, mini-Robots shake their hands. The aim of the exercise is creating internal concentration and attention towards the quality of their actions and, at the same time, listening the others in order to perform a collective exercise.

From the single activity to the creation of a collective and participated movement.
Greetings.

Objectives:

At the end of the lesson students will be able to:

- Use symbolic spaces recognized as a geometrical reticulate
- Develop attention and concentration
- Execute commands
- Recording commands with abstract symbols, following the sequence of the actions that have been carried out
- Understand the concept of algorithm
- Move in the space according to a rhythm scanned by commands
- Identify themselves in the robot's actions

Materials/ resources

Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respecting the copyright rule:

- Reticulate composed by at least 8 boxes for each side
- Copies prepared to mark the path taken, build simple algorithms

Lesson Activities

- Working context:
  gym or wide space
  class

- Teaching method:
  Proposal is shared in the big group through motor games and guided conversations;
  In pairs exercises to foster cooperation and decrease performance anxiety;
  Final sharing activity in the big group to consolidate the approach to the algorythms;
  Motor game to use preset schemes.

- Resources, digital tools, equipment:

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Reticulate composed by at least 8 boxes for each side
Scotch tape
Blackboard
Colored paper

- Connection with the reference skill:
  Geographic path and orientation
  Algorithm as mathematical tool
  Motor and expressive activity

Assessment activity

- Participation to the activities
- Attention and concentration
- Observation and deduction

Instructions for teachers

At the beginning, the expert's role is to help children to focus on the movement produced by the mini-Robot nearby and reproduce this stimulus transferring it to the other children, from hand to hand.
This activity is useful to underline the qualitative change of the exercise and to highlight any break of concentration.

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Module 8

Course 2: At School of Binary Calculation	
Module 8: In the school garden, Cartesian grid becomes a vegetables' field	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 1,5 h**

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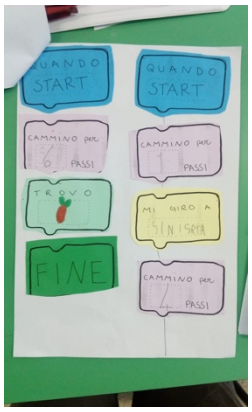
Lesson Overview

20'
In this lesson, we will introduce the writing of block programming and we will present the post-it cut like the scratch blocks, also by explaining the use of code writing and the joints.
In the big group, we will share an invented story on fruit and vegetables that are necessary to eat well and give energy also to the mini-robot (children).

60'
Children sit on the edge around the reticulate in which there is a papier-mache strawberry and a starting-point.
In turn and moving every time the strawberry, children in pairs are involved in a game/dialogue to include them: "Hello! Would you like strawberries? Mini-robot would like strawberries, how can it reach the strawberry?"
One of the children marks the path of mini-robot to reach the strawberry by using the arrows "forward", "turn right", "turn left", while his/her mate plays the part of the robot. At the beginning, instructions are given by the teacher, afterwards children do it.
Teacher help children to write the code for command sequences by using the block programming.

20'
The forms (fulfilled as in the image) are shown to the big group and some of them are proposed again to be executed and to assess the accuracy of the writing.
Greetings



Objectives:

At the end of the lesson students will be able to:

- Use symbolic spaces recognized as a geometrical reticulate to create
- Develop attention and concentration
- Execute commands

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- Recording commands with abstract symbols, following the sequence of the actions that have been carried out
- Using a new writing-mode of the actions – block code
- Move in the space according to a rhythm scanned by commands
- Identify themselves in the robot's actions

Material/ resources

Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respecting the copyright rule:

- Reticulate composed by at least 8 boxes for each side
- Preformed Post-it
- Objects made with papier-mache, foam rubber or plastic

Lesson Activities

- Working context:
  Gym or wide space
- Approach/Teaching method:
  Proposal is shared in the big group and motivated by a funny story that allow to feel involved and amused.
  In pairs exercises aiming to favor the cooperation between who does and who write the instructions.
  Sharing activity in the big group, aiming to assess the products
  Motor game by using preset schemes
- Resources, digital tools:
  Reticulate composed by at least 8 boxes for each side
  Preformed Post-it
  Objects made with papier-mache, foam rubber or plastic
- Connection with the reference skills:
  Geographic and orientation path
  Sequences approach according to the barcode
  Physical and expressive activity

Assessment activity:

- Participation to the activities
- Attention and concentration
- Cooperation among pairs

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Module 9

Course 2: At School of Binary Calculation	
Module 9: A scenography for a magic bee bot	
Digital Competence Area: 5- Problem solving	
Grade Level: 1st	**Timeframe: 1,5 h**

Lesson Overview

15'
Lesson aims to consolidate the writing of the block code, through a race won by the child who executes the shortest path.
In the big group children will share the know language, as well as its function and its use. So, a new step forward is proposed: to find the shortest way to reach the strawberry. This time a new character will be introduced: a robot bee, Beebot which will be impersonated in turn by the children.

60'
Children execute the activity in complete autonomy. Along the way, they will find new objects that obstacle the game and make it more complicated. After executing at least three exercises, objects will be compared and discussed by the group and the results will be reported through the post-it. In this way, children will choose the shortest way which is better to bypass obstacles.

15'
At the end of the game, which will have involved everybody, children will go back in their classroom to reflect together on what is happened and give sense to the lesson developed through a brainstorming led by the teacher.

Objectives:

At the end of the lesson students will be able to:

- Execute path on the reticulate.
- Record commands with abstract symbols, following the sequence of the actions that have been carried out.
- Use in an autonomous way the block code writing.
- Use "economic" strategies to achieve their objectives.

Materials/ resources

Indicate all the resources/tools that you will need during the lesson, and provide them with a title and a resource, by respecting the copyright rule:

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- Reticulate composed by at least 8 boxes for each side
- Preset post-it
- Objects made with papier-mache, foam rubber or plastic

Lesson activities

- Working context:
  Gym or a wide space
  Group discussion in the class
- Approach/Teaching method
  Proposal is shared in the big group and motivated by a challenge game.
  In pairs exercises foster cooperation among who does and who write instructions.
  Sharing the activity in the big group, in order to assess the products.
  Motor game by using preset schemes and scene objects.
- Resources/ digital tools/ materials
  Reticulate composed by at least 8 boxes for each side
  Preset post-it
  Objects made with papier-mache, foam rubber or plastic
- Connection with the reference skill:
  Geographic and orientation path
  Sequences approach according to the barcode
  Physical and expressive activities

Assessment of the activity

- Participation to the activities
- Attention and concentration
- Cooperation among pairs

Instructions for teachers

This activity introduces complex concepts such as algorithms, block code and the functions of efficiency and efficacy through the game, the movement and the fun to reach a goal/project.
As can be seen, real robotic tool, beebot, dush&dot, tablets and software are been introduced. This is an intentional choice rising from the idea that the complexity of computational thought should have been interiorized through experience, game, hypothesis and its verification, observation and deduction, reasoned choice, passage from the concrete to the abstract, use of symbols and codes.
The tender age of children needs those attentions. In this way, robotics does not represent only a mere intuitive and non-didactic game, but it will be able to transfer educational as well as digital skills.

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Curriculum (5): Learning in Connection

Curriculum Overview

Distribution of Courses:

Name of Partner: Tamat and I.C. FOLIGNO 4 Curriculum: Learning in Connection		
Course 1. Learning in Connection	Grade/ Year: 6th grade – 20 students	Timeframe: 10 modules x 3 hours

Content Outline

Course: Learning in Connection

DigComp Area:

- DigComp 1 – Information and data literacy
- DigComp 2 – Collaboration and communication
- DigComp 3 – Digital content creation
- DigComp 4 – Safety
- DigComp 5 – Problem solving

Course Overview

Course Overview
The objective of the Course is to develop the competences connected to ICT and communication media; to educate on the critical, positive and conscious use of social media and the web- especially with regard to education on web rules and rights and privacy policies; to hinder hate speech and cyber bullying, by identifying discriminatory messages and behaviours through video-storytelling workshops.

Aims of the Curriculum

The curriculum is addressed to students of 11-12 years of age (6th grade, or 1st grade of secondary school in Italy). The aim is to engage the students and educate them to share content through the new media with the video storytelling tool so that, through the use of a young and captivating language, they are conducted on a path of identification with the other, while, at the same time, discovering and narrating them-selves. Thus, the development of positive messages such as "seeing the world through a new point of view", in order to learn and understand the limits and strengths of the other, appreciate the richness of diversity and comprehend the severity of the acts of bullying and / or discrimination.

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At the same time, the students learn the language of the new media, acquiring technical knowledge through the production of content through the video storytelling. In this way, the pupils can actively use this new knowledge as creators of content rich in meaning and shared values, rather than being passive receivers of messages often empty or morally harmful.

The modules will be structured in the form of workshops, carried out in collaboration with, and for, students. During the implementation of the workshops, external experts will participate to farther deepen certain topics, in particular *non-discrimination* and *cyberbullying*. The collaborators will support the children in identifying the themes to be tackled and the stories to be proposed. Furthermore, technical experts in video storytelling and web communication will introduce the students to the knowledge of the tools useful to the production of videos for the web communication, and the final video stories conceived by the students will be shared online.

In a first phase, there will be the choice of the theme: the students take inspiration from the representation and image of them-selves, and from the perception of them-selves in the real world, with a particular attention to the social networks. In a second phase, the curriculum will approach the themes of *hate speech*, *cyber bullying*, *identification of discriminatory messages and behaviour, safe browsing, privacy, web reputation, risk prevention* and, more generally, the conscious use of technologies. Students, organized into groups, will choose a theme and with the experts' support will deepen it through Internet searches.

Therefore, the students will be invited to reflect on the chosen theme, becoming the active protagonists of the workshop and creating a product, through collaboration and shared creation of content in digital environments. The output will be a self-produced video for each group, which will be broadcast through social networks such as Youtube and Facebook, respecting the rules on security and copyright. The workshop will ensure, the acquisition of practical skills and tools useful to design, create and disseminate online an audiovisual product (choice of the theme-structure of the storyboard-dialogues-recording-post-production etc.), thanks also to the support of the technicians. The above-mentioned skills will improve the ability of the student to express him/herself effectively within the wider public sphere, which is today increasingly characterized by digital interactions.

The assessment of the specific objectives will be implemented through systematic observation of the students during the different working sessions with process cards and analysis, evaluation and peer-review evaluation of the digital stories produced during the workshop.

Objectives of the curriculum:

After completing the curriculum, the students will be able to:

- Develop the skills related to information technology and knowledge of digital communication tools;

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- use the media and social networks in a critical, positive and conscious way, in particular with regard to the rights and the issue of privacy online;
- Understand the rights and responsibilities of using the Internet;
- Counteract the hate speech and cyberbullying;
- Identify discriminatory messages and behaviors;
- Give preference to adequacy and non-exclusivity of the envisaged instruments, e.g. by combining activities without the use of computers and other devices with activities that use digital devices or online resources.

The course will be divided into the following phases:

a) Choice of the theme: it will take inspiration from the representation and image of the self, and from the perception of the self in the real world, with a particular focus on social networks, to then treat the themes of hate speech, cyberbullying, identification of discriminatory messages and behaviors, safe browsing, privacy, web reputation, risk prevention and, more generally, the conscious use of technologies;
b) Students will be invited to reflect on the chosen theme, becoming active protagonists and creating a product, through collaboration and shared creation of digital content;
c) The output will be a self-produced video for each group, which will be broadcast through social networks such as Youtube and Facebook, respecting safety and copyright regulations;
d) The workshops will guarantee the acquisition of practical skills and useful tools for the creation and dissemination online of an audiovisual product (choice of the theme-structuring of the storyboard-dialogues-recording-post-production etc.), that represent a useful means to express oneself in an effective way within the enlarged public sphere, increasingly characterized by digital interactions.

Modules of the Course:

Learning in Connection	
Module 1: Presentation of the Project	Timeframe: 3,00 h
Module 2: Netiquette, Copyright, Privacy	Timeframe: 3,00 h
Module 3: Working flux, copyright, video making, stop motion	Timeframe: 3,00 h
Module 4: Viewing of a video and debate on the topics presented by the video	Timeframe: 3,00 h
Module 5: Organization and search for multimedia material, Open shot	Timeframe: 3,00 h

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Module 6: The damages caused to our brains because of improper use of smartphones and social media; workshop on stop motion	Timeframe: 3,00 h
Module 7: Workshop on stop motion	Timeframe: 3,00 h
Module 8: Workshop on stop motion	Timeframe: 3,00 h
Module 9: Evaluation on the progress of the project	Timeframe: 3,00 h
Module 10: Final phase of the project and public presentation	Timeframe: 3,00 h

Digital Citizenship Course Index

Lesson Plan: Apprendimenti in Connessione

DigComp Competence Area							
1. Information	1.1 Browsing, searching and filtering information	☐	☐	☐	☐	☐	X
	1.2 Evaluating data, information and digital content	☐	☐	☐	☐	☐	X
	1.3 Managing data, information and digital content	☐	☐	☐	☐	☐	X
2. Communication and Collaboration	2.1 Interacting through digital technologies	☐	☐	☐	☐	☐	X
	2.2 Sharing through digital technologies	☐	☐	☐	☐	☐	X
	2.3 Engaging in citizenship through digital technologies	☐	☐	☐	☐	☐	☐

[7] ages

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	2.4 Collaborating through digital technologies	☐	☐	☐	☐	☐	☐
	2.5 Netiquette	☐	☐	☐	☐	☐	X
	2.6 Managing digital identity	☐	☐	☐	☐	☐	X
3.Content creation	3.1 Developing digital content	☐	☐	☐	☐	☐	X
	3.2 Integrating and re-elaborating digital content	☐	☐	☐	☐	☐	X
	3.3 Copyright and licenses	☐	☐	☐	☐	☐	X
	3.4 Programming	☐	☐	☐	☐	☐	☐
Safety	4.1 Protecting devices	☐	☐	☐	☐	☐	☐
	4.2 Protecting personal data and privacy	☐	☐	☐	☐	☐	X
	4.3 Protecting health and well-being	☐	☐	☐	☐	☐	X
	4.4 Protecting the environment	☐	☐	☐	☐	☐	☐
5. Problem solving	5.1 Solving technical problems	☐	☐	☐	☐	☐	☐
	5.2 Identifying needs and technological responses	☐	☐	☐	☐	☐	☐
	5.3 Creatively using digital technologies	☐	☐	☐	☐	☐	X
	5.4 Identifying digital competence gaps	☐	☐	☐	☐	☐	X

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Lesson Plan

Module 1

Course 1: Learning in Connection	
Module 1: Presentation of the project. The topics that will be tackles, the tools and technologies that will be involved, the main social networks and their features	
Digital Competence Area: DigComp 1 – Information and data literacy; DigComp 2 – Collaboration and communication; DigComp 3 – Digital content creation; DigComp 4 – Safety	
Grade Level: 6th grade	**Timeframe: 3,00h**

Lesson Overview:

Introduction to the topics of the lessons of the curriculum: critical, positive and conscious use of the media and the network, network rights and the issue of privacy and copyright, hate speech and cyberbullying, Netiquette.

- What is multimedia? Origins and history;
- Representation, self-image and self-perception in the real world. Who are we?
- How do we see ourselves? What are our strengths and weaknesses? How do others see us? How do we look on the web?

Starting from self-analysis, the students will debate on the differences between real life and the life described in the social networks.

- Viewing of the video "dipendenza da smartphone" (smartphone dependecy), that addresses issues concerning the historical evolution of the media and the extreme use of mobile phones in modern society.

Objectives:

At the end of the lesson the students will be able to:

Reflect on the critical, positive and conscious use of the media and the network, in particular for education on network rights and on the issue of privacy

Material/ resources

- PC
- Multimedia Interactive Whiteboard
- Digital resources (archives of documents, images, videos)

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Module Activities

- Work context:

The lesson takes place inside the school

- Approach / method:

"Non-formal" approaches related to laboratory activities ("hands-on"), to support teaching strategies aimed at project implementation (project-based learning) and learning through practice (learning by doing and by creating);

- Group size:

Large group with the presence of a teacher, a tutor and an additional figure.

- Verification of previous knowledge:

Compilation of an ex ante survey form aimed at detecting knowledge and expectations on the course. Conversation and annotation of the most relevant interventions of the students as prior knowledge, followed by the reading of the same to verify the adequacy of the thought expressed.

- Connection with the reference competence (s):

Understanding and finding solutions

Parameters for the Assessment of the Activity:

- Ex-ante assessment forms;
- Participation to the activities;
- Respect for others' ideas;
- Responsibility towards the work;
- Additional contributions;
- Use of proper language;
- Attention towards the contents elaborated.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities;
- Verify the necessary materials;
- Deliver the lessons clearly, taking into account the cognitive needs of each student;
- Monitor if the students understand the tasks they are given.

- Monitor students' learning
- Observe the behaviors within the group;
- Ask for opinions and report the concepts expressed by the students for all to understand;
- Assess the quantity and quality of the interventions;

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- Give feedback to verify the knowledge acquired.

- Measure progress
- Before beginning a new module, go through what has been said and developed in the previous one.

- Provide feedback
- Give value to the ideas expressed;
- Analyze and give value to the products presented by the students.

- Refine instruction
- Verify that the instructions are clear and well understood – repeating them if necessary;
- Welcome all opinions without commenting on them;
- Reformulate the tasks, using tools of various kinds (visual, verbal, etc.)

- Promote students' active engagement
- Do not give a well-defined proposal, but guide the students through the design of the project;
- Take into account all the observations;
- Repeat brainstorming

- Incorporate scaffolding techniques
- Use manipulative activities;
- Present the proposal through different techniques

- Additional activities
- Apply disciplinary knowledges for ideation and problem-solving, in order to strengthen the learning process

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Module 2

Course 1: Learning in Connection	
Module 2: Netiquette, Copyright, Privacy	
Digital Competence Area: DigComp 1 – Information and data literacy; DigComp 2 – Collaboration and communication; DigComp 3 – Digital content creation; DigComp 4 – Safety; DigComp 5 – Problem solving	
Grade Level: 6th grade	**Timeframe: 3,00h**

Lesson Overview:

- Ex ante survey
- Netiquette – analysis of the 15 rules of the correct behavior to observe when interacting on the net.
- Copyright and Creative Commons licenses.
- Difference between Copyright and Privacy.
- Download and installation of open source softwares to be used during the course. Open Shot, Vlc, Gimp, Audacity and Stop Motion Video, mobile app.

Objectives:

At the end of the lesson the students will be able to:

- Develop the skills related to information technology and knowledge of the digital communication tools;
- Reflect on the critical, positive and conscious use of the media and the network, in particular for education on network rights and on the issue of privacy.

Material/ resources

- PC, desktop
- Multimedia Interactive Whiteboard
- Smartphone
- Digital resources (documents, images, videos archives)
- Software created for other purposes and used for educational objectives, including software for entertainment (e.g. social media)

Module Activities

- Work context:

The lesson takes place inside the school

- Approach / method:

"Non-formal" approaches related to laboratory activities ("hands-on"), to support teaching strategies aimed at project-based learning and learning through practice (learning by doing and by creating);

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- Group size:

Large group with the presence of a teacher, a tutor and an additional figure

- Verification of previous knowledge:

During the conversation, the significant interventions of each student will be noted as preconceptions, followed by the reading of the same to verify the adequacy of the thought expressed.

- Connection with the reference competence (s):

Understanding and finding solutions

Parameters for the Assessment of the Activity:

- Participation to the activities;
- Respect for others' ideas;
- Responsibility towards the work;
- Additional contributions;
- Use of proper language;
- Attention towards the contents elaborated.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities;
- Verify the necessary materials;
- Deliver the lessons clearly, taking into account the cognitive needs of each student;
- Monitor if the students understand the tasks they are given.

- Monitor students' learning
- Observe the behaviors within the group;
- Ask for opinions and report the concepts expressed by the students for all to understand;
- Assess the quantity and quality of the interventions;
- Give feedback to verify the knowledge acquired.

- Measure progress
- Before beginning a new module, go through what has been said and developed in the previous one.

- Provide feedback
- Give value to the ideas expressed;
- Analyze and give value to the products presented by the students.

- Refine instruction
- Verify that the instructions are clear and well understood – repeating them if necessary;

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[Project number: 2017-1-CY01-KA201-026739]

- Welcome all opinions without commenting on them;
- Reformulate the tasks, using tools of various kinds (visual, verbal, etc.)

- Promote students' active engagement
- Do not give a well-defined proposal, but guide the students through the design of the project;
- Take into account all the observations;
- Repeat brainstorming

- Incorporate scaffolding techniques
- Use manipulative activities;
- Present the proposal through different techniques

- Additional activities
- Apply disciplinary knowledges for ideation and problem-solving, in order to strengthen the learning process;
- Present the project as a way to acquire scientific knowledge, an approach to observation and classification, an approach for planning.

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Module 3

Course 1: Learning in Connection	
Module 3: Working flux, copyright, video making, stop motion	
Digital Competence Area: DigComp 1 – Information and data literacy; DigComp 2 – Collaboration and communication; DigComp 3 – Digital content creation; DigComp 4 – Safety; DigComp 5 – Problem solving	
Grade Level: 6th grade	**Timeframe: 3,00h**
Lesson Overview (Please edit accordingly): • What is the workflow, how to organize files and name folders on PC in order to correctly cataloguing multimedia files. • Characteristics of digital images, pixels and how to determine the resolution of an image. High-resolution image search with advanced Google Images tools. • How to find "copyright free" audio content on dedicated sites. • How to design a video, study and material search phase, the storyboard and how to write it. • Design creative animations with the stop motion technique, what a frame is and how the human eye perceives moving images, guided exercises and free experimentation using the dedicated Stop Motion Studio mobile phone application.	
Objectives: • Know how to organize a work group • Knowledge of the characteristics of digital images • Knowledge of the concept of copyright and search for documents without copyright • Basic knowledge and ability to design a video and video in stop motion	
Material/ resources • desktop PC • Multimedia Interactive Whiteboard • Smartphone • Digital resources (archives of documents, images, videos) • Software created for other purposes and used for educational purposes, including even software for entertainment purposes (eg: social media)	

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Module Activities

- Work context:

The lesson takes place inside the school

- Approach / method:

"Non-formal" approaches related to laboratory activities ("hands-on"), to support teaching strategies aimed at project-based learning and learning through practice (learning by doing and by creating);

- Group size:

Large group with the presence of a teacher, a tutor and an additional figure

- Verification of previous knowledge:

During the conversation, the significant interventions of each student will be noted as preconceptions, followed by the reading of the same to verify the adequacy of the thought expressed.

- Connection with the reference competence (s):

Understanding and finding solutions

Parameters for the Assessment of the Activity:

- Participation to the activities;
- Respect for others' ideas;
- Responsibility towards the work;
- Additional contributions;
- Use of proper language;
- Attention towards the contents elaborated.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities;
- Verify the necessary materials;
- Deliver the lessons clearly, taking into account the cognitive needs of each student;
- Monitor if the students understand the tasks they are given.

- Monitor students' learning

- Observe the behaviors within the group;
- Ask for opinions and report the concepts expressed by the students for all to understand;
- Assess the quantity and quality of the interventions;
- Give feedback to verify the knowledge acquired.

- Measure progress

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- Before beginning a new module, go through what has been said and developed in the previous one.

- Provide feedback
- Give value to the ideas expressed;
- Analyze and give value to the products presented by the students.

- Refine instruction
- Verify that the instructions are clear and well understood – repeating them if necessary;
- Welcome all opinions without commenting on them;
- Reformulate the tasks, using tools of various kinds (visual, verbal, etc.)

- Promote students' active engagement
- Do not give a well-defined proposal, but guide the students through the design of the project;
- Take into account all the observations;
- Repeat brainstorming

- Incorporate scaffolding techniques
- Use manipulative activities;
- Present the proposal through different techniques

- Additional activities
- Apply disciplinary knowledges for ideation and problem-solving, in order to strengthen the learning process;
- Present the project as a way to acquire scientific knowledge, an approach to observation and classification, an approach for planning.

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Module 4

Course 1: Learning in Connection	
Module 4: Viewing of a video and debate on the topics presented by the video	
Digital Competence Area: DigComp 1 – Information and data literacy; DigComp 2 – Collaboration and communication; DigComp 3 – Digital content creation; DigComp 4 – Safety; DigComp 5 – Problem solving	
Grade Level: 6th grade	**Timeframe: 3,00h**

Lesson Overview (Please edit accordingly):

• View of the video 'Se Mi Posti Ti Cancello', episode 1 and 2 from the website www.generazioniconnesse.it, an awareness campaign aimed at young people to promote the responsible and positive use of new media and help make the Internet a safe place for the youngest;

• Debate and conclusions aimed at deciphering the correct behaviors to be taken in the real life and on the net (social network);

• Videomaking workshop. Starting from the rules of netiquette, the students work in groups of four, and are supported by the teachers and high school students from a vocational institute, to invent a story to be represented by creating a graphic-descriptive storyboard of the scenes in sequence, that will be processed to produce a short film;

• In the end, each group share the idea and draft with the whole class to improve the organization of the contents.

Objectives:

- Understanding the risks associated with exposure to social media
- Knowing how to recognize dangerous situations online and on social networks
- Knowledge of netiquette rules
- Knowing how to conceive a short story for a video
- Knowing how to create a graphic-descriptive storyboard

Material/ resources

- PC, Desktop
- Multimedia Interactive Whiteboard
- Smartphone
- Digital resources (archives of documents, images, videos)
- Software created for other purposes and used for educational purposes, including even software for entertainment purposes (eg: social media)

Module Activities

- Work context:

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[Project number: 2017-1-CY01-KA201-026739]

The lesson takes place inside the school

- Approach / method:

"Non-formal" approaches related to laboratory activities ("hands-on"), to support teaching strategies aimed at project-based learning and learning through practice (learning by doing and by creating);

- Group size:

Large group with the presence of a teacher, a tutor and an additional figure

- Verification of previous knowledge:

During the conversation, the significant interventions of each student will be noted as preconceptions, followed by the reading of the same to verify the adequacy of the thought expressed.

- Connection with the reference competence (s):

Understanding and finding solutions

Parameters for the Assessment of the Activity:

- Participation to the activities;
- Respect for others' ideas;
- Responsibility towards the work;
- Additional contributions;
- Use of proper language;
- Attention towards the contents elaborated.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities;
- Verify the necessary materials;
- Deliver the lessons clearly, taking into account the cognitive needs of each student;
- Monitor if the students understand the tasks they are given.

- Monitor students' learning

- Observe the behaviors within the group;
- Ask for opinions and report the concepts expressed by the students for all to understand;
- Assess the quantity and quality of the interventions;
- Give feedback to verify the knowledge acquired.

- Measure progress

- Before beginning a new module, go through what has been said and developed in the previous one.

- Provide feedback

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- Give value to the ideas expressed;
- Analyze and give value to the products presented by the students.

- Refine instruction
- Verify that the instructions are clear and well understood – repeating them if necessary;
- Welcome all opinions without commenting on them;
- Reformulate the tasks, using tools of various kinds (visual, verbal, etc.)

- Promote students' active engagement
- Do not give a well-defined proposal, but guide the students through the design of the project;
- Take into account all the observations;
- Repeat brainstorming

- Incorporate scaffolding techniques
- Use manipulative activities;
- Present the proposal through different techniques

- Additional activities
- Apply disciplinary knowledges for ideation and problem-solving, in order to strengthen the learning process;
- Present the project as a way to acquire scientific knowledge, an approach to observation and classification, an approach for planning.

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[Project number: 2017-1-CY01-KA201-026739]

Course 1: Learning in Connection	
Module 5: Organization and search for multimedia material, Open Shot	
Digital Competence Area: DigComp 1 – Information and data literacy; DigComp 2 – Collaboration and communication; DigComp 3 – Digital content creation; DigComp 4 – Safety; DigComp 5 – Problem solving	
Grade Level: 6th grade	**Timeframe: 3,00h**

Lesson Overview (Please edit accordingly):

How to transfer a video from a mobile device to a PC via cable connection or via Bluetooth.

Presentation of the free Open Shot software for video editing.

Explanation to and experimentation, through a specific exercise, of the following operations:

- Program interface (preview, timeline, effects, transitions);
- Add multimedia files to the project (audio, video, music, photos ...);
- Set the duration and cut a track;
- Create and control transitions between tracks;
- Set the parameters of resolution and frame rate of the project;
- Organize the project in folders and sub-folders;
- Save the project.

Group work continuation

Objectives:

- Know how to transfer a video from a mobile device to a PC via cable connection or via Bluetooth
- Knowledge of Open Shot software

Material/ resources

- PC, Desktop
- Multimedia Interactive Whiteboard
- Smartphone
- Digital resources (archives of documents, images, videos)
- Software created for other purposes and used for educational purposes, including even software for entertainment purposes (eg: social media)

Module Activities

- Work context:

The lesson takes place inside the school

- Approach / method:

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"Non-formal" approaches related to laboratory activities ("hands-on"), to support teaching strategies aimed at project-based learning and learning through practice (learning by doing and by creating);

- Group size:

Large group with the presence of a teacher, a tutor and an additional figure

- Verification of previous knowledge:

During the conversation, the significant interventions of each student will be noted as preconceptions, followed by the reading of the same to verify the adequacy of the thought expressed.

- Connection with the reference competence (s):

Understanding and finding solutions

Parameters for the Assessment of the Activity:

- Participation to the activities;
- Respect for others' ideas;
- Responsibility towards the work;
- Additional contributions;
- Use of proper language;
- Attention towards the contents elaborated.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities;
- Verify the necessary materials;
- Deliver the lessons clearly, taking into account the cognitive needs of each student;
- Monitor if the students understand the tasks they are given.

- Monitor students' learning

- Observe the behaviors within the group;
- Ask for opinions and report the concepts expressed by the students for all to understand;
- Assess the quantity and quality of the interventions;
- Give feedback to verify the knowledge acquired.

- Measure progress

- Before beginning a new module, go through what has been said and developed in the previous one.

- Provide feedback

- Give value to the ideas expressed;
- Analyze and give value to the products presented by the students.

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- Refine instruction
- Verify that the instructions are clear and well understood – repeating them if necessary;
- Welcome all opinions without commenting on them;
- Reformulate the tasks, using tools of various kinds (visual, verbal, etc.)

- Promote students' active engagement
- Do not give a well-defined proposal, but guide the students through the design of the project;
- Take into account all the observations;
- Repeat brainstorming

- Incorporate scaffolding techniques
- Use manipulative activities;
- Present the proposal through different techniques

- Additional activities
- Apply disciplinary knowledges for ideation and problem-solving, in order to strengthen the learning process;
- Present the project as a way to acquire scientific knowledge, an approach to observation and classification, an approach for planning.

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Module 6

Course 1: Learning in Connection	
Module 6: The damages caused to our brains because of improper use of smartphones and social media; workshop on stop motion	
Digital Competence Area: DigComp 1 – Information and data literacy; DigComp 2 – Collaboration and communication; DigComp 3 – Digital content creation; DigComp 4 – Safety; DigComp 5 – Problem solving	
Grade Level: 6th grade	**Timeframe: 3,00h**
Lesson Overview (Please edit accordingly): View of a short video about the damaging consequences of the brain learning skills in people of 12 to 25 years of age, due to excessive use of social media and YouTube. Debate and discussion on the opinions of the students.	
Objectives: Awareness and internalization of the effects of excessive use of social media and YouTube on the cognitive abilities of young people	
Material/ resources • Multimedia Interactive Whiteboard • Digital resources (archives of documents, images, videos)	
Module Activities • Work context: The lesson takes place inside the school • Approach / method: "Non-formal" approaches related to laboratory activities ("hands-on"), to support teaching strategies aimed at project-based learning and learning through practice (learning by doing and by creating); • Group size: Large group with the presence of a teacher, a tutor and an additional figure • Verification of previous knowledge: During the conversation, the significant interventions of each student will be noted as preconceptions, followed by the reading of the same to verify the adequacy of the thought expressed. • Connection with the reference competence (s): Understanding and finding solutions	

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Parameters for the Assessment of the Activity:

- Participation to the activities;
- Respect for others' ideas;
- Responsibility towards the work;
- Additional contributions;
- Use of proper language;
- Attention towards the contents elaborated.

Instructions for teachers

- Provide a differentiate instruction to match all students' needs (abilities, learning styles, range of roles to students etc.)
- Carefully plan the activities;
- Verify the necessary materials;
- Deliver the lessons clearly, taking into account the cognitive needs of each student;
- Monitor if the students understand the tasks they are given.

- Monitor students' learning
- Observe the behaviors within the group;
- Ask for opinions and report the concepts expressed by the students for all to understand;
- Assess the quantity and quality of the interventions;
- Give feedback to verify the knowledge acquired.

- Measure progress
- Before beginning a new module, go through what has been said and developed in the previous one.

- Provide feedback
- Give value to the ideas expressed;
- Analyze and give value to the products presented by the students.

- Refine instruction
- Verify that the instructions are clear and well understood – repeating them if necessary;
- Welcome all opinions without commenting on them;
- Reformulate the tasks, using tools of various kinds (visual, verbal, etc.)

- Promote students' active engagement
- Do not give a well-defined proposal, but guide the students through the design of the project;
- Take into account all the observations;
- Repeat brainstorming

- Incorporate scaffolding techniques
- Use manipulative activities;

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[Project number: 2017-1-CY01-KA201-026739]

- Present the proposal through different techniques

- Additional activities
- Apply disciplinary knowledges for ideation and problem-solving, in order to strengthen the learning process;
- Present the project as a way to acquire scientific knowledge, an approach to observation and classification, an approach for planning.

Conclusion

This programme report is developed for the requirements of the Erasmus+ programme "Digital, Responsible Citizenship in a Connected World" (DRC) intellectual output 4 "O4. Development and Evaluation of the Digital Citizenship Programme and Curricula on digital literacy (Leading partner CARDET)", in order to support children appropriate and responsible use of technology. The Digital Citizenship programme presents a series of lesson plans aiming at supporting teachers in the process of cultivating Digital Responsible Citizens in a Connected Word. The DRC curricula on digital literacy provides practical tips, pedagogical tools, methods, resources and material for teachers and students. Lessons have been developed by teachers from the 4 partner countries namely: Cyprus, Greece, Ireland and Italy. The involved teachers have an extensive teaching experience and are in alignment with aims, objectives and processes of their National Curriculum. Each lesson plan reflects a dimension of the DigCom framework: Information and data literacy; Communication and Collaboration; Digital Content Creation; Safety; Problem Solving. Even though teachers/researchers developed lesson plans with a view to their National Curriculum, we strongly believe that proposed learning activities can easily adapted to any teaching context and will be of use to support teacher professionals for promoting digital competencies and responsible online behavior of primary school students.

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