

RESULT 2:
STEAMERs Project: The TRAINING GUIDE



STEAMERs

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1. INTRODUCTION

ABOUT THE STEAMERS TRAINING GUIDE

The STEAMERS Training Guide is designed and constructed for VET trainers to train the pre-primary teachers on how to develop their key competences to effectively teach STEAM/ER in their schools. The training modules result from the Compendium (R1) and focus on the knowledge, skills, and key competences that R1 have revealed as needs for pre-primary teachers to contribute to STEAM/ER education with their children. The Training Guide material has been tested by VET trainers and pre-primary teachers as learners during a joint event in Cyprus. The pilot test process allowed to prepare pre-primary school teachers, give them all the knowledge, skills, and key competences needed to carry out effective STEAM/ER teaching with their children when returning back to their countries. This Training Guide is innovative in the sense that there is no training guide developed so far as regards STEAM/ER knowledge, skills, and key competences development for early childhood education teachers. The innovation also lies in the fact that this Training Guide is the result of the R1 research findings, and therefore it comes right from the needs of the target group. In addition, this Training Guide can be used as an independent tool from the whole STEAMERS training program (as a separate educational tool) for any pre-primary teacher that wishes to acquire knowledge and skills development to include STEAM/ER in their lessons. The Pilot tests have been assessed upon their completion. Both teachers and children gave their feedback. Their feedback was invaluable because it contributed to the improvement and adjustment of the Training Guide. VET trainers and pre-primary teachers are the primary target groups, various other target groups are impacted, such as school leaders, teachers and trainers of all levels of education, educational organisations involved in STEAM/ER, research organisations, education decision-makers, inspectorates, and all relevant stakeholders interested in the area of STEAM/ER, and children in pre-primary education as final beneficiaries. The Training Guide is an invaluable source of activities, tools, proposed lesson plans, valuable resources, for all interested parties, who will utilise them to give STEAM/ER an important position in education today. Besides, organisations have been approached at the local level to transfer the knowledge gained and incorporated in the Compendium on STEAM/ER key competences development for teachers. The STEAMERS Training Guide, based on the outcomes of R1, contained the curriculum, the list of modules with learning outcomes, followed by the training design, educational methodologies to be utilized, training materials/activities per module and other important resources.

2. STRUCTURE OF THE TRAINING COURSE

COURSE STRUCTURE

The course is divided in 9 chapters or modules: 6 thematic modules, one module on the theoretical foundations,

the introduction and the conclusion.

Introduction et objectives of the course

Module 1: Theoretical foundations

- a) Description of STEM methodology and educational robotics
- b) The importance of ICT
- c) Critical thinking
- d) Educational Methodologies
- e) Learning Outcomes

Module 2: Learning Guide - Science

- a) Objectives and skills
- b) Description of the activities
- c) Resources and training materials
- d) Assessment tools
- e) Conclusions/recommendations

Module 3: Learning Guide - Technology

- a) Objectives and skills
- b) Description of the activities
- c) Resources and training materials
- d) Assessment tools
- e) Conclusions/recommendations

Module 4: Learning Guide - Engineering

- a) Objectives and skills
- b) Description of the activities
- c) Resources and training materials
- d) Assessment tools
- e) Conclusions/recommendations

Module 5: Learning Guide - Mathematics

- a) 1.Objectives and skills
- b) 2.Description of the activities
- c) 3.Resources and training materials
- d) 4.Assessment tools

- e) 5. Conclusions/recommendations

Module 6: Learning Guide - Educational robotics

- a) Objectives and skills
- b) Description of the activities
- c) Resources and training materials
- d) Assessment tools
- e) Conclusions/recommendations

Module 7: Learning Guide - Arts

- a) Objectives and skills
- b) Description of the activities
- c) Resources and training materials
- d) Assessment tools
- e) Conclusions/recommendations

Conclusions

THEMES FOR LESSON PLANS

Each module includes 5 lesson plans, one for each theme that have been chosen. These themes are the same for every module:

- Daily routine
- Colours and shapes
- Numbers
- Seasons
- Body parts

3. THE LEARNING OUTCOMES MATRIX

MODULE 2 LEARNING GUIDE – SCIENCE

Daily Routine – Day and Night routine

KNOWLEDGE	SKILLS	KEY COMPETENCES
To formulate their ideas about day and night and their repeated alternation	To use models to represent the Earth and its movement around itself	Critical Thinking
	To perceive the repeatability (pattern) of the phenomenon of the alternation of day and night	Problem solving

Colours and shape- Colours exploration

KNOWLEDGE	SKILLS	KEY COMPETENCES
To introduce preschoolers to the concept of primary colours and colour mixing	To use models to represent the Earth and its movement around itself	Critical Thinking
To demonstrate to preschoolers how combining primary colours can create new colours	To perceive the repeatability (pattern) of the phenomenon of the alternation of day and night	Problem solving
To encourage preschoolers to predict and experiment with mixing colours.		

Numbers- Counting Nature's Treasures

KNOWLEDGE	SKILLS	KEY COMPETENCES
To introduce the concept of numbers to preschoolers in a fun and engaging way.	To introduce preschoolers to basic science concepts such as sorting and classifying natural materials based on different properties	Observation
To develop preschoolers' ability to count objects accurately	To develop preschoolers' creativity and through nature-based art activities	
To encourage preschoolers to explore the properties of natural materials.		

Seasons- Seasons sensory bottles

KNOWLEDGE	SKILLS	KEY COMPETENCES
To introduce preschoolers to the concept	To provide preschoolers with an opportunity To document and reflect on their observations.	Cooperative learning
To demonstrate to preschoolers how combining different items they can create season sensory bottles	To enhance preschoolers' fine motor skills like hand to eye coordination.	Constructivism
To encourage preschoolers to predict and experiment with magnetic items. of magnetism.	To foster creativity and artistic expression in preschoolers.	

Body parts- Body parts

KNOWLEDGE	SKILLS	KEY COMPETENCES
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To understand the basic structure and function of lungs.

To learn how air moves in and out of the lungs.

To appreciate the importance of breathing for our bodies.

MODULE 3 LEARNING GUIDE – TECHNOLOGY

Daily Routine – Photos of our daily routine

KNOWLEDGE	SKILLS	KEY COMPETENCES
Students should demonstrate Knowledge in using technology (tablets)	Being able to associate a routine with a specific task and time of the day so that effective searching can be done eg (morning, afternoon, evening, night, wake up, get up, eat breakfast, eat lunch, eat dinner, go to school, start school, go home, arrive home, watch TV, do homework, go to bed)	Digital skills
Identify a routine that the student does on a daily basis		
Learn how to use the search engine effectively to find a photo that shows the daily routine		

Colours and shape- Identify shapes

KNOWLEDGE	SKILLS	KEY COMPETENCES
Students should demonstrate Knowledge in using technology (tablets), analyse what the ORIGINAL photos are, and comprehend what they should do (how to actually find the same shapes and take a photo)	Analysing the ORIGINAL photos in order to guess where to find the shapes	Digital skills
	Demonstrate knowledge of using tablet	Problem solving

	Recognize Shapes and Colours Comparing ORIGINAL photo with the one taken	
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Numbers- Counting Numbers Using Technology

KNOWLEDGE	SKILLS	KEY COMPETENCES
Students should demonstrate Knowledge in using technology (tablets), analyse how many stamps they need to create and comprehend what they should do (how to actually apply the equivalent number of stamps)	Demonstrate knowledge of using tablet	Digital skills
To develop preschoolers' ability to count objects accurately.	Recognize Numbers	
To encourage preschoolers to explore the properties of natural materials.	Understand and apply repetition in creating the stamps	

Seasons- Learning the different seasons

KNOWLEDGE	SKILLS	KEY COMPETENCES
Students should demonstrate Knowledge in using technology (tablets/PC)	Ability to present their story to the class	Digital skills

Analyse and comprehend the different seasons and different months that belong to each season	Creating a drawing	
	Ability to associate various real life events with particular season	

Body parts- Using Technology to learn about Body Parts

KNOWLEDGE	SKILLS	KEY COMPETENCES
Students should demonstrate Knowledge in using technology (tablets)	Analysing the sense that the teacher is explaining	Digital skills
Analyse and comprehend what each sense is and which body part we need to use it.	Creating a video	
Ability to present their story to the class	Evaluating the outcome of their video choices	

MODULE 4 LEARNING GUIDE – ENGINEERING

Daily Routine –

KNOWLEDGE	SKILLS	KEY COMPETENCES
Group the idea that children have about alternating day and night.	Distinguish day from night	Critical Thinking
Describe the movement of the earth through play		Problem solving

Colours and shape-

KNOWLEDGE	SKILLS	KEY COMPETENCES
Create the basis for learning	Identify colour and shapes	Critical Thinking
Recognize basic and secondary colors together with shape recognition	Know how to discriminate shapes and colors together and knowing how to name them	Problem solving

Numbers-

KNOWLEDGE	SKILLS	KEY COMPETENCES
Identify numbers within a context	Recognize numbers through ribbons, drawings and the computer.	Critical Thinking
Learn to count correctly to 10		Problem solving
Recognize numbers even within a set of numbers		

Seasons-

KNOWLEDGE	SKILLS	KEY COMPETENCES
Identify season putting the seasons in touch with your emotions	Create the basis for learning and recognizing season and emotions	Critical Thinking
Learn the seasons through PC devices and know how to sing them		Problem solving

Body parts-

KNOWLEDGE	SKILLS	KEY COMPETENCES
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<p>Students learn to perceive themselves, others and the space around them.</p>	<p>Develop motor coordination in one's body scheme</p>	<p>Critical Thinking</p>
<p>They also learn to differentiate natural space from virtual bodily space</p>		<p>Problem solving</p>

MODULE 5 LEARNING GUIDE – MATHEMATICS

Daily Routine – Mathematics in my life

KNOWLEDGE	SKILLS	KEY COMPETENCES
Developing an understanding of the concepts of “smaller”, “bigger”, “equal”	Improving of understanding of the concept of time	Observation
Developing ability to identify commonalities and differences	Developing the skills to prepare a healthy meal	Logics

Colours and shape- Learn colours and shapes

KNOWLEDGE	SKILLS	KEY COMPETENCES
Developing the ability to recognise geometric figures	Development of spatial imagination	Logics
Improving the ability to recognise and name colours		

Numbers- What is a number and what does it serve us for

KNOWLEDGE	SKILLS	KEY COMPETENCES
Developing the ability to count objects	Developing the concept of number in its cardinal and ordinal aspects	Observation
Developing the ability to separate objects according to a common feature		

Seasons- Mathematics of the seasons

KNOWLEDGE	SKILLS	KEY COMPETENCES
Developing the ability to recognise the seasons	Developing counting skills	Observation
Developing ability to segregate clothes according to their purpose	Developing ability to identify time sequence	

Body parts- Human is built of mathematics

KNOWLEDGE	SKILLS	KEY COMPETENCES

KNOWLEDGE	SKILLS	KEY COMPETENCES
Developing the concept of body orientation (right and left side)	Developing motor coordination in one's body scheme	Logics
Developing the concept of "pair"		

MODULE 6 LEARNING GUIDE – EDUCATIONAL ROBOTICS

Daily Routine – BEEBOT Daily Routines Let's do a large program!

KNOWLEDGE	SKILLS	KEY COMPETENCES
Work cooperatively to achieve an objective	To perform a complex program for the Bee-Bot robot	Cooperative learning
Decompose a larger “problem” into smaller parts to more easily solve it.	The order of the instructions/steps in a program is important.	Problem solving

Colours and shape- Our first Computer Program

KNOWLEDGE	SKILLS	KEY COMPETENCES
What is an algorithm used for and how can it be applied to an everyday action	The sequence of the instructions is important in an algorithm	
What is a computer program	There can be more than one valid solution to perform the same action	
The different between algorithm and program.		

Numbers- BEEBOT Mat Counting 1-10 Let's program our first robot!

KNOWLEDGE	SKILLS	KEY COMPETENCES
Count from 1 to 10	To be introduced to the functions of a Bee-Bot robot.	Cooperative learning
Work cooperatively to achieve an objective	To perceive the repeatability (pattern) of the phenomenon of the alternation of day and night	
	Program their Bee-Bot robot	

Seasons- Let's create the story of the seasons

KNOWLEDGE	SKILLS	KEY COMPETENCES
Customize the characters	Combine different motion blocks into programmed sequences	Creativity
Record sounds and add them to projects	To think creatively.	Collaborative skills
Implement different backgrounds	To work collaboratively.	

Body parts- Artificial Intelligence (AI)

KNOWLEDGE	SKILLS	KEY COMPETENCES
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<p>Every day examples of AI (adapted to the age of the pupils)</p>	<p>AI is designed by people and helps us in our daily lives.</p>	<p>Digital skills</p>
<p>Definition and limits of AI (adapted to the age of the pupils)</p>	<p>AI does not replace people</p>	
	<p>Concept of Animating a drawing/learning to use an AI application</p>	

MODULE 7 LEARNING GUIDE – ARTS

Daily Routine – Time to put your toys away.

KNOWLEDGE	SKILLS	KEY COMPETENCES
Learn about the space around us.	Provide children with opportunities to reflect on their actions (what may happen if they don't tidy up).	Problem-solving
Regulate their behaviour (paying attention to putting their toys away/tidying up).	Follow the logical line of events.	Cooperative learning
Enhance motor skills through music and dance (by arranging toys through song and dance - movement).	Develop skills such as: consciously ordering toys, oral-linguistic skills during singing, independent work skills, active listening, etc.	Creativity

Colours and shape- "I have a small house!"

KNOWLEDGE	SKILLS	KEY COMPETENCES
Recognize/name shapes and colours	Observe and identify the shapes used in drawing/painting a house and the environment around the house.	Skills: oral-linguistic skills, independent work skills, the ability to observe and correctly translate what they visualize, conscious listening skills, fine and gross motor skills, enthusiasm for learning.
Recognize/identify shapes in the environment.	Use adequate geometric shapes / colours to draw a house and the environment.	
Discuss characteristics of different shapes.		

Compare and contrast different shapes.		

Numbers- The number 1!

KNOWLEDGE	SKILLS	KEY COMPETENCES
To recognize the number and the digit 1 and associate it with the quantity.	To make specific gestures necessary to write number 1 correctly	Cooperative learning
To become receptive to the rhythm of beats.	To be aware of the position that number 1 has in the numerical scale.	
	To aesthetically colour the number 1.	

Seasons- Spring is coming!

KNOWLEDGE	SKILLS	KEY COMPETENCES
To recognize the seasons on the wheel	To use symbols representing types of weather	Creativity
To identify specific elements of spring	To create a weather clock	Collaborative skills
To identify different types of weather		

Body parts- I am a penguin and I turn my head. Can you do it?

KNOWLEDGE	SKILLS	KEY COMPETENCES
To identify/name the parts of the human body	To enhance their memory and concentration	Creativity
To develop children's awareness and control of the body	To develop their language skills	
To develop fine motor skills and coordination	To boost their self-esteem and confidence	

4. Learning Activities

4.1. Module 1- Theoretical foundations

4.1.1. Description of STEAM methodology

The term STEAM was created by the National Science Foundation (NFS) in the United States in the 1990s. With the aim of developing new areas of knowledge and providing the students with an appropriate set of skills for new technological and digital developments.

The term **STEM** is an acronym for **S**cience, **T**echnology, **E**ngineering and **M**athematics.

According to this methodology, it is the student who builds his or her knowledge and the tools to solve everyday problems. Basically, the system follows up their interest through attractive themes closer to their reality. The main objective is to understand what has been studied in the classroom, but in a more challenging and practical context (everyday life).

The learning of these disciplines is encouraged through hands-on training, as the children work through experimentation. The projects are developed by the children, making them the main actors of their own learning experience.

Summarizing, STEM methodology develops the following skills in students:

- Research
- Critical Thinking
- Problem Solving
- Creativity
- Communication
- Collaboration

STEAM METHODOLOGY

The methodology is based on the same education principles as STEM, including Arts. The aim is to foster the student's creativity, to promote innovation and to associate logical thinking with creativity.

In the traditional curriculum, arts have very little relevance and teaching hours. However, this method argues that arts skills improve creativity, problem solving, critical thinking, autonomy and communication.

This is why arts were added to the four subjects of the **STEM** model (**S**cience, **T**echnology, **E**ngineering and **M**athematics) to evolve to what is known today as **STEAM** (**S**cience, **T**echnology, **E**ngineering, **A**rts and **M**athematics). STEAM education results in a multidisciplinary learning process, through the development of projects based on everyday life situations.

Educational systems based on STEAM methodology are becoming increasingly common within academic projects and communities. Mainly because:

- It supports proactive learning.

- It develops skills in creative problem solving and mathematical logical thinking, developing as the management of emotions.
- It integrates learning through ICT.
- It encourages teamwork and teach how to make decisions together (as they develop research, collaborate and design hypotheses).
- It teaches through first-person experimentation, thereby improving the long-term retention of the learned concepts

4.1.2. Description of educational robotics

Educational robotics is an interdisciplinary teaching environment. It is based on the use of robots and electronic components to enhance the development of children's skills and competences. It works especially in STEAM disciplines, although it can also cover other areas such as linguistics, geography and history.

Within this approach, Educational Robotics is considered as a privileged didactic resource with great potential for students from an early age and as a highly motivating element, being the perfect gear to generate multidisciplinary environments.

Educational robotics is a tool that facilitates the acquisition of knowledge in a playful way, based on principles such as interactivity, collaborative work, and the development of logical-mathematical thinking. The demand for a more scientifically focused education places educational robotics as an important element for the development of STEAM areas.

The application of educational robotics encourages the following social skills in children and young people:

1. **Teamwork:** During the process of group work, the children understand that the objective become more feasible if they work together.
2. **Discipline and commitment:** They understand and assimilate the importance of being orderly, patient and committed to achieve the project's results.
3. **Experimentation/Trial and error:** The outcome of their work become evident very quickly, as they can see for themselves whether they are right or wrong. By experimentation, they learn that making mistakes is part of the process.
4. **Increases self-esteem:** As they understand that failure is a key element in all learning, they develop resilience and lose the fear of making mistakes.
5. **DIY (Do it yourself) empowerment:** gaining autonomy by making robots by themselves and solving different problems.

On the other hand, it encourages the development of the following competences related to scientific technological training:

6. **Programming language:** They acquire their first notions of programming and understand that it must have an order, a structure and a method.

7. Computational thinking: With the design and creation of robots, they learn abstract concepts, breaking down a large problem into small parts and to propose solutions, that can be represented as sequences of instructions and algorithms.

8. Scientific attitudes: They acquire and put into practice attitudes such as curiosity, wonder, analysis and research. They learn to search, obtain and handle information.

9. Interest in technological culture: They have a first approach to the notion of technological culture, through computers, Internet and multimedia content.

10. Creativity and innovation: They realise that there is no single valid solution. This allows them to use their creativity to look for innovative solutions, also learning from their peers, beyond the first possible solution.

4.1.3. The importance of ICT

The appearance of new technologies, have transformed our society. Students learn in a different way and new methodologies are being used by the teachers. Technology can help us to discover new ways of thinking.

The use of ICT can enhance both the practical and theoretical aspects of STEM teaching and learning. Consider the following potential contributions:

- Enhance work production through ICT tools that expedite lengthy or difficult manual processes, focusing more time on critical thinking, discussion, and data interpretation.
- Assist with collecting and analyzing data.
- Increase the prevalence and scope of relevant information by linking school STEM learning to contemporary knowledge and providing access to experiences not feasible by other means.
- Improve educational outcomes through autonomous and collaborative learning, while increasing student motivation and engagement.
- Increase global awareness, through collaboration with international classrooms.
- Support exploration and experimentation by providing immediate, visual feedback.
- Focus attention on real-world applications through relevant technologies

ICT offers access to a wide variety of Internet resources and tools that facilitate and extend opportunities for STEM learning both inside and outside the classroom.

4.1.4. Critical thinking

We live in the age of ICT and we have an infinite amount of information that we can access freely. We need to help students to be able to discern between all the information that is relevant, what are the reliable sources.

Allowing them to make their own decisions, and to have their own opinion based on contrasting information.

This type of thinking would have the following benefits for the students:

- Curiosity in a wide range of subjects.
- Concern to be and stay well informed.
- Self-confidence in one's own reasoning abilities
- Open-mindedness to divergent world views and understanding of other people's opinions.
- Honesty in confronting one's own prejudices, stereotypes or self-centred tendencies.
- Prudence in making and altering judgements.

CRITICAL THINKING IN THE CLASSROOM

The experts affirm that from an early age, children have grown immersed in a culture of critical thinking, being attentive in front of complex situations, etc.

For that reason, it is considered beneficial to work the critical thinking abilities within the classroom. The most used model highlights eight forces and they are the following:

1. Time: Provide sufficient time and respect individual differences.
2. Opportunities: Propose authentic activities in which different cognitive processes can be developed and different tasks can be involved.
3. Routines: These are tasks that help to structure, order and develop different ways of thinking in the learning process and promote their autonomy.
4. Language: To implement a language of thought; where different cognitive processes can be described, distinguished and reflected upon.
5. Modelling: Students share their ideas, exchange views and discuss them; thinking is developed together.
6. Interrelationships: Context where one can speak self opinions and respect for each other's ideas is encouraged, developing an atmosphere of trust where strengths and weaknesses are shown.
7. Physical environment: Create an emotional environment of trust and a physical space to stimulate the culture of thinking, such as a classroom, laboratory or workshop.
8. Expectations: Establish a "menu" for learners to know the learning objectives so the learners can focus on what they need to think about

4.1.5. Educational methodologies

The key principles that describe the STEAM methodology are significant learning, student motivation, cooperative learning and critical thinking.

4.1.5.1. SIGNIFICANT LEARNING

Actual's society is characterised by an enormous amount of content and is known as the era of communication. By contrast, the human mind is forced to process a lot of data and must change and evolve

at great speed. The learning mechanism par excellence is significant learning convincing both, the classroom and everyday life. The experts highlight two conditions for meaningful learning to take place:

- Significant learning attitude on the part of the learner, i.e. a predisposition.
- Presentation of significant material: presents a logical relationship that allows interaction on the part of the learner.

4.1.5.2. MOTIVATION AND ITS IMPORTANCE

From the point of view of the teaching-learning process, motivation refers to the will to learn and to the interest that the learner has in his or her own learning or in the activities that lead to it.

From the students' perspective, two types of motivations must be considered: the intrinsic ones, that are inherent to their personality, and the extrinsic ones, that appear through the teaching and learning process driven by the teacher.

Another aspect to take into account is family or cultural contexts. The teacher must manage the whole process in such a way that the objectives can be achieved, by providing strategies for tackling the various tasks, which is called achievement motivation.

Some of the tricks to motivate the students are:

- Develop intrinsic motivation: interesting activities for students, the use of the surprise factor, using games
- and activities, variety in the organisation and structure of classes.
- Giving students the leading role.
- Avoid giving too much importance to evaluation.
- Transferring self-motivation to students.
- Use novel concepts: technological resources and ICT.

In summary, the experts assert that motivation is the engine that leads us to act and to achieve what we set out to do. Motivation also increases effort and persistence in the tasks, leads to students' initiative, improves their skills and performance

4.1.5.3 COOPERATIVE LEARNING

Johnson & Johnson (1999), considered as the fathers of the term cooperative learning, define it as "the didactic use of small groups in which students work together to maximise their own and each other's learning".

The same authors affirm that learning is the students' own and that it requires their direct and active participation. It is achieved when working cooperatively to achieve common goals.

It should be borne in mind that working in groups is not cooperative learning. For it to be so, the authors state that the following 5 elements are necessary:

- Positive interdependence: teachers set a clear task and a common goal, so that efforts benefit all members of the group. Generating commitment from all, success and failure depends on the group.

- Individual and group responsibility: everyone is responsible for their task within the group, along with the achievement of the objectives. Each learner's performance is evaluated in order to identify who needs more help and members are empowered.
- Encouraging interaction: pupils promote each other's success by sharing resources, congratulating each other's achievements and helping each other, which in the future, will be supportive in the school environment.
- Interpersonal and team skills: all members must learn and be motivated to exercise leadership, decisionmaking, communication and conflict resolution skills.

4.1.6 Evaluation

When we talk about the teacher's work, it is important to point out that behind every activity there must be an evaluation. And it is necessary also to differentiate between evaluation and grading. It is often thought that one is synonymous with the other, but it is not. It is possible to evaluate without grading or giving marks, and that is precisely when evaluation has the greatest impact on the learning of the youngest pupils.

Formative evaluation seeks to improve teaching and learning processes. Its main objective is to obtain information in order to help students to improve.

This type of evaluation is characterised by a closer teacher-student relationship, where the monitoring of the student's learning is sought. It also has great benefits for students' learning: greater motivation and involvement, responsibility for their learning, helps the teacher to detect their difficulties and adapt future sessions for their understanding, etc.

4.2. Learning guide- Science

LESSON PLAN

Seasons sensory Bottles

Summary			
Date	xxx	Total duration	70 minutes
Subject	Making four sensory bottles, one for each season, will engage students in science (physics), notably magnetism, while also teaching them about the seasons.		
Year Group or Grade level	3-6 years old		
Main Topic	<ul style="list-style-type: none"> The students will learn what are the four seasons colours and how they can represent each season in a sensory bottle. The students will predict, explore magnetic items and they will record the results on journal or worksheet. 		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Magnetism and magnetic poles Attraction and repel 	<ul style="list-style-type: none"> Cooperative learning Constructivism 	
Learning Objectives			
<ul style="list-style-type: none"> To introduce preschoolers to the concept of magnetism To demonstrate to preschoolers how combining different items they can create season sensory bottles. To encourage preschoolers to predict and experiment with magnetic items 		<ul style="list-style-type: none"> To provide preschoolers with an opportunity to document and reflect on their observations. To enhance preschoolers' fine motor skills like hand to eye coordination. To foster creativity and artistic expression in preschoolers. 	
Material needed			
<ul style="list-style-type: none"> Magnetic items (paperclips, washers, bolts, screws, pipe cleaner) 4 Plastic or glass water bottles Baby oil, Food colouring Magnetic wand 		<ul style="list-style-type: none"> Flowers, Leaves, pebbles, sand, seashells Glitter, Fake snow, &/or snowflakes Pom-poms Funnel Journal for observations 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Begin by introducing the concept of seasons to the preschoolers. Show them pictures or nature in each season.	
	05 minutes	Explain children that they are going to make 4 sensory bottles one for each season. Record their ideas of what can they include in the bottles.	

<i>Main activity</i>	05 minutes	You can add snowflake or fake snow & glitter to create the winter effect.	
	05 minutes	To make a spring sensory bottle, you can insert a few flowers into empty water bottle.	
	05 minutes	Fill an empty bottle with some sand, then add a few rocks, pebbles and seashells to make the summer sensory bottle.	
Assessment exercise			
assessment	10-15 minutes	Ask children what items moved when they were waving the wand	Make a list of the items that were pulled by the magnet and the ones who were not, to sort out the magnetic items and non-magnetic ones
Conclusions and recommendations			
<ul style="list-style-type: none"> • Magnets can push or pull one another in different directions. • Magnets are typically powerful enough that you can use one to move another around on top of a table without having them come into contact. • Attraction is what happens when magnets bring things together or closer together. • Magnets repel when they push other objects or themselves away. 		<ul style="list-style-type: none"> • Further recommendations for the teachers: https://littlebinsforlittlehands.com/magneticsensory-bottle/ 	

LESSON PLAN

Body Parts

Summary			
Date	xxx	Total duration	xxx
Subject	In this lesson plan you can learn how to make a lung model that demonstrates how the respiratory system works. By following the step-by-step instructions provided, children can create a functioning lung model that shows how air moves in and out of the lungs. This		

	interactive activity can help children learn about the importance of lungs in our bodies.		
Year Group or Grade level	4-6 years old		
Main Topic	The main topic of the lesson plan is to introduce preschoolers to body parts and particularly lungs and how they function		
Subtopics or Key Concepts	The subtopics of the lesson plan include the basic structure and function of lungs. How air moves in and out of the lungs and the importance of lungs for our bodies		
Learning Objectives			
	<ul style="list-style-type: none"> To understand the basic structure and function of lungs. To learn how air moves in and out of the lungs. To appreciate the importance of breathing for our bodies 		
Material needed			
	<ul style="list-style-type: none"> Large plastic bottle (x2) Straws Balloons 	<ul style="list-style-type: none"> Scissors Tape Modeling clay 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Gather the children together and introduce the topic of lungs. Ask the children what they know about lungs and breathing. Explain that lungs are an important part of our respiratory system that help us breathe.	
<i>Main activity</i>	30 minutes	<p>Lung Model Construction</p> <p>Instruct the children to follow the step-by-step instructions provided to create their own lung models.</p> <p>Assist children as needed and encourage them to work together in pairs or small groups.</p> <p>After the models are complete, have the</p>	Cut the bottom of a plastic bottle about 2,5 cm from the end. It's recommended that an adult help with this task due to the sharpness of the scissors. Insert two straws with two balloons into the bottle. Make sure the balloons are stuck on the straw and the two staws are stuck



		<p>children test them by blowing into the straws and observing how the balloons inside the bottles inflate and deflate.</p>	<p>together with tape. Make sure there is no air coming out of the bottle's opening. Secure it in place with tape or plasticine if necessary.</p> <p>Tie a knot at the end of another balloon and cut it horizontally in half. Take the balloon half with the knot and stretch the open end over the bottle's bottom, securing it with tape if needed.</p> <p>Gently pull down on the balloon from the knot, allowing air to enter the balloons in your lung model.</p> <p>Release the balloon with the knot and observe as air is expelled from the lung model</p>
	10 minutes	<p>Ask the children to share their observations and what they learned about how air moves in and out of the lungs. Discuss the importance of breathing for our bodies and how lungs help us to breathe in oxygen and exhale carbon dioxide.</p>	<p>Ask them questions about what they find, such as "What do you notice about this model?" or "How does it work?"</p>
Assessment exercise			
assessment	05 minutes	Discussion with children	<p>Place your hand on your stomach. What do you notice? When you breathe in what do you feel? Does your stomach expand when you breathe in? Why do you think this happens?</p>
Conclusions and recommendations			
<ul style="list-style-type: none"> • Extention (10minutes) <p>To further your exploration, you can construct a similar model that represents both lungs. To</p>		<ul style="list-style-type: none"> • CT Science Center's article on making a lung model 	

<p>create this model, you will need to use two straws and two plastic bags. You will need to create an upside-down Y-shaped trachea using straws that have been taped together to ensure they are airtight. Plastic bags should be taped to the ends of each straw in the Y shape. Finally, ask children to blow into the straw to see both lungs inflate!</p> <ul style="list-style-type: none"> • Conclusion (5 minutes) <p>Summarize the key points of the lesson and emphasize the importance of taking care of our lungs by breathing fresh air and avoiding smoking.</p>	<ul style="list-style-type: none"> • Visual aids such as diagrams of the respiratory system
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LESSON PLAN

Counting Nature's Treasures

Summary			
Date	xxx	Total duration	60 minutes
Subject	The subject of this lesson plan is a combination of science and math, with a focus on introducing preschoolers to the concept of numbers through nature-based activities		
Year Group or Grade level	4-6 years old		
Main Topic	To introduce preschoolers to the concept of numbers through nature- based activities and to encourage them to explore the properties of natural materials.		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Introduction to numbers • Counting objects • Exploring the properties of natural materials 	<ul style="list-style-type: none"> • Sorting and classifying natural materials based on different properties (e.g. color, shape) 	
Learning Objectives			
<ul style="list-style-type: none"> • To introduce the concept of numbers to preschoolers in a fun and engaging way. • To develop preschoolers' ability to count objects accurately. • To encourage preschoolers to explore the properties of natural materials 	<ul style="list-style-type: none"> • To introduce preschoolers to basic science concepts such as sorting and classifying natural materials based on different properties. • To develop preschoolers' creativity and through nature-based art activities 		
Material needed			
<ul style="list-style-type: none"> • Outdoor space with access to natural materials (e.g. leaves, rocks, sticks, flowers,etc.) • Large sheet of paper or cardboard 	<ul style="list-style-type: none"> • Marker or crayon • Small containers or baskets • Number cards or foam numbers 		
Lesson Outline			

	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Begin by introducing the concept of numbers to the preschoolers. Show them number cards or foam numbers and ask them if they can identify any numbers they recognize.	
	10 minutes	Take the preschoolers outside to a designated area with access to natural materials. Provide each child with a small container or basket and a marker or crayon	
	05 minutes	Explain to the preschoolers that they will be going on a nature scavenger hunt to find a certain number of items. Write a number on each child's container or basket (e.g. 5, 10, or 15).	
<i>Main activity</i>	05 -10 minutes	Ask the preschoolers to find the number of items that matches the number on their container or basket. For example, if a child has the number "5" on their container, they must find 5 rocks or 5 leaves	
	05 minutes	Encourage the preschoolers to explore the properties of the natural materials they find, such as the texture, color, and shape	
	05 minutes	Once the preschoolers have collected the required number of items, have them count and sort	

		their treasures on a large sheet of paper or cardboard.	
Assessment exercise			
assessment	10-15 minutes	Observe the preschoolers as they are searching for and counting their nature treasures.	Ask them questions about what they find and how they are counting. This will help you assess their understanding of numbers and their ability to identify and count objects.
Extension	10-15 minutes	If time allows, you can also encourage the preschoolers to create patterns or designs using their natural materials	
Conclusions and recommendations			
This nature-based numbers activity combined with science for preschoolers is a fun and engaging way to introduce the concept of numbers, encourage exploration of natural materials, and promote creativity and expression through art.		Teachers may consider integrating this activity into a larger nature-based curriculum or theme, such as a unit on seasons, plants, or animals. They may also want to provide opportunities for children to share and discuss their findings, observations, and creations with their peers or families.	

LESSON PLAN

Colours exploration

Summary			
Date	xxx	Total duration	80 minutes
Subject	Students will be engaged in science (physics) and particularly about the colours by exploring and mixing the basic colours in hands-on activities .		
Year Group or Grade level	3-6 years old		
Main Topic	The students will learn what are the basic colours and what are the what are their derivatives. The students will predict, explore colour mixture with water and they will record the results on a worksheet.		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Additive mixing • Color theory • The color wheel 	<ul style="list-style-type: none"> • Color terms • Cooperative learning • Constructivism 	
Learning Objectives			



<ul style="list-style-type: none"> To introduce preschoolers to the concept of primary colors and color mixing. To demonstrate to preschoolers how combining primary colors can create new colors. To encourage preschoolers to predict and experiment with mixing colors. 		<ul style="list-style-type: none"> To provide preschoolers with an opportunity to document and reflect on their color mixing observations. To enhance preschoolers' fine motor skills through painting and coloring activities. To foster creativity and artistic expression in preschoolers. 	
Material needed			
<ul style="list-style-type: none"> Containers or cups filled with red, yellow, and blue water Food coloring Droppers 		<ul style="list-style-type: none"> White coffee filters Tray or plate Recording sheet Watercolors or tempera 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Begin by introducing the concept of primary colors (red, blue, and yellow) to the preschoolers. Show them pictures or real-life examples of objects that are primary colors	
	10 minutes	Fill the three cups or jars with water. Label one cup "red," one cup "blue," and one cup "yellow."	
	05 minutes	Add several drops of red food coloring to the "red" cup, several drops of blue food coloring to the "blue" cup, and several drops of yellow food coloring to the "yellow" cup. Mix each cup with a spoon until the water is colored.	
<i>Main activity</i>	05 minutes	Place a white coffee filter on the tray or plate. Invite the preschoolers to predict what will happen when they mix the primary colors together. Allow them to make their predictions.	
	05 minutes	Have the preschoolers dip one end of a coffee filter into the "red" cup	Alternatively, children can use



		and the other end into the "blue" cup. Then, dip another coffee filter into the "yellow" cup.	droppers to mix the colours instead of dipping. the coffee filters
	05-10 minutes	Place the coffee filters on the tray or plate and allow them to dry completely	
	10 minutes	Once the coffee filters are dry, show the preschoolers how the colors have mixed together to create new colors. Ask them to identify the new colors they see.	Encourage the preschoolers to experiment with mixing the colors themselves by dipping the coffee filters into different cups and creating their own color combinations.
Assessment exercise			
assessment	10-15 minutes	Students can document their color Experiment observations on a recording sheet, using either watercolors or tempera paint. This enables them to witness how the merging of two colors generates a distinct hue.	
extension	10-15 minutes	If time allows, have the preschoolers create a piece of artwork using the coffee filters they have colored. Provide them with glue and construction paper to create a collage or allow them to decorate the coffee filters however they like.	
Conclusions and recommendations			
In conclusion, this lesson plan, is based on the color experiment that introduces preschoolers to the concept of color mixing and enhances their fine motor skills, creativity, and artistic expression. By engaging in the experiment and documenting their observations, preschoolers can develop a deeper understanding of the properties of colors and how they interact with one another.		Further recommendations for the teachers: Some recommendations for this lesson plan include providing ample time for preschoolers to explore and experiment with the materials, encouraging them to ask questions and make predictions, and adapting the activity to accommodate different learning styles and abilities.	

LESSON PLAN

Day and Night routine

Summary			
Date	XXX	Total duration	60 minutes
Subject	Students will be engaged in science (physics) and particularly about the day and night alternation by using the daily routines.		
Year Group or Grade level	4-6 years old		
Main Topic	<ul style="list-style-type: none"> The students will learn what activities are held during the day and what activities are held during the night. The students will learn why we experience daytime and night-time on the Earth. 		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Contrasting student and scientific views Student everyday experiences 	<ul style="list-style-type: none"> Motion of the sun and Earth Shape of the Earth Astronomy 	
Learning Objectives			
<ul style="list-style-type: none"> To formulate their ideas about day and night and their repeated alternation Describe the alternation of day and night and realize that it is due to the rotation of the Earth on its axis 		<ul style="list-style-type: none"> To use models to represent the Earth and its movement around itself To perceive the repeatability (pattern) of the phenomenon of the alternation of day and night 	
Material needed			
<ul style="list-style-type: none"> Computer with internet access Two dolls depicting the 2 cartoon protagonists from a screenshot of the video below: https://youtu.be/dJz_noKP-Bw 		<ul style="list-style-type: none"> Globe torch a darkened part of the classroom to work in worksheet glue scissors tambourine 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	05 minutes	The teacher has placed two dolls depicting the 2 cartoon protagonists from the video which will be shown next, in class. The 2 dolls live in different countries. One of them lives in Greece while the other lives in America.	



	10 Minutes	Introduction of the Day and Night topic by showing a video with Day & Night. Then have a short discussion. 'Have you ever seen fireworks? When do we see fireworks, during the day or at night?'	
<i>Main activity</i>	05 minutes	After the video finishes, teacher moves to the idea generation stage, where he/she asks children questions to understand the children's ideas.	When the doll wakes up, the other is still sleeping. When it is day in Greece, is it day or night in America? Why? How do you think day changes to night and then day again?
	05 minutes	The teacher places a globe and a flashlight on a desk. Asks children to identify the earth and the sun. Then slowly rotates the globe on its axis talking about the rotation of the earth around itself.	
	05 minutes	The teacher experiments with the Flashlight highlighting different countries and places on Earth. Ask the students questions to help them understand the day & night alternation better.	Which part of the earth does the sun illuminate? Is it day or night in Greece? The teacher rotates the globe at a point where America is lighted & not Greece. Where does the sun illuminate now? Is it day or night in America?
	10-15 minutes	The teacher shows the children a worksheets with pictures of children's daily habits that are characteristic and easily recognizable about day and night. Then asks children to cut out the pictures	

		from the worksheet and glue them into the correct box.	
Assessment exercise			
assessment	10-15 minutes	Role-play 'Day & Night' game	Children play a role-play game, simulating the phenomenon of day-night alternation
		<ol style="list-style-type: none"> 1. The teacher divides the children into groups. 2. A child will pretend to be the sun 3. Two pairs will alternately represent the earth while held back-to-back 4. The rest of the children will be 'judges'. 5. Each pair rhythmically rotates around itself while the sound of the tambourine is heard. 6. When the sound stops the pairs stop moving and the child who sees the sun shouts "day" while the child who doesn't see the sun shouts "night". 7. The rest of the children who have the role of a 'judge', will check whether the pair correctly represents the phenomenon. 8. The pairs can change, so all 	




		children can have a turn	
Conclusions and recommendations			
Have the children been able to identify areas of daylight and darkness on their model and match these to illuminated and dark parts of the globe?		Were the children able to express and request ideas and opinions when they were working in their group?	

4.3. Learning guide -Technology

LESSON PLAN

Do you enjoy drawing? Do you enjoy sticking stamps on paper? Do you love tablets? Have you ever thought of using a tablet to learn how to write a number? What about using the tablet to help you count? What about if you do all of these together? :)

Summary			
Date	xxx	Total duration	40 min
Subject	Counting Numbers Using Technology		
Year Group or Grade level	Year Group: 4-6		
Main Topic	Learning to write numbers and counting		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Using tablets effectively Being able to access applications Learning basic functions (insert/delete icons) 	<ul style="list-style-type: none"> Learning to identify numbers Learning to count Learning to write numbers using pen/stylus 	
Learning Objectives			
<ul style="list-style-type: none"> Students should demonstrate Knowledge in using technology (tablets), analyse how many stamps they need to create and comprehend what they should do (how to actually apply the equivalent number of stamps) 	<ul style="list-style-type: none"> Demonstrate knowledge of using tablet Recognize Numbers Understand and apply repetition in creating the stamps 		
Material needed			
<ul style="list-style-type: none"> Teacher PC / Projector / Electronic Whiteboard (for assessment) Tablets ideally with some sort of Stylus Printed Cards Box for the Cards 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	3 minutes	Do you enjoy drawing? Do you enjoy sticking stamps on paper? Do you love tablets? Have you ever thought of using a tablet to learn how to write a number? What about using the tablet to help you count? What about if you do all of these together?	start by asking them these questions to make them enthusiastic and eager to listen what you are up to....



	2 minutes	Learning to write numbers and counting using tablets	Introduce the topic and Activity Title
<i>Main activity</i>	5 minutes	Hand out the tablets and basic usage instructions	
	20 minutes	Explain the exercise: The children should pick a number card from the box, and then copy the number onto their iPad and then used the stamp feature(or insert emojis) to create that many stamps. They can pick up to 2 numbers each. They can work in groups depending on the tablet availability	various apps are available for drawing and inserting stamps which must be already installed
	5 minutes	They can try to add on the same drawing another number and adding the additional stamps	This is an extension task for students that have finished the previous one
Assessment exercise			
Assessment	5 minutes	Teacher can go round and check that the students have done what they were supposed to do and they are able to create the corresponding number of stamps	At the same time the students can pick an additional number
		The assessment can be done by having one student coming to perform the same exercise on the teachers PC/Tablet which is connected with the class projector	
Conclusions and recommendations			
	<ul style="list-style-type: none"> The teacher should be able to identify which students have faced difficulties with doing the exercise and distinguish if this was due to lack of knowledge of counting or due to the usage of tablets 	<ul style="list-style-type: none"> There are cards available to print and cut to prepare for the lesson. You can download them here 	

LESSON PLAN

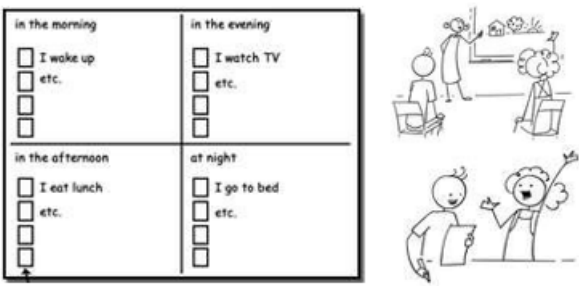
Seasons

Summary			
Date	xxx	Total duration	60 min
Subject	M4- Seasons		
Year Group or Grade level	Year Group: 3-6		
Main Topic	Seasons		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Identify season putting the seasons in touch with your emotions learn the seasons through PC devices and know how to sing them 		
Learning Objectives			
<ul style="list-style-type: none"> The objective of the lessons is to create the basis for learning and recognizing season and emotions 			
Material needed			
<ul style="list-style-type: none"> Paper/Glue Pc and demonstrative slides Colours 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	With the use of the computer and the demonstration slide (“the season”)	
	10 minutes	the teacher makes each child say their favourite season	
<i>Main activity</i>	10 minutes	children learn season and the “autumn songs” through the computer	
	20 minutes	circle time: seasons and emotions	
Assessment exercise			
Assessment	20 minutes	children are invited to draw their favourite season	
Conclusions and recommendations			
<ul style="list-style-type: none"> Conclusions, the seasons will be Better memorized if associated with an emotion Recommendation for teachers, to always involve children in groups so that everyone can participate and demonstrate what they have learn 			

LESSON PLAN

Can anybody tell me in general terms what they did from the moment they woke up today until you came at school?

Does anybody know what is a routine? What do we mean by daily routine? Does anybody like using the internet to find photos?... well this is what we are going to do today...

Summary			
Date	xxx	Total duration	40min
Subject	Using Technology to find photos of our Daily Routine (Web Browser Software)		
Year Group or Grade level	Year Group: 6+		
Main Topic	Identifying a daily routine and searching the web for finding a photo of it		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Students should demonstrate Knowledge in using technology (tablets), • Web Searching Techniques • Saving in a folder 	<ul style="list-style-type: none"> • Learning what is a routine • Identifying the basic daily routines • Learning basic Web Search skills (search, save, retrieve) 	
Learning Objectives			
<ul style="list-style-type: none"> • Students should demonstrate Knowledge in using technology (tablets), • Identify a routine that the student does on a daily basis • Learn how to use the search engine effectively to find a photo that shows the daily routine 		<ul style="list-style-type: none"> • Being able to associate a routine with a specific task and time of the day so that effective searching can be done eg (morning, afternoon, evening, night, wake up, get up, eat breakfast, eat lunch, eat dinner, go to school, start school, go home, arrive home, watch TV, do homework, go to bed) 	
Material needed			
<ul style="list-style-type: none"> • Teacher PC • Projector / Electronic Whiteboard • Tablets / PCs • Pens/Paper for writing bullet points the daily routines 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	3 minutes	<p>Can anybody tell me in general terms what they did from the moment they woke up today until you came at school?</p> <p>Does anybody know what is a routine? What do we mean by daily routine? Does anybody like using the internet to find photos?... well this</p>	start by asking them these questions to make them enthusiastic and eager to listen what you are up to....

		is what we are going to do today...	
	2 minutes	Show them a PowerPoint presentation introducing to them what we mean by the general routine (morning, afternoon, evening, night, wake up, get up, eat breakfast etc.)	Introduce the topic and Activity Title
<i>Main activity</i>	5 minutes	Show them how they can make an effective search on the web and how to save the photo they like	just simple search will be enough. Depending on the knowledge of the class
	20 minutes	<ul style="list-style-type: none"> • Students should write down their daily routine. • Then they should use their PC/Tablet to search and find a particular photo on the web that shows the specific activity/routine. • They should then save the photos. 	the students can work in groups depending on the availability of resources and time constraints
	5 minutes	The teacher will then gather all photos and use the projector to display some of them randomly displaying various routines	The teacher should pick different routine from different student
Assessment exercise			
Assessment	5 minutes	For each one the students should recognize which routine it demonstrates	
		The teacher will check to see how many routines the students were able to identify and how many photos they were able to save. They can also check the relativity of the routine with the photos they saved	
Conclusions and recommendations			



STEAMERS


<ul style="list-style-type: none">• This is rather an advance lesson that could be possible depending on the ICT level of the class.• The students could work in groups	<ul style="list-style-type: none">• EASY alternative solution to the lesson could be that various routines are already shown on the class projector or whiteboard and then the students can be asked to come on the board and circle the correct routine
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LESSON PLAN

Today you are going to be a reporter for our kindergarden!!

Your mission is to create a small video about something and then present your own story to the class!!

Do you like looking at videos?? do you enjoy using the camera on your tablets? Here is your mission....

Summary			
Date	xxx	Total duration	40 min
Subject	Using Technology to learn about Body Parts		
Year Group or Grade level	Year Group: 4-6		
Main Topic	Reporter Story on Body Parts		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Using tablets effectively Being able to access specific applications Analyse a body part / sense 	<ul style="list-style-type: none"> Learning to identify senses Learning to identify various body parts Learning basic functions (take photo, save, retrieve) 	
Learning Objectives			
<ul style="list-style-type: none"> Students should demonstrate Knowledge in using technology (tablets), Analyse and comprehend what each sense is and which body part we need to use it. Ability to present their story to the class 	<ul style="list-style-type: none"> Analysing the sense that the teacher is explaining Creating a video Evaluating the outcome of their video choices 		
Material needed			
<ul style="list-style-type: none"> Teacher PC Projector / Electronic Whiteboard Tablets / Smart Phones 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	2 minutes	<p>Today you are going to be a reporter for our kindergarden!! Your mission is to create a small video about something and then present your own story to the class!!</p> <p>Do you like looking at videos?? do you enjoy using the camera on your tablets? Here is your mission.</p>	<p>Start by asking them these questions to make them enthusiastic and eager to listen what you are up to....</p>





	3 minutes	Show them a PowerPoint presentation introducing to them the Big Five Senses (Sight, Hearing, Smell, Taste, Touch)	The main objective of this lesson is to be able to find the body part that the teacher will imply. The introduction of the senses is simply to bring the element of game and discovery
<i>Main activity</i>	5 minutes	Hand out the tablets and basic usage instructions	Make sure they know how to take a video and save it
	20 minutes	<p>The teacher can adjust this activity to various difficulty levels.</p> <p>1.Level: A very simple presentation showing the various body parts</p> <p>2.Level: The presentation can have just an introduction of the five senses</p> <p>Level: There could be just short videos and the students should guess what sense is being used in each video</p> <p>3. The students will then get their tablets/smart phones and go around in their classroom and take photos of the equivalent body part of their toys in order to make their video</p>	
Assessment exercise			
Assessment	10 minutes	The students should return back to their groups/seats and check their videos to make sure that their video is ok. If any technical issues occurred then the student should take the video again	
		The Video assessment could be done when the teacher will ask the student to present their videos to the class. This should not take more than 2 minutes for each student. (the assessment will take 2 lessons to be completed	
		The student should have taken video shots of the five different body parts that we use for the senses (Sight, Hearing, Smell, Taste, Touch)	

Conclusions and recommendations	
This lesson can be further extended to 2 lessons depending on the no of students and if they have worked individually or in groups	To assess their knowledge the teacher can prepare a Kahoot! so that all students could participate

LESSON PLAN

Who knows what is a detective? Who wants to be a detective? Who is willing to do the lesson today outside in the yard and being a detective at the same time??

Summary			
Date	xxx	Total duration	40 min
Subject	Using Technology to identify shapes		
Year Group or Grade level	Year Group: 4-6		
Main Topic	Detective Hunt to Find Shapes - Recognizing shapes around us		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Using tablets effectively Being able to access specific applications Analyse a shape to determine where to find it 	<ul style="list-style-type: none"> Learning to identify shapes Learning the basic colours Learning basic functions (take photo, save, retrieve) 	
Learning Objectives			
<ul style="list-style-type: none"> Students should demonstrate Knowledge in using technology (tablets), analyse what the ORIGINAL photos are, and comprehend what they should do (how to actually find the same shapes and take a photo) 	<ul style="list-style-type: none"> Analysing the ORIGINAL photos in order to guess where to find the shapes Demonstrate knowledge of using tablet Recognize Shapes and Colours Comparing ORIGINAL photo with the one taken 		
Material needed			
<ul style="list-style-type: none"> Teacher PC / Projector / Electronic Whiteboard Tablets / Smart Phones 	 		
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	3 minutes	Who knows what is a detective? Who wants to be a detective? Who is willing to do the lesson today outside in the yard and being a detective at the same time??	start by asking them these questions to make them enthusiastic and eager to listen what you are up to....



	2 minutes	Detective Hunt to Find Shapes – Recognizing shapes around us	Introduce the topic and Activity Title. The students can be split into groups of 2 max 3
<i>Main activity</i>	5 minutes	Hand out the tablets and basic usage instructions	Make sure they know how to take a photo and save it
	20 minutes	The teacher should go around the yard to find different shapes of objects. A square, circle, triangle and rectangle. You should take about a dozen photos of shapes that you will find around the yard and store them in an album on the iPads or have them displayed in the class projector Triangles are usually the hardest to find but you can find them in spokes of the cars and bikes. You can find squares and rectangles in porch railing and skirting. Circles are everywhere for example on bells on their bikes, the ends of hoses, wheels of the million toys we have. Students should then take the iPad around the yard to find those shapes. Once they find it, they should switch over to the camera app to snap a photo of it. Then they have a collection of both the teacher photos and their photos to compare the two!	
Assessment exercise			
Assessment	10 minutes	returning back to the classroom to check the ORIGINAL photos with the ones the students took	
		The students should be assessed on the accuracy of their photos, if they managed to find the shapes indicated but also how close their actual photos were with the ones that the teacher had as ORIGINALS	
Conclusions and recommendations			
<p>This lesson can be modified in a various of ways:</p> <ul style="list-style-type: none"> • For example depending on the amount of tablets/smart phones, students can work individually or in groups of 2-3. • The teacher can introduce the shapes and allow the students to find and take photos of their own objects 			



The teacher can emphasise at the beginning of the lesson that the photos taken should be exactly (zoom level) as the ones that were shown in the beginning of the lesson so as to identify how observative the students were.

4.4 Learning guide -ENGINEERING

LESSON PLAN

Daily routine

Summary			
Date		Total duration	60 minutes
Subject	I bambini saranno impegnati a distinguere il giorno dalla notte e, soprattutto, a comprendere la routine quotidiana di questi due momenti della giornata		
Year Group or Grade level	4-6 anni		
Main Topic	Développer le concept des aspects cardinaux et ordinaux des nombres naturels		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • The planets. • How the solar system works shape and size of the planets. • When the sun is out it's day, when the moon is out it's night 		
Learning Objectives			
Group the idea that children have about alternating day and night.			
Describe the movement of the earth through play			
Material needed			
<ul style="list-style-type: none"> • Balloons • Cardboard • Glue • Crayons • Computer with internet 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	We will start by showing an image of the sun and the moon explaining that one represents the day and the other the night	
<i>Main activity</i>	10 minutes	In an imagine, there are two children from two different parts of the world, one is sleeping and the other one is going to	

		school. It can explain how it is not always night in countries.	
	10 minutes	Jeu didactique - l'enseignant demande aux enfants de placer le nombre indiqué de balles du panier sur le tapis.	
	10 minutes	The teacher with a flash light reproduces the movement of the sun and explains the movement	
	10 minutes	After having explained the imagines the teacher will make some questions for knowing which ideas the children developed	
	10 minutes	The teacher will show the slide of the daily routines and the children will have to identify which belong to the night and which to the day	
Assessment exercise			
		Team gam, two teams, one representing the day and the other the moon, the children will have to draw which daily routine they prefer at that time of the day	
Conclusions and recommendations			
	<ul style="list-style-type: none"> • Through manual and robotic games , the children must be able to explain the difference between day and night and the daily routine of each moment • We recommend teachers to delve even further into the topic especially by letting the child use his imagination. 		

LESSON PLAN

Seasons

Summary			
Date		Total duration	60 min
Subject	M4- Seasons		
Year Group or Grade level	Year Group: 3-6		
Main Topic	Seasons		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Identify season putting the seasons in touch with your emotions learn the seasons through PC devices and know how to sing them 		
Learning Objectives			
The objective of the lessons is to create the basis for learning and recognizing season and emotions			
Material needed			
<ul style="list-style-type: none"> Paper/Glue Pc and demonstrative slides Colours 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	With the use of the computer and the demonstration slide the season	
	10 minutes	the teacher makes each child say their favourite season	
<i>Main activity</i>	10 minutes	The children learn season and the “autumn songs” through the computer	
	20 minutes	circle time: seasons and emotions	
Assessment exercise			
Assessment	20 minutes	The children are invited to draw their favourite season	
Conclusions and recommendations			
<ul style="list-style-type: none"> Conclusions, the seasons will be better memorized if associated with an emotions Recommendation for teachers, to always involve children in groups so that everyone can participate and demonstrate what they have learn 			

LESSON PLAN

Numbers

Summary			
Date		Total duration	60 minutes
Subject	Module 4- Numbers		
Year Group or Grade level	4-6 years old		
Main Topic	Learn to recognize numbers by playing both manually and using the computer		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Identify numbers within a context Learn to count correctly to 10 Recognize numbers even within a set of numbers 		
Learning Objectives			
<ul style="list-style-type: none"> The objective of the lessons is recognize numbers through ribbons, drawings and the computer 			
Material needed			
<ul style="list-style-type: none"> Water colour Paper Pc and presentation slides Crayons Balloons Objects that children can play with by counting 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	With the use of the computer and the demonstration slide explain the numbers	
	10 minutes	The teacher will tell the children to draw their little hands and count their fingers together	
<i>Main activity</i>	10 minutes	The teacher will give each child objects and each child will say how many there are	
	10 minutes	Each child will have to take the quantity of balloons based on the number that the teacher has said	
	10 minutes	The teacher will show the numbers on the computer again and the	

		children will have to put them in order from smallest to largest	
Assessment exercise			
Assessment	10 minutes	The teacher forms a circle and assign each one number, when the teacher says a number the children who have that number will have to jump and clap their hands	
Conclusions and recommendations			
<ul style="list-style-type: none"> • Conclusions, through games, manual skills and technology, children will have to learn and recognize numbers, they will also have to learn to write them correctly. • Recommendation for teachers, to always involve children in groups so that everyone can participate and demonstrate what they have learnt 			

LESSON PLAN

Body Parts

What parts is my body made up of?

Summary			
Date		Total duration	75 minutes
Subject	Parts of Body		
Year Group or Grade level	4-6 years old		
Main Topic	Students learn the names of their body parts and where they are located Students learn to understand the similarities and differences of body parts between themselves and their classmates		
Subtopics or Key Concepts			
Learning Objectives			
<ul style="list-style-type: none"> • Student everyday experiences • Students learn to perceive themselves, others and the space around them. • They also learn to differentiate natural space from virtual bodily space 		<ul style="list-style-type: none"> • Developing motor coordination in one's body scheme 	
Material needed			
<ul style="list-style-type: none"> • PC • Paper • Scissor • Newspaper • Cards 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	mutual knowledge and explanation of the laboratory	
	02 minutes	Introduction of a new topic or continuation of a previous lesson	
<i>Main activity</i>	10 minutes	body parts recognition game	
	05 minutes	Dancing with the song "Me!". Children imitate the fox.	
	20 minutes	computer game of touching the body parts mentioned by the game learn a nursery rhyme about body parts by watching the girl teach it from the computer	

	20 minutes	draw a boy or girl with all the body parts	
Assessment exercise			
Assessment	10 minutes	<ul style="list-style-type: none"> breathing exercise to teach you to pay attention and feel all parts of the body discussion: in which part of the body do we feel emotions? 	
Conclusions and recommendations			
<ul style="list-style-type: none"> highlight the importance of our body and the bodies of others For teacher: strengthen the correlation between the body and emotional states 			

LESSON PLAN

Colours and shapes

Summary			
Date		Total duration	60 minutes
Subject	Module 4- Colours and shapes		
Year Group or Grade level	3-6 years old		
Main Topic	Children will be involved in the group activity experimenting with or colours and shapes and expressing their preferences		
Subtopics or Key Concepts	Identify colour and shapes Knowing how to discriminate shapes and colours together and knowing how to name them		
Learning Objectives			
The objective of the lessons is to create the basis for learning and recognizing basic and secondary colors together with shape recognition			
Material needed			
<ul style="list-style-type: none"> Pc and demonstrative slides Reticulated Laminated cards with coloured arrows Paper 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	With the use of the computer and the demonstration slide explain the shapes and colours	
<i>Main activity</i>	10 minutes	The teacher makes each child say their favourite colour	
	10 minutes	The teacher will give each child objects and each child will say how many there are	

	10 minutes	The teacher will show the simple shapes and encourage children to recognize them and draw them	
Assessment exercise			
		with the net game the children reinforce what they have learned by guiding their classmates in moving through the game by guiding it according to the colour indications	
Conclusions and recommendations			
<ul style="list-style-type: none"> • Conclusions, through games, manual skills and technology, children will have to learn and recognize colours and shapes. • Recommendation for teachers, to always involve children in groups so that everyone can participate and demonstrate what they have learned 			

4.5. Learning guide -Mathematics

LESSON PLAN

Daily routine

Summary			
Date		Total duration	60 minutes
Subject	I bambini saranno impegnati a distinguere il giorno dalla notte e, soprattutto, a comprendere la routine quotidiana di questi due momenti della giornata		
Year Group or Grade level	4-6 anni		
Main Topic	Développer le concept des aspects cardinaux et ordinaux des nombres naturels		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • The planets. • How the solar system works shape and size of the planets. • When the sun is out it's day, when the moon is out it's night 		
Learning Objectives			
Group the idea that children have about alternating day and night. Describe the movement of the earth through play			
Material needed			
<ul style="list-style-type: none"> • Balloons • Cardboard • Glue • Crayons • Computer with internet 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	We will start by showing an image of the sun and the moon explaining that one represents the day and the other the night	
<i>Main activity</i>	10 minutes	In an imagine, there are two children from two different parts of the world, one is sleeping and the	

		other one is going to school. It can explain how it is not always night in countries.	
	10 minutes	Jeu didactique - l'enseignant demande aux enfants de placer le nombre indiqué de balles du panier sur le tapis.	
	10 minutes	The teacher with a flash light reproduces the movement of the sun and explains the movement	
	10 minutes	After having explained the imagines the teacher will make some questions for knowing which ideas the children developed	
	10 minutes	The teacher will show the slide of the daily routines and the children will have to identify which belong to the night and which to the day	
Assessment exercise			
		Team gam, two teams, one representing the day and the other the moon, the children will have to draw which daily routine they prefer at that time of the day	
Conclusions and recommendations			
	<ul style="list-style-type: none"> • Through manual and robotic games , the children must be able to explain the difference between day and night and the daily routine of each moment • We recommend teachers to delve even further into the topic especially by letting the child use his imagination. 		

LESSON PLAN

Numbers

Summary

Date		Total duration	60 minutes
Subject	Module 4- Numbers		
Year Group or Grade level	4-6 years old		
Main Topic	Learn to recognize numbers by playing both manually and using the computer		
Subtopics or Key Concepts	Identify numbers within a context Learn to count correctly to 10 Recognize numbers even within a set of numbers		
Learning Objectives			
The objective of the lessons is recognize numbers through ribbons, drawings and the computer.			
Material needed			
<ul style="list-style-type: none"> • Water colour • Paper • Pc and presentation slides • Crayons • Balloons • Objects that children can play with by • counting 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	With the use of the computer and the presentation slide explain the numbers	
	10 minutes	The teacher will tell the children to draw their little hands and count their fingers together	
<i>Main activity</i>	10 minutes	The teacher will give each child objects and each child will say how many there are	
	10 minutes	Each child will have to take the quantity of balloons based on the number that the teacher has said	
	10 minutes	The teacher will show the numbers on the computer again and the children will have to put them in order from smallest to largest	
Assessment exercise			
Assessment	10 minutes	The teacher forms a circle and assign each one number,	

		when the teacher says a number the children who have that number will have to jump and clap their hands	
Conclusions and recommendations			
<p>Conclusions, through games, manual skills and technology, children will have to learn and recognize numbers, they will also have to learn to write them correctly.</p> <p>Recommendation for teachers, to always involve children in groups so that everyone can participate and demonstrate what they have lean.</p>			

LESSON PLAN

Mathematics in my life

Summary			
Date		Total duration	90 minutes
Subject	Mathematics - My daily routine		
Year Group or Grade level	5-6 years old		
Main Topic	Familiarising children with the concepts: “smaller”, “bigger”, “equal” based on daily activities		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Developing the concepts of “less”, “more”, “the same amount” Recognition of fruit and vegetables Developing the concept of “the size of sets” 		
Learning Objectives			
<ul style="list-style-type: none"> Developing an understanding of the concepts of “smaller”, “bigger”, “equal” Developing ability to identify commonalities and differences 		<ul style="list-style-type: none"> Improving of understanding of the concept of time Developing the skills to prepare a healthy meal 	
Material needed			
<ul style="list-style-type: none"> warm-up illustrations charts of the daily activities 		<ul style="list-style-type: none"> fruits, vegetables, cooking utensils worksheet 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	5 minutes	Picture gymnastics – the teacher shows the children pictures of the exercises they are supposed to do (standing on one leg, jumping jacks, squats, etc.) and the children do the exercises	
<i>Main activity</i>	5 minutes	The teacher discusses with the children their daily routine, using different time perspectives: what they have already done today, what they are doing now, what they will be doing later	
	15 minutes	Discussing further topics: <ul style="list-style-type: none"> Pointing out behaviours 	List of exemplary daily behaviours: wake-up, morning toilet, breakfast, coming to kindergarten, second



		<p>common for all the children.</p> <ul style="list-style-type: none"> Classifying illustrations of the daily activities into common and separate ones. Comparing sizes of sets – “less”, “more”, “the same” 	<p>breakfast in the kindergarten, activities in kindergarten, lunch, children’ play, evening toilet, dinner, sleep</p>
	20 minutes	<p>Game of puns based on the illustrations from previous point with the daily activities - children turn the pictures upside down, mix them up.</p> <p>The teacher divides the children into two teams, one of the teams draws the picture and shows to the other team. The other team guesses, scoring points</p>	
	3 minutes	<p>Final activities to practice the concepts of “more”, “less”, “the same”: Counting the scored points, determining the winning team.</p>	
	30 minutes	<p>Making a healthy meal together - classifying foods into fruit and vegetables, making two salads by two teams, tasting.</p>	
Assessment exercise			
Assessment	10 minutes	Assessment or Evaluation	<p>Filling out the work sheet: test of understanding of the terms like “less”, “more”, “the same amount”; colouring sets according to the teacher's instructions.</p>
Conclusions and recommendations			
<ul style="list-style-type: none"> After these activities, children are able to classify, count and assess the sizes of sets based on everyday activities. 			

- The children are also able to segregate fruit and vegetables and make a healthy meal.

LESSON PLAN

Body Parts

What parts is my body made up of?

Summary			
Date		Total duration	75 minutes
Subject	Parts of Body		
Year Group or Grade level	4-6 years old		
Main Topic	Students learn the names of their body parts and where they are located Students learn to understand the similarities and differences of body parts between themselves and their classmates		
Subtopics or Key Concepts			
Learning Objectives			
<ul style="list-style-type: none"> • Student everyday experiences • Students learn to perceive themselves, others and the space around them. • They also learn to differentiate natural space from virtual bodily space 		<ul style="list-style-type: none"> • Developing motor coordination in one's body scheme 	
Material needed			
<ul style="list-style-type: none"> • PC • Paper • Scissor • Newspaper • Cards 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	mutual knowledge and explanation of the laboratory	
	2 minutes	Introduction of a new topic or continuation of a previous lesson	
<i>Main activity</i>	10minutes	Body parts recognition game	
	05 minutes	Dancing with the song "Me!". Children imitate the fox.	
	20 minutes	computer game of touching the body parts mentioned by the game learn a nursery rhyme about body parts by	



		watching the girl teach it from the computer	
	20 minutes	Draw a boy or girl with all body parts	
Assessment exercise			
Assessment	10 minutes	Assessment or Evaluation	<ul style="list-style-type: none">• breathing exercise to teach you to pay attention and feel all parts of the body• discussion: in which part of the body do we feel emotions?
Conclusions and recommendations			
<ul style="list-style-type: none">• highlight the importance of our body and the bodies of others• For teacher: strengthen the correlation between body and emotional states			

LESSON PLAN

Colours and shapes

Summary			
Date		Total duration	60 minutes
Subject	Module 4- Colours and shapes		
Year Group or Grade level	3-6 years old		
Main Topic	Children will be involved in the group activity experimenting with or colors and shapes and expressing their preferences		
Subtopics or Key Concepts	Identify colour and shapes Knowing how to discriminate shapes and colors together and knowing how to name them		
Learning Objectives			
The objective of the lessons is to create the basis for learning and recognizing basic and secondary colors together with shape recognition			
Material needed			
<ul style="list-style-type: none"> Pc and presentation slides Reticulated laminated cards with colored arrows Paper 			
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	With the use of the computer and the demonstration slide Explain the shapes and colours	
<i>Main activity</i>	10 minutes	The teacher makes each child say their favourite colour	
	10 minutes	The teacher will give each child objects and each child will say how many there are	
	10 minutes	The teacher will show the simple shapes and encourage children to recognize them and draw them	
Assessment exercise			
		With the net game the children reinforce what they have learned by guiding their classmates in moving through the game by	

		guiding it according to the colour indications	
Conclusions and recommendations			
<ul style="list-style-type: none">• Conclusions, through games, manual skills and technology, children will have to learn and recognize colours and shapes.• Recommendation for teachers, to always involve children in groups so that everyone can participate and demonstrate what they have learn.			

4.6. Learning guide -Educational robotics

LESSON PLAN

BEEBOT Mat Counting 1-10

Let's program our first robot!

Summary			
Date		Total duration	2h30- 3h
Subject	Let's program our first robot Bee-Bot! The students will learn how to manage and program the robot		
Year Group or Grade level	4- 5 years old		
Main Topic	The objective of this lesson is to make a basic program with the Bee-Bot robot. Using the numbers from 1 to 10		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Be confident to try new activities, initiate ideas and speak in a familiar group • Find out programmable robots 	<ul style="list-style-type: none"> • Problem-solving • Cooperative learning • Introduction to educational robotics 	
Learning Objectives			
<ul style="list-style-type: none"> • Count from 1 to 10 • Work cooperatively to achieve an objective 		<ul style="list-style-type: none"> • To be introduced to the functions of a BeeBot robot. • Program their Bee-Bot robot 	
Material needed			
<ul style="list-style-type: none"> • Bee-Bot User guide • One Beebot robot per group • One Beebot board per group • One set of Cards to work with numbers per group) 		<ul style="list-style-type: none"> • One set of Bee-Bot Command Cards per group) • One set of Bee-Bot Roles cards per group • scissors • sticky tape 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Engage students by asking them to describe what they see when the teacher holds up a Bee-Bot.	The teacher may invite some students to share their answer with an elbow partner, then invite a few students to share their answer with the class
	15 minutes	Remind the students that we need a Program to communicate with the robot (in this case using a special language based on arrows).	The teacher can encourage the class by asking: Can we communicate with the robot using the same language as we talk to each other? Why not? How can we



			communicate with robots? How is it called this "way of communicating" with machines?
	15-20 minutes	Tell students that they are going to teach their Bee-Bot to learn the numbers from 1 to 10	f the teacher seems it necessary, review the numbers from 1 to 10
<i>Main activity</i>	10 minutes	Explain to the class that we are going to help the Bee-Bot robot count from 1 to 10 . Designing a program and transmitting the instructions to the robot.	The teacher can motivate the students by asking. Do you want the robot to help us count?
Assessment exercise			
Conclusions and recommendations			

LESSON PLAN

Let's create the story of the seasons

How to design our first graphic adventure with the App ScratchJr?

Summary			
Date		Total duration	3-4 hours
Subject	ScratchJr is a programming language for children ages from five. The kids will create their own interactive animated story. The story will describe the seasons		
Year Group or Grade level	From 5 years old		
Main Topic	Students will make their first graphic story of the seasons of the year. They will use the free application "Scratch Jr".		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Definition of graphic animated story • Develop an algorithmic using ScratchJr blocks 		<ul style="list-style-type: none"> • Learning to use Scratch Jr.

LESSON PLAN

What's the weather like?

Summary			
Date		Total duration	60 minutes
Subject	Science/Social studies		
Year Group or Grade level	From 5 years old		

Main Topic	Seasons and the weather.		
Subtopics or Key Concepts	<ul style="list-style-type: none"> The four seasons, and the Environment changes in weather 	<ul style="list-style-type: none"> Typical activities for each season 	
Learning Objectives			
<ul style="list-style-type: none"> Identify the four seasons Describe changes in weather and the environment during each season 		<ul style="list-style-type: none"> Know typical activities for each season 	
Material needed			
<ul style="list-style-type: none"> Posters or images depicting the four seasons Colored cardboard 		<ul style="list-style-type: none"> Worksheets or printed activities with images of typical activities for each season Pencils or colored pencils 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	5 minutes	Greet the children and introduce the topic of seasons	This step is crucial as it sets the tone for the lesson and establishes a positive and welcoming environment. Greeting the children helps to create rapport and sets the stage for learning.
	10 minutes	Show the posters or images depicting the four seasons	This visual aid provides a clear representation of the four seasons, making it easier for students to understand and visualize the concept. It adds an engaging element to the lesson and encourages active participation.
	10 minutes	Engage in a discussion with questions like: "Do you know what the four seasons are?" and "What changes do you notice around you during different seasons?"	This discussion stimulates students' critical thinking skills and encourages them to reflect on their own experiences and observations. By asking open-ended questions, it allows for diverse responses and fosters a sense of curiosity and exploration. This step also promotes communication and enhances students'



STEAMERS

			understanding of the topic.
<i>Main activity</i>	5 minutes	Give each child a coloured cardboard and ask them to draw or colour something that represents their favourite season.	This activity provides an opportunity for students to express their personal preferences and creativity while exploring the concept of seasons
	10 minutes	Have them share their work with the rest of the class, describing what they drew and why it's their favourite season	By sharing their work with the class, students can practice their verbal communication skills and learn from their peers' perspectives on different seasons.
Assessment exercise			
Conclusions and recommendations			

LESSON PLAN

BEEBOT Daily Routines

Let's do a large program

Summary			
Date		Total duration	3h- 3h30
Subject	The student will learn how to make a more advanced program for the BeeBot robot. Using the daily routines		
Year Group or Grade level	4- 5 years old		
Main Topic	The student will gradually learn to create more complex programs. The Beebot robot will go through the activities the students perform every day.		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Find out programmable robots • Problem-solving • Express algorithms using a symbolic language (arrows) 	<ul style="list-style-type: none"> • Cooperative learning • Introduction to educational robotics 	
Learning Objectives			
<ul style="list-style-type: none"> • Work cooperatively to achieve an objective • Decompose a larger “problem” into smaller parts to more easily solve it. 		<ul style="list-style-type: none"> • To perform a complex program for the Bee-Bot robot • The order of the instructions/steps in a program is important 	
Material needed			
<ul style="list-style-type: none"> • Bee-Bot Userguide • One Beebot robot per group • One Beebot board per group • One set of routine Flashcards per group 		<ul style="list-style-type: none"> • One set of Bee-Bot Command Cards per group • scissors • sticky tape 	

LESSON PLAN

BEEBOT Daily Routines

Let's do a large program!

Summary			
Date		Total duration	3h- 3h30
Subject	The student will learn how to make a more advanced program for the BeeBot robot. Using the daily routines		
Year Group or Grade level	4- 5 years old		
Main Topic	The student will gradually learn to create more complex programs. The Beebot robot will go through the activities the students perform every day.		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Find out programmable robots • Problem-solving • Express algorithms using a symbolic language (arrows) 	<ul style="list-style-type: none"> • Cooperative learning • Introduction to educational robotics 	
Learning Objectives			
<ul style="list-style-type: none"> • Work cooperatively to achieve an objective • Decompose a larger “problem” into smaller parts to more easily solve it. 	<ul style="list-style-type: none"> • To perform a complex program for the Bee-Bot robot • The order of the instructions/steps in a program is important 		
Material needed			
<ul style="list-style-type: none"> • Bee-Bot User guide • One Beebot robot per group • One Beebot board per group • One set of routine Flashcards per group 	<ul style="list-style-type: none"> • One set of Bee-Bot Command Cards per group • scissors • sticky tape 		

LESSON PLAN

BEEBOT Daily Routines

Let's do a large program!

Summary			
Date		Total duration	60 minutes
Subject	Daily routines		
Year Group or Grade level	4- 5 years old		
Main Topic	Understanding and Organizing Daily Routines		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • Time management • Sequencing 	<ul style="list-style-type: none"> • Understanding daily tasks 	
Learning Objectives			
<ul style="list-style-type: none"> • Identify common daily routines and tasks. • Sequence and organize activities in a daily routine 		<ul style="list-style-type: none"> • Develop an understanding of the concept of time management 	
Material needed			
<ul style="list-style-type: none"> • Picture cards or visuals representing common daily activities (e.g., brushing teeth, eating breakfast, getting dressed) • Large chart paper or whiteboard with markers 		<ul style="list-style-type: none"> • Clock or timer 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Greet the students and have a discussion about daily routines.	Greeting the students and initiating a discussion about daily routines is an effective way to start the lesson with student engagement and participation.
	15 minutes	Ask questions like, "What are some things you do every day?" and "Why is it important to have a routine?"	Asking questions like "What are some things you do every day?" and "Why is it important to have a routine?" promotes critical thinking and encourages students to reflect on their own habits and experiences.
	15-20 minutes	Explain that today, we will learn about daily	Explaining that the lesson will focus on daily routines and



		routines and how to organize our day.	organizing the day provides students with a clear purpose and expectation, helping them to understand the relevance and importance of the topic.
<i>Pre activity</i>	10-15 minutes	Show the picture cards or visuals of different daily activities to the students. Discuss each activity and ask students to identify when they typically do each task (morning, afternoon, evening, etc.). Place the cards on the chart paper or whiteboard in a random order.	This activity is an effective way to engage students in discussing daily activities and their typical timing. This activity encourages students to think critically about their own routines and expand their vocabulary related to daily activities
<i>Main activity</i>	10 minutes	Explain that it's important to have a sequence or order for our daily activities. Invite students to help organize the picture cards in the correct sequence, starting from the time they wake up until bedtime.	This sets the foundation for organizing the picture cards later in the lesson and helps students understand the logical flow of a typical day.
	15 minutes	Encourage students to discuss and share their ideas on the correct order. Guide the students to rearrange the cards in the correct sequence, emphasizing morning, afternoon, and evening activities.	Encouraging students to discuss and share their ideas on the correct order helps foster classroom interaction and collaborative learning. This gives students an opportunity to express their thoughts, exchange ideas, and learn from one another, promoting a deeper understanding of sequencing and providing a platform for effective communication.
Assessment exercise			



Assessment	10-15 minutes	Provide a worksheet or activity sheet with pictures of daily activities in a mixed-up sequence. Ask students to arrange the pictures in the correct order, using their understanding of sequencing.	This activity encourages students to think critically and apply their understanding of daily routines to reorder the pictures.
Conclusions and recommendations			
<p>Review the main concepts covered in the lesson about daily routines, sequencing, and time management.</p> <p>Discuss the importance of having a daily routine and how it helps in organizing our day.</p> <p>Encourage students to practice their own daily routines at home, using the skills they learned</p>		<p>Reviewing the main concepts covered in the lesson about daily routines, sequencing, and time management is essential to reinforce learning and ensure understanding. By discussing the importance of having a daily routine, students are able to connect the concepts to real-life situations and understand how it helps in organizing their day effectively.</p> <p>Encouraging students to practice their own daily routines at home empowers them to apply the skills they learned in the lesson, promoting independence and time management skills outside of the classroom. This also allows for personalization and customization of routines based on individual preferences and needs.</p>	

LESSON PLAN

Artificial Intelligence (IA)

Do you want to see how your hand-draw drawings come to life?

Summary			
Date		Total duration	120 minutes
Subject	Introduction to Artificial Intelligence and its limits using body parts		
Year Group or Grade level	5 years old		
Main Topic	To introduce students to the concept of Artificial Intelligence. Using an application that automatically animate children's hand-drawn figures of people and humanlike characters		
Subtopics or Key Concepts	<ul style="list-style-type: none"> Examples of AI Definition and limits of AI 	<ul style="list-style-type: none"> Concept of Animated drawings 	
Learning Objectives			
<ul style="list-style-type: none"> Every day examples of AI (adapted to the age of the pupils) Definition and limits of AI (adapted to the age of the pupils) 		<ul style="list-style-type: none"> AI is designed by people and helps us in our daily lives. AI does not replace people Concept of Animating a drawing/learning to use an AI application 	
Material needed			
<ul style="list-style-type: none"> Tablet or smartphone with camera and internet access Paper or cardboard cards of different colors 		<ul style="list-style-type: none"> Colors felt tip pens Crayons with colors scissors 	
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	10 minutes	Ask : What do you think happens when somebody ask to mobile phone or virtual assistant for a song? Who plays the song?	The teacher can use the mobile phone to demand different songs (preferably songs that the children are familiar with)
	5 minutes	AI has its limitations (it can never replace a physical person).	Cause the virtual assistant to fail in the choice of the song (avoid vocalizing, speaking fast, giving a confusing command).
	5 minutes	Ask if they would like that their drawings of the human body to move/animate.	Explain that we are going to use an AI to animate our own drawings of the human body.
	10 minutes	Review of the main body parts we need to draw: leg, foot, arm,	The software has to clearly distinguish these



		hand, chest, head and face.	parts in order to perform the animation correctly.
<i>Main activity</i>	5 minutes	Definition of AI (adapted to the age of the pupils)	Definition IA: The ability of a n computer/device/robot to provide a solution or answer a question by simulating the human brain.
	10-15 minutes	Main Discussion: Every day examples of AI (adapted to the age of the pupils)	Virtual assistant, self-parking car, face recognition systems, etc. Point out to students that AI is a simulation of human intelligence, and that behind these mechanisms is the previous work of real people
	30 minutes	Guided Activity: 1. Draw a human body on the colored cardboard (not white). The cardboard and the felt tip pen used should be of similar colours. 2. Open the application and scan the drawing (Using the guide provided by the application itself). Note: Divide the class into working groups of 4 people (more or less).	As can be seen, the application is not able to differentiate correctly between body parts (it does not distinguish between paper and drawing). The AI does not work in all circumstances, it has its limitations, while the human are able to distinguish between the child's drawing and the cardboard.
	30 minutes	3. Draw a picture of a human body again (this time on cardboard or white paper) and colour it in dark tones. 4. Point out to students that the joints of the human body have to be clearly differentiated and separated. 5. Each student must show his or her animation to his or her working group. If an animation is not very successful, let the	In this case the AI (software) has collected (scanned) our drawing, correctly processed all the body parts and made an animation with our drawing. Promote teamwork so that students help each other to use the application and to correct drawings



		children help each other to find and solve the problem	
<i>assessment</i>	30 minutes	Assessment evaluation The aim of this lesson is to introduce students to the term Artificial Intelligence and its characteristics.	The students have been able to use Artificial Intelligence software to make an animation of their own drawings of the human body. Through this lesson, the students should learn what AI is, several examples and its basic characteristics.
Assessment exercise			
Assessment	10-15 minutes	<p>Concept of Animating a drawing/learning to use an AI application: Each working group should present their animations to the rest of the class. In each animation all body parts must be perfectly defined. Definition and Every day examples of AI: Each group should be able to give an example of an AI and explain (using their own words):</p> <ul style="list-style-type: none"> • How the IA Works : IA simulates the human brain/way of thinking • AI is created by humans <p>Limits and objectives of AI: Each group must know that:</p> <ul style="list-style-type: none"> • AI does not replace people • AI has its limitations (it does not always work, it depends on the data available). <p>The teacher can help pupils to express themselves using the examples seen during the lesson and asking appropriate questions: "Does our AI application always distinguish the body parts we have drawn...no....Why?"</p>	
Conclusions and recommendations			
<ul style="list-style-type: none"> • The idea of this lesson is that the students become familiar with the concept of Artificial Intelligence. And feel it as a positive tool that is destined to make our lives easier. • The application "Animated Drawings" has been chosen because children are fascinated to see their drawings move and come to life 		<ul style="list-style-type: none"> • It is recommended that the teacher learn how to use the "Animated Drawings" application before teaching the class. • To make it easier for students to access the application, it is recommended to create a free QR code from the website. Link Animated Drawings application: https://sketch.metademolab.com/canvas 	

LESSON PLAN

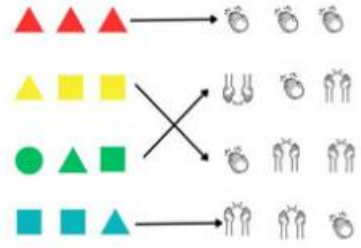
Our first Computer Program

How do we communicate with a robot to make it understand us?

Summary			
Date		Total duration	3 heures
Subject	Students will learn, without a computer, the concepts of an algorithm and a program. Using colors and shapes		
Year Group or Grade level	5 years old		
Main Topic	Students will learn why we need a computer program. They will learn how to write, interpret and analyze simple algorithms and programs. All this using the shapes and colors		
Subtopics or Key Concepts	<ul style="list-style-type: none"> • What is an algorithm and what it is used for. Examples of algorithms • Why we need to develop a computer program 	<ul style="list-style-type: none"> • Express algorithms using symbolic language. 	
Learning Objectives			
<ul style="list-style-type: none"> • What is an algorithm used for and how can it be applied to an everyday action • What is a computer program • The different between algorithm and program. 	<ul style="list-style-type: none"> • The sequence of the instructions is important in an algorithm • There can be more than one valid solution to perform the same action 		
Material needed			
<ul style="list-style-type: none"> • blackboard • pencils • Crayons of different colours 	<ul style="list-style-type: none"> • chalks of different colors • sheet of paper • the worksheet attached to this lesson (one copy for each group) 		
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	15minutes	We begin the activity by describing the actions we take every day. The idea is that the students can detect actions and decisions needed to complete one routine	For example, the teacher can ask about the daily routine of brushing teeth (or other). "Do you brush your teeth? Why is it necessary to brush your teeth? What do you do when you brush your teeth?"
	15-20 minutes	Generate a discussion for students to exchange ideas on the chosen topic and decide the steps needed to carry out the selected action. We guide the students to define the instructions and we draw them on the blackboard.	If different alternatives appear, we draw them separately to be analyzed. There can be different alternatives to achieve the same solution. We emphasize that the order of the instructions is important



	15-20 minutes	Check that the listed tasks are correct. Explain to students that what they have just done is "design an Algorithm" (which is an ordered list of steps to accomplish an objective").	Students can mime the instructions drawn on the blackboard. To invite students to use their own words to describe what an algorithm is.
	10 minutes	Review colors and shapes to be used in the next activity	
<i>Main activity</i>	10 minutes	Review the concept of algorithm and what it is used for. Stress that there can be several valid algorithms to obtain the same solution. The order of the instructions is important.	The teacher can repeat the previous exercise with a different activity to fix the concepts
	10 minutes	Main Discussion: Sometimes, we need to write an algorithm, which can be executed by a machine or robot. But robots are not able to understand the human's languages (natural languages, such as English or Spanish). The algorithms we design for robots consist of a finite and fixed set of instructions that the machine can carry out. Algorithms written in this way are called Programs.	It is recommended to reinforce the Algorithm vs. Program concept with several examples: - You can use the algorithm designed in the previous activity to explain that a robot does not understand the instruction "pick up the toothbrush to brush your teeth". - When we want the robot vacuum cleaner to clean the house we cannot say "robot clean the kitchen". We need to give them more concise commands
	15 minutes	Guided Activities: 1. Explain that we are going to become dancing robots. Using three geometric shapes to code dance steps: a triangle will indicate that we should clap our hands, a square that we should raise both hands, and a circle that we should	

		<p>extend both arms downward.</p> <p>2. Divide the class into groups of 3-4 people. Assign a color to each group.</p>	<p>- This dance code is a proposal.</p> <p>- Background music can be played</p>
15-20 minutes		<p>3. Draw some sequences on the board (a combination of colors and symbols) and help the class (robots) to perform the corresponding dance. Repeat this exercise as many times as necessary so that the students are clear about the program</p>	<p>For example, we could draw ●▲▲■ and, meaning that the "red team" should extend their arms downward, then the "blue team" clap their hands twice, then the "yellow team" clap their hands twice, and finally the "red team" extend their arms upward</p>
15-20 minutes		<p>4. Hand out worksheet 1, to solved by teams. They have to join with arrows the four sequences of figures with their corresponding dance (each group with its color).</p>	<p>The solution for the exercise is (the color depends on each group):</p>  <p>The diagram shows four rows of colored shapes on the left, each with an arrow pointing to a sequence of robot dance moves on the right. Row 1: Three red triangles point to three robots with arms down. Row 2: One yellow triangle, one yellow square, and one yellow square point to two robots with arms up and two robots with arms down. Row 3: One green circle, one green triangle, and one green square point to one robot with arms down, one robot with arms up, and two robots with arms up. Row 4: Two blue squares and one blue triangle point to two robots with arms up and one robot with arms down.</p>
15 minutes		<p>5. After completing the worksheet we share it with the class for correction.</p>	<p>If some groups have not solved the tasks correctly, we analyze their answers together to identify the errors and solves them</p>
30 minutes		<p>6. Each group must define one choreography (involving all "groups of robots") and draw it on a sheet of paper using the language of figures.</p> <p>7. Once the choreographies are designed, they are written one by one on the blackboard. The whole class must perform each choreography following the steps</p>	<p>Try to have at least one symbol of the color of each group in each choreography. So that all groups will have a step to dance.</p>

		described by the figures.	
	10 minutes	8. Ask the question "What differences do you find between how we talked with our friends and the dancing robots?".	We guide the discussion to conclude that in this activity the robots (students) have not been able to use natural language (raising arms, giving a palm, etc.) . They have had to use only three different colored geometric forms
	10-15 minutes	9. Explain to students that we cannot use the same language to communicate with people as we use to communicate with a robot. Robots do not understand natural language such as "clap your hands" or "raise your arms". To communicate with machines/robots we need to use a special language (in our case, colored geometric shapes) which are called Programs.	In this case, the students acted as robots executing (choreographing) a program (colored geometric shapes).
<i>assessment</i>	30 minutes	Assessment or Evaluation The objective of this lesson is to introduce students the concept of algorithm and program. What they are used for and the difference between them.	<ul style="list-style-type: none"> • Students should be able to use an algorithm to perform an everyday action. • Express algorithms using symbolic language (Program) • Students has to work in a cooperative way to solve the challenge posed.
Assessment exercise			
Assessment	<p>This assessment exercise can be carried out in groups, taking into account that all members must participate.</p> <p>Concept of Algorithm and its characteristics: They should be able to express in their own words what an algorithm is and develop an example.</p> <p>They should know that the order of the instructions is important. The teacher can change the order of some instructions on the example proposed by the students and ask the questions: "What happens if I change the order of these two instructions? Can I perform the action correctly with this change?, Why?"</p>		





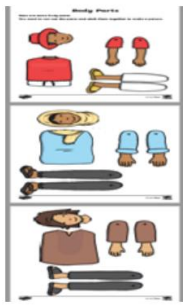
	<p>Sometimes there is no single solution to perform the same action. The teacher can propose alternative examples to the students to perform the same action as they already proposed.</p> <p>Ask the students: Is my algorithm valid also to perform the proposed action? Why?</p> <p>Concept of Program and its characteristics: The students should be able to express in their own words why we need a computer program for. For this purpose, the teacher can ask "Can we use the above algorithm to communicate with a robot? why not? What kind of algorithm do we have to use to communicate with robots?.</p> <p>The students have used the symbolic language to write a "program". Each participant has actively and positively collaborated in the realization of the Worksheet and in the coding of dance</p> <p>Different between algorithm and Program: The students has to know when we need an algorithm and when need a program. The teacher can ask the questions: What does my partner have to use if he wants to teach me how to draw a house? an algorithm or a program? and if we want to communicate with a machine?</p>
Conclusions and recommendations	
<ul style="list-style-type: none">• The idea of this lesson is to introduce students to the concept of programming through a familiar topic such as geometric shapes and colors.	<ul style="list-style-type: none">• The lesson can be extended by repeating the previous exercises and introducing more complex tasks. For example by introducing more geometric shapes associated with new dance steps

4.7. Learning guide - Arts

LESSON PLAN

Seasons sensory Bottles

Summary		
Date		Total duration 50 min
Subject	Arts	
Year Group or Grade level	4-5 years old	
Main Topic	Body parts	
Subtopics or Key Concepts	<ul style="list-style-type: none"> body parts functions awareness/ appreciation of their bodies 	<ul style="list-style-type: none"> music, stories, drawing, colouring, body parts art
Learning Objectives		
<ul style="list-style-type: none"> To identify/name the parts of the human body To develop children's awareness and control of the body To develop fine motor skills and coordination 	<ul style="list-style-type: none"> To enhance their memory and concentration To develop their language skills To boost their self-esteem and confidence 	
Material needed		
<ul style="list-style-type: none"> PC Projector / Electronic Whiteboard Audio and video system Large or normal sheets of paper + watercolours/crayons 	<ul style="list-style-type: none"> Craft Play Learn - - https://www.craftplaylearn.com/ifyourehappy-and-you-know-it/ 	
Worksheet 1 <i>Source: Large or normal sheets of paper + watercolours/crayons</i>	Worksheet 2 <i>Source: https://www.creatingreallyawesomefunthings.com/59-hand-foot-print-art-projects; https://ro.pinterest.com/pin/550916966886601338/</i>	 



Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	5 minutes	If you're happy and you know – song https://www.youtube.com/watch?v=l4WNRvVjiTw Sing the song with the children and invite them to act it out.	The song enhances balance and coordination. It sets children in a good mood.
<i>Main activity</i>	5-10 minutes	Explain to children that today they will revise the parts of the body. Hand children worksheet 1 and invite them to cut out the body parts. Then ask children to put the cut-outs together in the right place to form a body	This activity is optional- depending on children's ability to cut paper as it may take them more than 5 min to cut and assemble the pieces. It helps children identify/recognise and place different body parts.
	10-15 minutes	Use the video clip based on Eric Carle's book, From Head to Toe (https://www.youtube.com/watch?v=fOIx72g0UdA). -Play the video without sound and guide children to guess what happens in the pictures (I am a penguin and I turn my head. Can you do it? I can do it!). -Play the video again (with or without sounds depending on children's English language level) and encourage children to act it out. -Role play: Model the dialogue: You play an animal and have children answer you: Teacher: I am a penguin and I turn my head. Can you do it? Children: I can do it! -Role play (first entire class in a chorus and then pair work) Have children act out 2 or 3 of the dialogues (penguin / giraffe / buffalo / monkey/ seal/ gorilla/ cat/ crocodile/ camel/ donkey/ elephant/).	You can select only a few animals and encourage children to act out only 2/3 dialogues.



		-Focus on the last image: I am boy/girl and I can ... Ask children what else they can do.	
	15 minutes	<p>Hand and Foot Painting</p> <p>Tell children they can do wonderful things with their hands and feet such as create beautiful paintings in an original way. You can show them some samples. Paint the bottoms of feet and palms of hands with washable paints.</p> <p>Have children first press their feet or hands onto large sheets of paper, leaving colourful prints, to see how it works.</p> <p>Then invite them to think of something they would like to do and then create it with their hands and feet.</p>	<p>Make sure children wear suitable clothes. At the end of the activity make sure you have plenty of water for cleanups.</p> <p>Body parts art can increase children's awareness of their bodies. Tell them they can handprint everything they can imagine from flowers to animals or birds. Encourage them to combine handprints with drawing and painting.</p>
	3 minutes	Display children's works on the classroom walls and organize an art gallery.	<p>Organize a school art gallery where children will present their works to parents and peers.</p> <p>You can also invite children to take pictures and then combine everything into a video to be uploaded on the kindergarten site.</p>
Assessment exercise			
	7 minutes	Children present their works and discuss them with their peers	Each child shares their ideas about their peers' pictures in a supportive and non-judgmental environment.
		<ul style="list-style-type: none"> • Participate in the activities you plan with children by watching, listening, and taking notes so you can assess the situation accurately and offer support as required. • Ensure that all children are familiar with the vocabulary and how it relates to the body parts. • Provide immediate, detailed, and encouraging performance-focused feedback. • Always justify your comments by using the criteria which were previously agreed upon with the child (Are you sure that this is your knee? What do you think?). • Include preschoolers who are older in the assessment process. • Encourage children to express their thoughts and opinions positively and nonjudgmentally 	
Conclusions and recommendations			
	<ul style="list-style-type: none"> • Children should be able to recognize parts of 	<ul style="list-style-type: none"> • Additionally, it helps children become comfortable with their bodies and cultivates appreciation for their bodies. 	




<p>their bodies because it will help them begin to acquire a sense of body awareness.</p> <ul style="list-style-type: none">• Teaching children about human body parts meets their curiosity. Children's learning experiences, vocabulary, and understanding of the functions of body parts can all be improved by teaching them about body parts.	<ul style="list-style-type: none">• Follow up: Organize a school art gallery where children will present their works to parents and peers. You can also invite children to take pictures and then combine everything into a video/album to be uploaded on the kindergarten site.• As recommendations, observe and check each child when engaged in activities. Focus on what they need and help them correct themselves. Make sure they feel comfortable and enjoy their success
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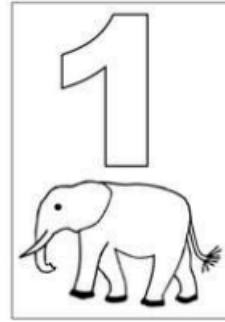
LESSON PLAN

The number 1!

Do you need math when you go shopping? How does a vegetable manage her money? How do your parents do this?

Can you think of other ways to use math in daily life?

Summary			
Date		Total duration	50 min
Subject	Arts		
Year Group or Grade level	4-5 years old		
Main Topic	Numbers		
Subtopics or Key Concepts	<ul style="list-style-type: none"> numbers 1-5 number 1 	<ul style="list-style-type: none"> music, drawing, colouring, photographs, sculpture 	
Learning Objectives			
<ul style="list-style-type: none"> To recognize the number and the digit 1 and associate it with the quantity. To become receptive to the rhythm of beats 		<ul style="list-style-type: none"> To make specific gestures necessary to write number 1 correctly. To be aware of the position that number 1 has in the numerical scale. To aesthetically colour the number 1 	
Material needed			
<ul style="list-style-type: none"> PC Projector / Electronic Whiteboard Images (the 3 slides) Audio and video system 15 Preschool Counting Songs, Fingerplays & Rhymes https://childhood101.com/15-preschoolcounting-songs-fingerplays-rhymes/ Counting Songs for Preschool https://www.teachingexpertise.com/classroom-ideas/counting-songs-for-preschool/ Flashcards with numbers 1-5/ https://tinyurl.com/yv957exb 		<p>Worksheet 1</p> <div style="text-align: center;">  </div> <p>Source: https://ro.pinterest.com/pin/396387204701216060/</p> <p>Worksheet 2</p>	



Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	5 minutes	<p>Invite children to sit down in a circle.</p> <p>Sing a counting song, such as 5 Little Ducks, 5 Little Monkeys, 1, 2, 3, 4 5.</p> <p>With the class, count from 1 to 5 a few times while counting fingers and toes, counting aloud or softly, jumping five times, and clapping five times.</p> <p>As you display the number flashcards, have children name the numbers.</p>	<p>Children can learn to count forwards and backwards through counting songs, which can also contribute to their developing mathematical and number sense.</p> <p>Thus, the children practice saying the numbers backwards and memorize the order of the numbers.</p> <p>Children learn that a number is more than just a word since it denotes a value when they sing a song about 5 of something, which then changes to 4 when one leaves, then to 3, etc</p>
	5 minutes	<p>Clapping up beats: Ask children to close their eyes so they can listen.</p> <p>First, show how to do a basic, one- or two-clap pattern.</p> <p>Then have the children open their eyes and repeat what you've just done.</p> <p>Do the same with variations in claps</p>	<p>This activity helps children focus and pay close attention to what they are doing. It practices repetition and works on the memory</p>



		<p>of 1-5, pause and repeat. Invite the children to repeat what you've just done.</p> <p>Play a few rounds and slowly increase the patterns. You can make it loud and then soft. You can make it slow and then fast.</p>	
<i>Main activity</i>	10 minutes	<p>Explain that today they will learn about the number 1 and they will write the number 1. Treasure hunt: Scatter objects throughout the room and ask them to find as many of one object as they can. Count how many each child has discovered. The child who has the most wins. Repeat for other objects.</p>	<p>Movement makes it easier to remember. The activity also addresses kinesthetic learners.</p>
	5 minutes	<p>Show pupils how to write the number 1 in the air and on the board. Ask children to model the number 1 from plasticine / lego and then place an object near it (1 toy/ 1 crayon/1 book). Children take pictures and assemble them into a class album on Numbers</p>	<p>Discuss the number with the children and ask them what the number 1 looks like. Encourage their imagination (like a caterpillar/ a pole, etc).</p>
	10 minutes	<p>Ask pupils to write the number 1 in the air. Give children one worksheet (they can choose</p>	<p>This will activate the motor cortex, aiding retention and comprehension.</p>

		whichever worksheet they like) and invite them to colour the number 1. Ask pupils to write the number 1 in their notebooks (flour/sand).	
	5 minutes	Statues: pair work/ role play: one of the children is the sculptor and the other one the material. The sculptor has to turn his partner into the number 1	Children take pictures and assemble them into a class album on Numbers.
<i>Assessment</i>	10 minutes	Project the pictures taken. The children present their statues to their peers and get feedback from their peers.	Each child shares their ideas about their peers' pictures in a supportive and non-judgmental environment.

Assessment exercise

Discuss with children what the number 1 looks like so that they will recognize the number 1 when they see numbers. Observe, listen and participate in activities you organize with children to get an accurate evaluation of what is happening and help when needed. Make sure all children write the number 1 correctly in sand/flour and their notebooks. Give immediate, specific, positive feedback focusing on performance. Make sure you always justify your feedback. Help children correct themselves by resorting to the criteria previously established with them (Are you sure that the number looks that way? What do you think?).

In the case of older preschoolers, involve them in assessment. Also, give each child a chance to share their ideas in their group in a supportive and non-judgmental environment.

Conclusions and recommendations

- Some children may find learning and especially mathematics challenging. According to research, arts and, particularly, music may energize children and stimulate their brains, preparing them for learning. Thus, understanding math may change dramatically when music is used, making math a more pleasurable experience for all.
- Mixing the two makes math more enjoyable for children and fosters a more relaxed learning environment. As well as encouraging greater learning engagement
- Adding movement by clapping up beats increases hand-eye coordination skills and makes it easier to remember. Music coupled with movement can help build strength, coordination, body balance and awareness for the child. Last but not least, taking pictures / drawing / colouring / role-playing on sculpture allow children to express themselves, to make meaning and thus own the topic.
- As recommendations, observe and check each child when writing the number 1. Focus on what they need and





STEAMERS

<p>and attention during lessons, music can also stimulate memory.</p>	<p>help them correct themselves. Make sure they enjoy their success.</p>
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LESSON PLAN

"I have a small house!"

Where do you live? Do you like your house? Have you ever imagined your ideal house? What would it look like? Like a square or a rectangle?

Summary			
Date		Total duration	50 min
Subject	Arts		
Year Group or Grade level	4-5 years old		
Main Topic	Colours and shapes		
Subtopics or Key Concepts	<ul style="list-style-type: none"> geometrical shapes (triangles, squares, semicircles, etc 	shapes rectangles, circles,	<ul style="list-style-type: none"> colours
Learning Objectives			
<ul style="list-style-type: none"> Recognize/name shapes and colours Recognize/identify shapes in the environment. Discuss characteristics of different shapes. Compare and contrast different shapes. 		<ul style="list-style-type: none"> Observe and identify the shapes used in drawing/painting a house and the environment around the house. Use adequate geometric shapes / colours to draw a house and the environment. Skills: oral-linguistic skills, independent work skills, the ability to observe and correctly translate what they visualize, conscious listening skills, fine and gross motor skills, enthusiasm for learning. 	
Material needed			
<ul style="list-style-type: none"> PC Projector / Electronic Whiteboard Images (the slides) Audio and video system Coloured pencils/crayons/plasticine/clay, white sheets, coloured building blocks/ a model house 		Slide 1: A house in the Countryside  Source: https://tinyurl.com/4up2hw3b Slide 2: A house in the city  Source: https://tinyurl.com/4nu3nbvs	

Slide 3: A house in the mountains



Source:

<https://www.houzz.ie/photos/garageapartment-maine-coast-round-window-instairwellphvwvp~372188>

Slide 4: A house with a pool



Source: <https://tinyurl.com/bdh2pyxf>

Slide 5: A kindergarten



Source: <https://tinyurl.com/4r9ekctk>

Slide 6: A new kindergarten



Source:

<https://www.atlasobscura.com/places/kindergarten-wolfartsweie>

Lesson Outline

	Duration	Guide	Remarks
<i>Warm up</i>	3 minutes	Spread out the shapes on the floor and ask	This will activate the motor cortex, aiding retention and



		children to raise their hands in the air. When everyone's hands are up, say "Touch/point to a (green) triangle." Have children touch/point to the red triangle. Repeat with each shape. Ask children how they identified each geometrical figure to justify their choice.	comprehension. The focus of the activity is on recognizing/identifying the shapes and their colours.
	3 minutes	Missing shape: Place a few shapes on a tray, cover them with a towel, and then remove one. Uncover the tray and ask the children to identify which form is missing. Encourage them to justify their choice.	The focus of the activity is on identifying the shapes and their colours and naming the missing shapes.
	4 minutes	Shape and colour matching game: Invite children to explore shapes with differently coloured blocks. Get children into groups of four and have them sit around the table. Lay on each table large sheets of paper on which you previously drew differently coloured shapes. Distribute differently coloured blocks which children have to match with the shapes	The game aids children practice sorting and matching colors and shapes. Also, it fosters problem-solving abilities, hand-eye coordination, pattern recognition, and fine motor skills.



		drawn on the tables.	
<i>Main activity</i>	10 minutes	Drawing & painting with shapes: Invite children to look at and observe a model house/slides with houses. Encourage them to observe, analyze and discuss the model house, its main elements and the shapes they identify.	The activity develops observation and analytic skills. The activity is also meant to inspire children for the next activity.
	5 minutes	Ask children to imagine what their ideal house might look like and what shapes and colour they might use.	Children share their ideas with their peers: My house is in the countryside. The windows of my house are like a square/ a circle/ a triangle, etc. Encourage children to give vent to their imagination.
	15 minutes	Give children white sheets of paper and colours and ask them to draw and colour/paint the house of their dreams using geometrical shapes.	Children can choose what colours/materials (coloured crayons, paints, plasticine, clay, etc.) to use or even combine the materials given. Encourage children to give vent to their imagination.
<i>Assessment</i>	10 minutes	Organize a gallery displaying children's paintings/drawings. The children present their products to their peers and get feedback from their peers.	Each child shares their ideas about their peers' house in a supportive and non-judgmental environment.
Assessment exercise			
Constantly observe the class to assess whether everyone grasps a concept or is engaged in the activity. If some children struggle with an activity/concept, you can form a small group or provide one-on-one guidance. Use verbal informal formative assessment tied to children's performance.			



Give immediate feedback. Be specific in your comments and help children correct an answer. Ask children to assess their work: “How do you think you did on this house?” Allow time for children to share their accomplishments with their peers.

Conclusions and recommendations

<ul style="list-style-type: none"> • The theme of shapes and colours is vast and may include various activities. Make sure you engage children in a range of diverse activities on shapes to help them internalize the concepts. Thus, you can engage children in: <ul style="list-style-type: none"> a. singing songs: I have a small house, by G. Zurli - https://www.youtube.com/watch?v=Ke08aV6YpjY b. or picture activities (such as Painting with shapes http://www.athomewithali.net/2012/11/painting-with-shapes.html). <p>The teacher creates triangles, rectangles, squares, circles, and semicircles by cutting up inexpensive little sponges. Instead of using brushes, children create artworks with sponges. The teacher organizes a gallery where children explain to each other their paintings and get feedback from their peers.</p>	<p>c. a class album on shapes Take the children on a "shape tour" so they can explore the classroom (or kindergarten, if you have time; it could be a separate session) and find shapes. Discuss the shapes that they found. Also, they can use a camera to capture the shapes and compile the images into a class album on shapes. Moreover, instruct the children to sketch their own versions of the shape or to cut it out of an old newspaper, magazine, etc. to put in the class album.</p>
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LESSON PLAN

Time to put your toys away.

Every child plays. Do you like to play? We also like to play, but every time after we play we have to tidy up. Tidying up can be fun!

Summary		
Date		Total duration 50 min
Subject	Arts	
Year Group or Grade level	4-5 years old	
Main Topic	Daily routine	
Subtopics or Key Concepts	<ul style="list-style-type: none"> • instructions/directions • toys away • tidying up 	<ul style="list-style-type: none"> • music and dance • ordering/sorting toys • stand up/sit down /draw /read/sing /watch
Learning Objectives		
<ul style="list-style-type: none"> • Learn about the space around us. • Regulate their behaviour (paying attention to putting their toys away/tidying up). • Enhance motor skills through music and dance (by arranging toys through song and dance - movement). 	<ul style="list-style-type: none"> • Provide children with opportunities to reflect on their actions (what may happen if they don't tidy up). • Follow the logical line of events. • Develop skills such as: consciously ordering toys, oral-linguistic skills during singing, independent work skills, active listening, etc. 	



Material needed			
<ul style="list-style-type: none"> • PC • Projector / Electronic Whiteboard • Images (the 3 slides) • Audio and video system • Clean Up Song Kids Song for Tidying Up Super Simple Songs 	<ul style="list-style-type: none"> • Image 1: The wardrobe • Image 2: The room • Image 3: At kindergarten 		
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	5 minutes	Show children the 3 slides with pictures of the tidy/untidy of the wardrobe/room/kindergarten. Image 1: The wardrobe Image 2: The room Image 3: At kindergarten Discuss with children why we should tidy up the place where we live.	You may use a PC or printed images. Start discussing the untidy images, Encourage children to make suggestions and reveal the tidy images in the end. Children compare their suggestions to the given pictures
	5 minutes	Discuss with children what they should do after they play with their toys.	Discuss what happens if they don't to put their toys away (consequences: e.g. stumble over toys dropped on the floor)
<i>Main activity</i>	5 minutes	Play the song and encourage them to join and sing along	Allow children to discover the song (music and images) without instructions
	10 minutes	Play the song and encourage them to act out the words/mime the actions.	This will activate the motor cortex, aiding retention and comprehension
	15 minutes	Invite children to have a look around and see whether their things and toys are in their places and where they should be. Play the song and invite them to tidy up while singing the song.	During the tidying process, revise with children how to sort toys by categories, colours, sizes. Also, revise instruction vocabulary such as: stand up/sit down/sing/watch the video/dance. Ask children to think of an action/code like a meme representing 'tidy up' and negotiate a representation. You



			can play Simon Says with activities they do at the kindergarten, including tidying up (stand up/sit down /draw / read/sing /watch a video/etc).
<i>Assessment</i>	10 minutes	Check (helped by the children themselves) if the children have tidied up and put everything in their boxes or shelves or invite children to check if they have put all their things away (while singing the song).	Give children verbal feedback based on the level of accomplishing their tasks, helping them to correct themselves
Assessment exercise			
<ul style="list-style-type: none"> • Check (helped by the children themselves) if the children have tidied up and put everything in their boxes or shelves or invite children to check if they have put all their things away (while singing the song). • Use verbal informal formative assessment tied to children’s performance while observing, listening and participating in experiences with children. In the case of older preschoolers involve them in assessment. • Start with your instructions. In addition to explaining children what they should do (e.g., put all their things away in their boxes while singing the song), your instructions must also include the measure of success for each child (e.g., having everything ordered and arranged in the right place) so that they can also assess their work. • Your feedback must be immediate, specific, positive focusing on performance and helping children to correct themselves (Are you sure that is the right place for that toy? What do you think?). This way they will feel safe. Also, it is great to give each child a chance to share their ideas in their group in a supportive and non-judgmental environment (the beginning of peer assessment). By realizing the role of cooperation children learn that working together helps them to meet their goals, which is very effective feedback. 			
Conclusions and recommendations			
<ul style="list-style-type: none"> • Children need routines in their lives, which must be correctly inserted into their daily schedule. Generally, children can get familiar with daily routines through different arts, such as songs, drawing or collages (when we discuss routines with them). • Music creates a positive state and sets children in a good mood by reducing stress, heightening attention, enhancing concentration, reinforcing memory and stimulating motivation. Music enables children to internalize the message through repetition. 		<ul style="list-style-type: none"> • Repetition builds ownership of the content. Songs are contagious, the lessons of which spread beyond the classroom and turn into lifelong habits. • As recommendations, make sure that while putting things away, children follow the instructions: singing to themselves, paying attention to where they put their toys and not getting in the way of their peers. 	



LESSON PLAN

Spring is coming!

Spring is nature's way of saying, 'Let's play and learn!'

Summary			
Date		Total duration	50 min
Subject	Arts		
Year Group or Grade level	4-5 years old		
Main Topic	Seasons/spring		
Subtopics or Key Concepts	<ul style="list-style-type: none"> seasons weather clothes they wear in spring 	<ul style="list-style-type: none"> music, dance, drawing, colouring, collage, role-play fashion show with spring clothes 	
Learning Objectives			
<ul style="list-style-type: none"> To recognize the seasons on the wheel To identify specific elements of spring To identify different types of weather 		<ul style="list-style-type: none"> To use symbols representing types of weather To create a weather clock 	
Material needed			
<ul style="list-style-type: none"> PC Projector / Electronic Whiteboard Audio and video system Links to season wheels: https://wordwall.net/resource/10000259/seasons https://wordwall.net/resource/32198159/seasons 	To make the Collage Weather clock: <ul style="list-style-type: none"> Cardboard, paper fasteners, markers, scissors, cotton/ribbon, glue White paper plates or white cardboard circles Magazine pictures or photographs that depict different types of weather/children's drawing 		
Lesson Outline			
	Duration	Guide	Remarks
<i>Warm up</i>	5 minutes	Play the season wheel with the children and ask them to tell you which season is shown in the pictures when the wheel stops and what elements characterize that season. Invite children to identify several elements of spring. https://wordwall.net/resource/10000259/seasons https://wordwall.net/resource/32198159/seasons	If the wheel is not friendly you can switch the template. Ask children what their favourite season is and why.
	10 minutes	Play lively music and invite children to a fashion show, wearing clothes or	Ask parents to help you with this activity and have their offspring dressed accordingly.



		<p>accessories representing a season.</p> <p>Ask the other children to guess the season presented.</p>	
<i>Main activity</i>	5 minutes	<p>1. Discuss with the children what the weather is like in spring and whether this influences the way we dress.</p> <p>2. Tell children they are going to make their own weather clock indicating the weather to use at home and kindergarten. This way they will know and decide on what clothes to put on each day.</p>	<p>The activity raises children's awareness of different types of weather and the way weather influences our life (what clothes to wear).</p>
	20 minutes	<p>1. Tell them they can draw and/or use collage. Give children what they need to make their weather clock.</p> <p>2. Invite children to make the base of the clock by drawing a circle (use a paper plate or cardboard).</p> <p>3. Create the weather clock. Ask the children to think about an image / colour to describe weather (e.g. Sun - sunny days, umbrella - rainy days, a cloud/cotton for cloudy days, a leaning tree to indicate windy days; blue - cold temperatures; red - hot temperatures).</p> <p>Tell them they will also have to add a symbol for snow (as sometimes it snows even in spring).</p> <p>4. Invite children to divide their circle into sections for the different types of weather.</p> <p>5. Invite children to draw pictures or</p>	<p>The activity helps children develop their autonomy.</p> <p>Children are given choices in making the weather clock (they can draw or/and use cut outs from magazines to represent diverse types of weather).</p> <p>The activity helps them decide on the clothes they will wear according to weather.</p>

		<p>glue pictures from magazines/ cotton representing different weather symbols in the sections of their circle.</p> <p>6. Help children to create a spinner/arrow.</p> <p>7. Help the children to attach the spinner/arrow to the centres of their circles with paper fasteners.</p> <p>8. Show the children how to indicate the weather of the day by pointing the spinner to the correct image.</p>	
<i>assessment</i>	5 minutes	<p>Role play: in pairs children set their clocks and ask each other what the weather is like and what kind of clothes they will put on. What's the weather like today? It's cold. Put on warm clothes then.</p> <p>Model the activity and encourage children to extend their conversation.</p>	The activity develops children's turn taking in conversation.
Assessment exercise			
<p>Observe, listen and participate in the activity to get an accurate evaluation of what is happening and help children when they need. Give immediate, specific, positive feedback focusing on performance. Make sure you always justify your feedback. Check for children's understanding by answering the following questions: Did each child manage to make a "weather clock"?/ Could children explain how the weather influences the way we dress?/ Could children draw or use cut-outs to represent each type of weather? Was the child able to sustain turn taking in role-playing?</p>			
Conclusions and recommendations			
<ul style="list-style-type: none"> Discuss different sounds the weather makes. Use a cookie sheet to make thunder, a pie tin and rice for rain, and a fan for wind. Have the children close their eyes and describe the type of weather they think each item sounds like. My story: Ask parents to provide a picture of their child enjoying a spring outdoor activity. Have the child describe the activity, the weather, and 		<ul style="list-style-type: none"> Tell children they will use their weather clock at home so that they will know what clothes to put on every day and they will also make together a weather clock for their class to use it at school. As recommendations, observe and check each child while making their weather clock and role-playing. Focus on what they need and help them correct themselves. Make sure they enjoy their success 	



STEAMERS

the clothes s/he wears and include everything in a story.	
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5. Piloting phase

5.1. Module 2 Science

General Information			
Date	27.10.2023 and 28.07.2023	Total Duration	1 hour with children, 40 mins with teachers
School/ Country	Akata Makata / Greece		
Year Group	4-5 years old	Grade level	Preschool
Number of students	15	Number of teachers	5
Module	Module 2- Science		
Lesson Plan	Day and Night Routine		
Material Used	<ul style="list-style-type: none"> • Computer with internet access • Two dolls depicting the 2 cartoon • video (https://youtu.be/dJz_noKP-Bw) • globe • torch • a darkened part of the classroom to work in • worksheet • glue • scissors • tambourine 		
Location description	Indoor classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To formulate their ideas about day and night and their repeated alternation	Yes	the children were able to formulate ideas about day and night
Describe the alternation of day and night and realize that it is due to the rotation of the Earth on its axis	Yes	The movement game helped a lot for this understanding
To use models to represent the Earth and its movement around itself	Yes	

To perceive the repeatability (pattern) of the phenomenon of the alternation of day and night	Yes	The video helped a lot
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	1 hour with the children and 40 mins with teachers
Sequence of warming-up activities	in the warm-up phase the children actively participated and introduced themselves and how old are they counting one's years with fingers and then without fingers
Sequence of guided activities	The experiment with the flashlight highlighting different countries and places on Earth helped them understand the day & night alternation better. The worksheets with pictures of children's daily habits that are characteristic and easily recognizable about day and night were easily done by children (they cut out the pictures from the worksheet and glue them into the correct box), because they were familiar with these activities from their personal experience and routine.
Assessment Exercise	Children were invited to dance/ play a role-play game, simulating the phenomenon of day-night alternation. It really helped assess their understanding about the concept of the rotation of the Earth on its axis and around the sun.
Others	

Feedbacks	
Students	The students were engaging through the duration of the lesson plan. They seemed to enjoy it and the assessment showed that they understood the concepts that they were taught.

Teachers	The teachers were introduced the lesson plans in July by themselves and then piloted them with the children in October. Their feedback was very positive, they assessed the lesson plan as a very structured one and their feeling was that the learning goals were achieved
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General Information			
Date	06.07.2023	Total Duration	1 hour
School/ Country	Akata Makata/ Greece		
Year Group	4-6 years	Grade level	Preschool
Number of students	15	Number of teachers	2
Module	Module 2 Science		
Lesson Plan	Body Parts		
Material Used	<ul style="list-style-type: none"> • Large plastic bottle (x2) • Straws • Balloons • Scissors • Tape • Modelling clay • 		
Location description	preschool classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To understand the basic structure and function of lungs.	Yes	the children were able to formulate ideas about the function of lungs



To learn how air moves in and out of the lungs.	Yes	The experiment helped a lot for this understanding
To appreciate the importance of breathing for our bodies	Yes	The children were excited to do their breathing exercises and breath in and out
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	1 hour
Sequence of warming-up activities	In the warm-up phase the children actively participated and engage in the conversation about the importance of lungs and shared their ideas of how they thought the lungs work.
Sequence of guided activities	The preschoolers enjoyed the process of a Lung Model Construction
Assessment Exercise	Students observed what they made and shared with their teachers how the lungs are working. Then, they observed how their stomach expand when they breathe in and were able to relate this movement to the model.
Others	

Feedbacks	
Students	The students were engaging through the duration of the lesson plan. They seemed to enjoy it and the assessment showed that they understood the concepts that they were taught.
Teachers	The teachers piloted the lesson plan with the children in May. Their feedback was very positive, they assessed the lesson plan as a very structured one and their feeling was that the



	learning goals were achieved. In July those teachers shared the lesson plans to the rest of the teachers of the school
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General Information			
Date	06.07.2023	Total Duration	1 hour
School/ Country	Akata Makata / Greece		
Year Group	4-6 years	Grade level	preschool
Number of students	15	Number of teachers	10
Module	Module 2- Science		
Lesson Plan	Counting Nature's Treasures		
Material Used	<ul style="list-style-type: none"> • Outdoor space with access to natural materials (e.g. leaves, rocks, sticks, flowers, etc) • Large sheet of paper or cardboard • Marker or crayon • Small containers or baskets • Number cards or foam numbers 		
Location description	outdoor space – garden		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To introduce the concept of numbers to preschoolers in a fun and engaging way.	Yes	the children were able to formulate ideas about numbers
To develop preschoolers' ability to count objects accurately.	Yes	The number hunt helped a lot for this understanding
To encourage preschoolers to explore the properties of natural materials	Yes	The children were excited to find out what was at the garden
To introduce preschoolers to basic science concepts such as sorting and classifying natural materials based on different properties.	Yes	The preschoolers were able to sort, classify natural materials and they were really keen to do so



To develop preschoolers' creativity and through nature-based art activities.	Yes	The activity was really hands-on and children did some land art creations along with their teachers
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	1 hour
Sequence of warming-up activities	In the warm-up phase the children actively participated and engage in counting numbers or shout out all the numbers they knew.
Sequence of guided activities	The preschoolers got excited when they realised that they would be going on a nature scavenger hunt to find a certain number of items. They chose their baskets that had a number on them (e.g. 5, 10, or 15). They were able to find the number of items that matched the number on their baskets
Assessment Exercise	Students documented their collection and observed what they found and shared with their teachers how they were counting. This will help them understand the concept of numbers and their ability to identify and count objects.
Others	

Feedbacks	
Students	The students were engaging through the duration of the lesson plan. They seemed to enjoy it and the assessment



	showed that they understood the concepts that they were taught.
Teachers	The teachers were introduced the lesson plans in July and piloted them with the children. Their feedback was very positive, they assessed the lesson plan as a very structured one and their feeling was that the learning goals were achieved.

General Information			
Date	15.09.2023 and 28.07.2023	Total Duration	1 hour with children, 40 mins with teachers
School/ Country	Akata Makata / Greece		
Year Group	4-5 years	Grade level	preschool
Number of students	15	Number of teachers	5
Module	Module 2- Science		
Lesson Plan	Colours exploration		
Material Used	<ul style="list-style-type: none"> • Containers or cups filled with red, yellow, and blue water • Food coloring • Droppers • White coffee filters • Tray or plate • Recording sheet • Watercolors or tempera 		
Location description	Indoor classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To introduce preschoolers to the concept of primary colors and color mixing	Yes	the children were able to formulate ideas about colour mixing
To demonstrate to preschoolers how combining primary colors can create new colors.	Yes	The experiment helped a lot for this understanding
To encourage preschoolers to predict and experiment with mixing colors	Yes	The children were excited to predict what colour would appear
To provide preschoolers with an opportunity to document and	Yes	The worksheet helped a lot

reflect on their color mixing observations		
To enhance preschoolers' fine motor skills through painting and coloring activities	Yes	The activity was really hands-on
To foster creativity and artistic expression in preschoolers.	Yes	Children made lovely creations
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	80 mins with the children and 40 mins with teachers
Sequence of warming-up activities	In the warm-up phase the children actively participated and engage in adding the drops of the colours into the cups and mix each cup with a spoon until the water is colored.
Sequence of guided activities	The preschoolers predicted what would happen when they mix the primary colors together.
Assessment Exercise	Students documented their color experiment observations on a recording sheet, using watercolours. This enables them to witness how the merging of two colors generates a distinct hue.
Others	

Feedbacks	
Students	The students were engaging through the duration of the lesson plan. They seemed to enjoy it and the assessment showed that they understood the concepts that they were taught



Teachers	The teachers were introduced the lesson plans in July by themselves and then piloted them with the children in September. There feedback was very positive, they assessed the lesson plan as a very structured one and their feeling was that the learning goals were achieved.
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General Information			
Date	28.07.2023	Total Duration	70 mins
School/ Country	Akata Makata / Greece		
Year Group	4-6 years	Grade level	preschool
Number of students	15	Number of teachers	4
Module	Module 2- Science		
Lesson Plan	Seasons sensory bottles		
Material Used	<ul style="list-style-type: none"> • Magnetic items (paperclips, washers, bolts, screws, pipe cleaner) • 4 Plastic or glass water bottles • Baby oil, Food colouring • Magnetic wand • Flowers, Leaves, pebbles, sand, seashells • Glitter, Fake snow, &/or snowflakes • Pom-poms • Funnel • Journal for observations 		
Location description	Preschool classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To introduce preschoolers to the concept of magnetism.	Yes	
To demonstrate to preschoolers how combining different items they can create season sensory bottles.	Yes	
To encourage preschoolers to predict and experiment with magnetic items.	Yes	The experiment helped a lot for this understanding

To provide preschoolers with an opportunity to document and reflect on their observations	Yes	
To enhance preschoolers' fine motor skills like hand to eye coordination.	Yes	
To foster creativity and artistic expression in preschoolers	Yes	
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	70 mins
Sequence of warming-up activities	In the warm-up phase the children actively participated and engage in the conversation about the four seasons
Sequence of guided activities	The preschoolers enjoyed the process of the sensory bottles.
Assessment Exercise	Students observed what happen when they use the magnetic wand on bottles that have or have not magnetic items inside. Then, they understood the concept os attraction and the magnets repel when they push other objects or themselves away.
Others	

Feedbacks	
Students	The students were engaging through the duration of the lesson plan. They seemed to enjoy it and the assessment



	showed that they understood the concepts that they were taught.
Teachers	The teachers piloted the lesson plan with the children in July. Their feedback was very positive, they assessed the lesson plan as a very structured one and their feeling was that the learning goals were achieved.

5.2. Module 3 Technology

General Information			
Date	20.07.2023	Total Duration	40 min
School/ Country	GCSchool Primary School, Nicosia, Cyprus		
Year Group	6 years	Grade level	preschool
Number of students	15	Number of teachers	6
Module	Module 3		
Lesson Plan	Creating a storyboard game based on Seasons		
Material Used	<ul style="list-style-type: none"> • Teacher PC / Projector • PCs • Pens/Paper for writing bullet points the months in each season 		
Location description	In the classroom		
Others	mix classroom of English and Greek speaking kids		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Students should demonstrate Knowledge in using technology (PC)	Yes	The students were able to use the PC and the drawing application, PAINT
Analyse and comprehend the different seasons and different months that belong to each season	Yes	the students were ok with this objective
Ability to present their story to the class	Yes	No problems, the students were able to share their drawings
Creating a drawing Ability to associate various real life events with particular season	Yes	some difficulties with some students in using the mouse effectively to create realistic drawings
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The activity level was adequate for this age group. All students were able to use the PC and the mouse in order to create the task requirement
Duration of the lesson Plan	40 minutes
Sequence of warming-up activities	the sequence was ok, there was an easy follow through the warm up and the actual task that the students had to do
Sequence of guided activities	The time allocated in each activity is enough, the sequence again is in the right order and the students were able to follow through easily
Assessment Exercise	The amount for assessment was ok, all students had their USB ready and saved their drawing so that they were able to present it to the class
Others	

Feedbacks	
Students	The students have enjoyed the exercise, they were paying attention on what is required
Teachers	The teachers did not phase any difficulties with the lesson or equipment used. They enjoyed the lesson since they saw their students enjoying it

General Information			
Date	18.09.2023	Total Duration	40 min
School/ Country	GCSchool Primary School, Nicosia, Cyprus		
Year Group	6+	Grade level	Primary School
Number of students	33	Number of teachers	7 Teachers
Module	Module 3		
Lesson Plan	Identifying a daily routine and searching the web for finding a photo of it		
Material Used	<ul style="list-style-type: none"> • Teacher PC • Projector • Tablets / PCs • Pens/Paper 		
Location description	In the classroom		
Others	mix classroom of English and Greek speaking kids		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Students should demonstrate Knowledge in using technology (tablets)	Yes	The students were able to use the pcs and the application needed for the lesson
Identify a routine that the student does on a daily basis	Yes	This was ok from all students
Learn how to use the search engine effectively to find a photo that shows the daily routine	Yes	This was a somehow challenging depending on the routine, some students had to search a bit more to find exactly the one they wanted
Being able to associate a routine with a specific task and time of the day so that effective searching can be done	Yes	This was done ok, some specific search had to be done to find the right time of the routine
Other remarks about the learning objectives:		

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Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The activity was adequate for all students
Duration of the lesson Plan	40 minutes
Sequence of warming-up activities	Enjoyed the challenge, they were eager to start the task required
Sequence of guided activities	The sequence was followed as the lesson plan
Assessment Exercise	The time of 5 minutes for the whole assessment can be extended a bit to another 2-3 so that the teacher can have sufficient time to go through all students.
Others	

Feedbacks	
Students	The students were happy that they learned more effective ways to search. They needed to know how to narrow down their search results.
Teachers	The teachers have found the lesson fun and pleasant to do. The students showed interest and were actively participating throughout the lesson, both practically and theoretically

General Information			
Date	19.07.2023	Total Duration	40 min
School/ Country	Falcon English Primary School, Nicosia, Cyprus		
Year Group	4 years	Grade level	Pre-School
Number of students	25	Number of teachers	4 Teachers
Module	Module 3		
Lesson Plan	Counting Numbers Using Technology		
Material Used	<ul style="list-style-type: none"> • Teacher PC / Projector • Tablets with Stylus • Printed Cards • Box for the Cards 		
Location description	In the classroom		
Others	mix classroom of English and Greek speaking kids		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Students should demonstrate Knowledge in using technology (tablets)	Yes	The students were able to use tablets that they used, although the application was ready for them to use
Students should demonstrate Knowledge in using technology (tablets), analyse how many stamps they need to create and comprehend what they should do (how to actually apply the equivalent number of stamps)	Yes	the students knew how to use the stylus but they needed some guidance when they made mistakes
Recognize Numbers	Yes	They were able to recognize the numbers
Understand and apply repetition in creating the stamps	Yes	they faced some difficulties in making the same size of the stamps
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The activity level was adequate for this age group. All students were able to use the tablet and stylus
Duration of the lesson Plan	40 minutes
Sequence of warming-up activities	the sequence was ok, there was an easy follow through the warm up and the actual task that the students had to do
Sequence of guided activities	The time allocated in each activity is enough, the sequence again is in the right order and the students were able to follow through easily.
Assessment Exercise	The amount for assessment was ok since the teachers were assessing students work as they were doing it
Others	

Feedbacks	
Students	The students were very excited to use the tablets during their lessons. They all expressed the need to have more time with the tablets in order to write more numbers.
Teachers	The teachers did not phase any difficulties with the lesson or equipment used. They enjoyed the lesson since they saw their students enjoying it. The only thing is that the students needed more time to do more exercises. This caused some disturbance in class that the teachers had to cope with.

General Information			
Date	19.07.2023	Total Duration	40 min
School/ Country	Falcon English Primary School, Nicosia, Cyprus		
Year Group	4-6 years	Grade level	Pre-School
Number of students	28	Number of teachers	4 Teachers
Module	Module 3		
Lesson Plan	Using Technology to identify shapes		
Material Used	<ul style="list-style-type: none"> • Teacher PC • Projector • Tablets 		
Location description	Outside in the yard (the activity from students)		
Others	mix classroom of English and Greek speaking kids		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Students should demonstrate Knowledge in using technology (tablets)	Yes	The students were able to use tablets that they used
Being able to access specific applications, Learning basic functions (take photo, save, retrieve)	Yes	the students knew how to access photo application, take the photo and save it
Analyse a shape to determine where to find it	Yes	this was like a treasure hunt task... they had to look a bit harder for some shapes
Learning to identify shapes Learning the basic colours	Yes	That was an easy task, all students were able to identify colour and shapes
Other remarks about the learning objectives: The amount of tablets was sufficient enough to share between the students		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The activity level was adequate for this age group. All students were already knowledgeable regarding taking photos, videos and saving them
Duration of the lesson Plan	40 minutes
Sequence of warming-up activities	everyone was excited with the start up questions and activities and very excited to use technology in the lesson
Sequence of guided activities	The time allocated in each activity is enough, the sequence again is in the right order and the students were able to follow through easily.
Assessment Exercise	The time for returning back to the classroom to check their photos with the original ones is adequate, 10 minutes
Others	

Feedbacks	
Students	The students were very excited to use the tablets outside in the yard. They all expressed the need to have more time with the tablets in order to find even more shapes
Teachers	The teachers did not phase any difficulties with the lesson or equipment used. They enjoyed the lesson since they saw their students enjoying it.

General Information			
Date	14.09.2023	Total Duration	40 min
School/ Country	Falcon English Primary School, Nicosia, Cyprus		
Year Group	3-5 years	Grade level	Pre-School
Number of students	26	Number of teachers	3 Teachers + 2 Assistants
Module	Module 3		
Lesson Plan	Using Technology to learn about Body Parts		
Material Used	<ul style="list-style-type: none"> • Teacher PC • Projector • Tablets / Smart Phones 		
Location description	In the classroom		
Others	mix classroom of English and Greek speaking kids		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Students should demonstrate Knowledge in using technology (tablets)	Yes	The students were able to use tablets and mobile phones that they used
Analyse and comprehend what each sense is and which body part we need to use it	Yes	That was an easy task, all students were able to identify the sense
Creating a video and show Ability to present their story to the class	Yes	some difficulties by some students
Analysing the sense that the teacher is explaining	Yes	That was an easy task, all students were able to identify the sense
Other remarks about the learning objectives:		
Due to the sharing of resource, tablet or mobile phone, some students were not able to do the video requested due to time limitations of the lesson and due to lack of resources		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The activity was adequate for most part but the part where the students had to do a video faced some problems. This is due to the availability of resources and not so much a knowledge issue
Duration of the lesson Plan	40 minutes
Sequence of warming-up activities	everyone was excited with the start up questions and activities and very excited to use technology in the lesson
Sequence of guided activities	the time allocated for the kids to go around the classroom and make their video should have been longer, especially due to the fact that students are overwhelmed with the using of tablets and everyone wants to try out the video
Assessment Exercise	The time of 2 minutes for the presentation might work with small groups in the class but this can cause an issue if there are a lot of students and not everything starts on time
Others	

Feedbacks	
Students	The students were very excited to use the tablets and mobile phones. Some expressed a bit disappointment because they did not have the chance to use the tablets.
Teachers	The feedback from teachers was that the lesson was fun to do and fun for the students. The lesson has caught the attention of the students from the start and they were not bored at any level.

5.3. Module 4 Engineering

General Information			
Date	27.10.2023	Total Duration	2 hours
School/ Country	Scuola materna 3 circolo- Plesso San Marco (Italy)		
Year Group	3-5 years	Grade level	Pre-School
Number of students	17	Number of teachers	1
Module	Module 4		
Lesson Plan	work about current season- Autumn		
Material Used	PC, mobile phone, cards, reticulated, bristol		
Location description	Indoor classroom		
Others	Heterogeneous class from 3 to 5 years		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
learn the seasons	Yes	
use the computer to learn songs and nursery rhymes about the seasons	Yes	
development of computational thinking	Yes	
works about seasons and emotions	Yes	
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement



Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	2 hours divided in four parts
Sequence of warming-up activities	in the warm-up phase the children actively participated and introduced themselves
Sequence of guided activities	the students illustrated the songs learned via audiovisual instrument by singing nursery rhymes and following the sequence on the PC. They made themselves available to show their abilities to follow the video, sing and move.
Assessment Exercise	the children were asked to repeat the names of the seasons after watching the video on the computer and many of them had really excellent memories. learning about the seasons helped develop children's computational thinking through the use of color
Others	

Feedbacks	
Students	they had a lot of fun singing nursery rhymes about autumn, the current season.it was very interesting to understand what emotions the seasons aroused. Most of them prefer summer.
Teachers	the teacher was a fundamental part of this journey because not only did she make it easier for the children to do the activities but she actively involved them without neglecting anyone and helped them get to know each other through many fun questions

General Information			
Date	27.10.2023	Total Duration	2 hours
School/ Country	Scuola materna 3 circolo- Plesso San Marco (Italy)		
Year Group	3-5 years	Grade level	Pre-School
Number of students	17	Number of teachers	1
Module	Module 4		
Lesson Plan	Parts of Body		
Material Used	PC, mobile phone, cards, reticulated, bristol, Lego constructions		
Location description	indoor classroom		
Others	heterogeneous class from 3 to 5 years		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
perception the part of body	Yes	difficulty for the little ones (3 years)
perception of body parts through and development of computational thinking	Yes	facilitated exercises and simplified commands in relation to the age group
part of body and emotions	Yes	contextualize many different and interesting areas of where children perceive emotions in the body
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement



Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	2 hours divided in four part
Sequence of warming-up activities	In the warm-up phase the children actively participated and introduced themselves
Sequence of guided activities	the children were first invited to follow directions from the PC and indicate the relevant parts of the body, then through the network that develops computational thinking, they were able to recognize the various directions and parts of the body in space. learning about some parts of the body through the description of emotions is very interesting
Assessment Exercise	the net and emotions exercises have proven to be very useful in helping children learn the parts of the body
Others	

Feedbacks	
Students	the children cooperated with each other in an active way and then followed, in free play, the reproduction of the human body through Legos
Teachers	the teacher was a fundamental part of this journey because not only did she make it easier for the children to do the activities but she actively involved them without neglecting anyone and helped them get to know each other through many fun questions. it also helped the children cooperate with each other

General Information			
Date	27.10.2023	Total Duration	2 hours
School/ Country	Scuola materna 3 circolo- Plesso San Marco (Italy)		
Year Group	3-5 years	Grade level	Pre-School
Number of students	17	Number of teachers	1
Module	Module 4		
Lesson Plan	Numbers		
Material Used	PC, mobile phone, cards,		
Location description	Indoor classroom		
Others	Heterogeneous class from 3 to 5 years		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Numbers recognize	Yes	from one to ten
say the numbers in sequence	Yes	
use the PC to learn to count	Yes	difficulty for the little ones (3 years)
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	1 hour



Sequence of warming-up activities	in the warm-up phase the children actively participated and introduced themselves and how old are they counting one's years with fingers and then without fingers
Sequence of guided activities	Instead of balloons, the net was used to better aid numerical learning and link it to motor activity. learning to count is easier if accompanied by rhythm. Then the teacher form a circle and assign each one number, when the teacher says a number the children who have that number will have to jump and clap their hands. After that the teacher will show the numbers on the computer again and the children will have to count in order from smallest to largest.
Assessment Exercise	the children were invited to dance to learn the numbers to the rhythm of the music. this allowed you to follow the music through the computer and learn the steps.
Others	

Feedbacks	
Students	the younger students showed some difficulty in counting following the PC, it went better if connected to a song
Teachers	the teacher was a fundamental part of this journey because not only did she make it easier for the children to do the activities but she actively involved them without neglecting anyone and helped them get to know each other through many fun questions.it also helped the children cooperate with each other.

General Information			
Date	27.10.2023	Total Duration	2 hours
School/ Country	Scuola materna 3 circolo- Plesso San Marco (Italy)		
Year Group	3-5 years	Grade level	Pre-School
Number of students	17	Number of teachers	1
Module	Module 4		
Lesson Plan	Daily Routine		
Material Used	PC, mobile phone, cards, reticulated, bristol		
Location description	Indoor classroom		
Others	Heterogeneous class from 3 to 5 years		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Learn the daily routine	Yes	
Recognize the difference between day and night	Yes	facilitated exercises and simplified commands in relation to the age group
knowing how to guide a child in their daily activities	Yes	difficulty for the little ones (3 years)
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	1 hour



Sequence of warming-up activities	in the warm-up phase the children actively participated and introduced themselves and how their day goes.
Sequence of guided activities	children are invited to describe their routine through a PC program in time with the music. then they are asked to guess whether the activity proposed by the teacher takes place during the day or at night
Assessment Exercise	the children are put in circle time and asked if they like day and night more and why, this exercise also serves to bring out the children's fears and calm them through a guided meditation on the PC.
Others	

Feedbacks	
Students	the students shared how they felt during the past weekend and how they feel knowing they have to face the next one. they know well how to recognize the activities that take place during the day and those that take place at night. they are still learning the days of the week and the months.
Teachers	the teacher was a fundamental part of this journey because not only did she make it easier for the children to do the activities but she actively involved them without neglecting anyone and helped them get to know each other through many fun questions. it also helped the children cooperate with each other.

General Information			
Date	27.10.2023	Total Duration	1 hour
School/ Country	Scuola materna 3 circolo- Plesso San Marco (Italy)		
Year Group	3-5 years	Grade level	Pre-School
Number of students	17	Number of teachers	1
Module	Module 4		
Lesson Plan	Colors and shapes		
Material Used	PC, mobile phone, cards, reticulated, bristol		
Location description	Indoor classroom		
Others	heterogeneous class from 3 to 5 years		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Recognize primary and secondary colors	Yes	difficulty for the little ones (3 years)
Recognize shapes	Yes	facilitated exercises and simplified commands in relation to the age group
Recognize colors and shapes together follow	Yes	difficulty for the little ones (3 years)
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	the proposed activities were found to be suitable for each age group of children, the activities were modulated according to age
Duration of the lesson Plan	1 hour

Sequence of warming-up activities	in the warm-up phase the children actively participated and introduced themselves and said their favourite colour.
Sequence of guided activities	children are invited to learn primary and secondary colors and shapes through a PC program. Then they are asked to guess the color again on a PC program. are invited to draw the colors and shapes of autumn (current season).
Assessment Exercise	through the game of the fence they are invited to give instructions to their classmates on how to move inside by naming the direction of the arrows and their colour.
Others	

Feedbacks	
Students	the children cooperated with each other in an active way and then followed, the evaluation phase was facilitated by the teacher based on the age of the children.
Teachers	the teacher was a fundamental part of this journey because not only did she make it easier for the children to do the activities but she actively involved them without neglecting anyone and helped them get to know each other through many fun questions. it also helped the children cooperate with each other.

5.4. Module 5 Maths

General Information			
Date	16.06.2023	Total Duration	80 min
School/ Country	School and Kindergarten Complex in Łętownia/Poland		
Year Group	5-6 years	Grade level	pre scholar
Number of students	18	Number of teachers	1
Module	Module 5		
Lesson Plan	Seasons		
Material Used	pictures representing the seasons, jigsaw puzzles, music, circles in colours, silhouettes of parts of the wardrobe, a sheet of paper - materials for making artwork		
Location description	indoor classroom		
Others	activities related to the introduction of the seasons were carried out according to the teaching plan, the project activities carried out were of a consolidating nature.		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
developing the ability to recognise the seasons	Yes	Children recognise the four seasons and give their characteristic features
developing the ability to separate clothes according to purpose	Yes	The children sort out the parts of their wardrobe according to the appropriate season, distinguish between warm and cooler weather clothing.
formation of numeracy skills, recognition of time sequence	Yes	Children name the seasons in the correct order using a rhyming scheme. They understand the sequence of

	the seasons
Other remarks about the learning objectives:	

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The activities were appropriately matched to the age group. The children coped with the tasks. They identified the appropriate seasons without too much difficulty and correctly matched parts of their clothing to the weather conditions
Duration of the lesson Plan	80 minutes divided into two classes of approximately 40 minutes each.
Sequence of warming-up activities	Talking with children about the seasons, naming, learning a rhyme. Assigning an appropriate illustration to each season and movement exercises. Musical game with the piece Seasons by Vivaldi: children danced to the rhythm of the music. When the music stopped the teacher showed the chosen illustration, the children named the season and performed the given exercise.
Sequence of guided activities	Dividing the children into four teams, it was a great form of integration for them, with each group drawing an envelope and putting together a picture from a jigsaw puzzle depicting the season. Once assembled, the children named and matched the captions. During a discussion about the seasons, the preschoolers demonstrated their great knowledge by counting the number of seasons. They pointed out which season followed which one. They demonstrated their knowledge of the characteristics of each season. During a movement game about the seasons (spring green, autumn red, winter blue, summer yellow). The children showed agility and emotional maturity, it was an interesting experience. In the last game of the main part, the preschoolers assigned different types of clothing to the corresponding seasons. They then counted the parts of the wardrobe and stated which were the most and which were the least. They also determined which were the warmest (thickest) and which were the lightest (thinnest).
Assessment Exercise	through the game of the fence they are invited to give instructions to their classmates on how to move inside by naming the direction of the arrows and their colour
Others	

Feedbacks	
Students	Children enjoy working with activity-based methods and find their way around group tasks well. They create interesting artwork.
Teachers	Cooperation with the preschoolers during the classes was very good, the children were eager to act, which affected positive impact on the achievement of the intended objectives.

General Information			
Date	15.06.2023	Total Duration	1h10
School/ Country	Primary school in Zakrzów / Polska		
Year Group	4-5 years	Grade level	pre scholar
Number of students	13	Number of teachers	1
Module	Module 5		
Lesson Plan	Numbers - What is a number and what does it do for us?		
Material Used	Toys (teddy bears, blocks, cars), chairs, dominoes, colorful balls, interactive board		
Location description	indoor classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Developing the ability to count items	Yes	
Developing the ability to sort objects according to their common features	Yes	
Developing the concept of number in its cardinal and ordinal aspects	Yes	
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement



Adequacy of the activities to the proposed age group	The classes were conducted with children of different ages, so younger children had little problem with the ordinal aspect of numbers
Duration of the lesson Plan	1 hour
Sequence of warming-up activities	The children were interested in the introductory part. Little children like physical games.
Sequence of guided activities	The methods prepared were attractive to the children. They were able to manipulate the toys, they could arrange the coloured balls and the dominoes with the corresponding number in turn, which was attractive to them. The children acquired knowledge and familiarity with the order aspect of numbers in a practical way. The activities were enhanced by playing/playing on the interactive whiteboard.
Assessment Exercise	The children tested their acquired knowledge through attractive games. They arranged teddy bears on chairs and tested their knowledge while describing their chosen teddy bear. They thoroughly enjoyed the online game.
Others	

Feedbacks	
Students	Students enjoy taking part in activities, especially when they can manipulate and act practically.
Teachers	Each practical activity and the elements of information technology are attractive to the children and they are eager to undertake the tasks.

General Information			
Date	14.06.2023	Total Duration	90 min
School/ Country	Primary school in Zakrzów / Polska		
Year Group	5-6 years	Grade level	pre scholar
Number of students	15	Number of teachers	1
Module	Module 5		
Lesson Plan	Daily routine		
Material Used	Illustrations of the daily plan, fruit, vegetables		
Location description	Indoor classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Developing an understanding of the concepts greater, lesser, equal	Yes	Children can identify a set of elements and determine whether it is larger, smaller, equal to
Ability to identify commonalities and differences, concept of time	Yes	Children can name the activities of the day, identify the terms morning, noon, evening
developing the ability to prepare a healthy meal	Yes	children can make a healthy meal
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement

Adequacy of the activities to the proposed age group	The children did very well with the proposed activities, in addition English was taught, as the naming of times of the day and activities was in this language
Duration of the lesson Plan	90 minutes
Sequence of warming-up activities	The children were interested in the proposed activities. The movement and music are perfect for the beginning of the activities and a great introduction to the topics.
Sequence of guided activities	The children knew the order of the day and were able to identify and sort what they were doing in the morning, midday and evening. morning and midday activities were similar for most, with differences emerging in the evening. They excelled in a game of puns, while competing for a better score for the group. Finally, they sorted healthy and unhealthy foods and made healthy meals.
Assessment Exercise	Each child had the opportunity to perform the task themselves. they did very well.
Others	

Feedbacks	
Students	The children really enjoy tasks with competition and the opportunity to make things happen, as the joint work on a healthy salad demonstrated.
Teachers	The intended objectives were met when conducting the classes.

General Information			
Date	20.06.2023	Total Duration	70 min
School/ Country	School and Kindergarten Complex in Łętownia/Poland		
Year Group	4-5 years	Grade level	pre scholar
Number of students	17	Number of teachers	1
Module	Module 5		
Lesson Plan	Colours and shapes		
Material Used	Geometrical figures of different colours, magic bag with coloured eggs, coloured ribbons, sheets of paper, glue, animation scarf.		
Location description	indoor classroom		
Others	activities related to learning about colours and figures have been carried out during the school year, a form of consolidation of the subject matter.		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
improving the ability to recognise and name colours	Yes	Children can name the colours: red, blue, yellow, green
developing the ability to recognise geometric figures	Yes	Children name and recognise geometrical figures: circle, square, rectangle, triangle.
developing the ability to prepare a healthy meal	Yes	development of spatial imagination
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement



Adequacy of the activities to the proposed age group	The activities were well suited to the age group. The children coped very well with the tasks. They showed particular creativity during their artwork. As a result, everyone in the group was able to admire their creations.
Duration of the lesson Plan	70 minutes divided into two classes of approximately 35 minutes each.
Sequence of warming-up activities	The children were interested in the proposed activities. The movement and music are perfect for the beginning of the activities and a great introduction to the topics.
Sequence of guided activities	The children were curious about the shapes they could draw, responding quickly to the teacher's cue by pointing to the correct figures. A lot of fun was had by the children playing in groups, where they had to work closely together to create the right shape from their bodies. They especially enjoyed it when they could see the effect of this play on the interactive whiteboard screen.
Assessment Exercise	The children freely formed shapes of squares, circles and triangles from coloured ribbons.
Others	

Feedbacks	
Students	The children enjoy working with activity-based methods and are comfortable with group tasks.
Teachers	The teacher carried out the lessons very efficiently and the children cooperated willingly, which further facilitated the achievement of the objectives

General Information			
Date	22.06.2023	Total Duration	75 min
School/ Country	Primary school in Zakrzów / Poland		
Year Group	5-6 years	Grade level	pre scholar
Number of students	16	Number of teachers	1
Module	Module 5		
Lesson Plan	Body parts		
Material Used	Grey paper, markers, coloured hearts, gym bags		
Location description	indoor classroom		
Others	activities related to body parts carried out during the school year, this is a form of consolidation of the subject matter.		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Development of body orientation	Yes	Children are able to name the parts of the body, they try to point to the right and left side
developing the concept of "pairs"	Yes	Children become familiar with the concept of "pairs"
developing motor coordination in body schema	Yes	Children can point out directions in relation to their bodies
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement



Adequacy of the activities to the proposed age group	The activities were well suited to the age group. The children coped well with the tasks. They were interested in practical activities
Duration of the lesson Plan	75 minutes
Sequence of warming-up activities	movement game with indication of body parts
Sequence of guided activities	The children were very emotional about the task of tracing the figures on the sheet. Colourful and attractive teaching aids helped to consolidate the right and left sides better. Dynamic activities helped familiarise the children with terms and tasks that were difficult for them.
Assessment Exercise	The children performed well on the task, which was evidence of good learning.
Others	

Feedbacks	
Students	The children enjoy working with activity-based methods and are comfortable with group tasks.
Teachers	Activity tasks made it easier for children to learn

5.5. Module 6 Educational robotics

General Information			
Date	01/06/2023	Total Duration	1h45
School/ Country	EIPACA Manosque /France		
Year Group	4- 5 years old	Grade level	MS - GS
Number of students	10 students	Number of teachers	4 teachers
Module	Module 6		
Lesson Plan	Artificial Intelligence (AI) concept using the body parts.		
Material Used	2 Tablets with camera and internet access Papers of different colors. Colors felt tip pens Crayons with colors		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Every day examples of AI (adapted to the age of the pupils)	Yes	Most of the students remembered the example of "Alexa" (virtual assistant for music production and other tasks).
Definition and limits of AI (adapted to the age of the pupils)	Yes	It was clear to the students that artificial intelligence is not perfect and sometimes does not work well
AI is designed by people and helps us in our daily lives and not replace people	Yes	

Concept of Animating a drawing/learning to use an AI application	Yes	All students managed to animate their drawing
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The youngest students had difficulty drawing the human body and needed help to make their drawing.
Duration of the lesson Plan	1h 30- 2h
Sequence of warming-up activities	The students were very participative and interested in this part. All the proposed activities were followed
Sequence of guided activities	As the younger students had trouble drawing a human body, some children did not make a second drawing on a human body (on a colored paper so that the application had problems to recognize the silhouette of their drawing). For this reason we chose to draw first the human body well defined on a blank paper and then on a colored paper.
Assessment Exercise	Once the practical part was finished. The students sat all together and were asked about the basic concepts of the lesson: what is an AI, limits, examples, etc., The students were able to define in their own words what AI is and give some examples. They were clear that it is not 100% efficient and that it is positive for humans.
Others	

Feedbacks	
Students	As it is a different and novel activity. The students showed great interest in the new concepts presented.



Teachers	The students were very excited about the idea of doing a robotics workshop. They really liked the practice and were very participative. They consider it a good lesson to do in class
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General Information			
Date	01/06/2023	Total Duration	1h15
School/ Country	EIPACA Manosque /France		
Year Group	4- 5 years old	Grade level	MS - GS
Number of students	10 students	Number of teachers	2 teachers
Module	Module 6		
Lesson Plan	Our first Computer Program using the shapes and colors		
Material Used	blackboard pencils Crayons of different colors chalks of different colors sheet of paper several copies of the worksheet		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
What is an algorithm used for and how can it be applied to an everyday action	Yes	The term algorithm is complicated for children but they understood the concept of a list of steps to perform a task (brushing teeth, going to school ...).
What is a computer program The difference between algorithm and program.	Yes	The students understood that we need another language to communicate with robots.
The sequence of the instructions is important in an algorithm There can be more than one valid solution to perform the same action	Yes	through the practical examples they proved that the order of the tasks is important and that there can be more than one valid solution
Other remarks about the learning objectives:		

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Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	we had to do the Worksheet 1 in the oral form because some students found it complicated (especially the younger ones).
Duration of the lesson Plan	1h 15. The realization of the lesson took less time than the original planning. The students learned the concepts the first time without the need to repeat the exercises.
Sequence of warming-up activities	The students were very participative and interested in this part. We chose to make an algorithm with the tasks we perform in the morning from the moment we wake up until we say good morning to the teacher. Once the steps were defined, we read them to the teacher.
Sequence of guided activities	We performed all the proposed activities, except for the activity where the students had to design a sequence of steps by themselves for the others groups (it was complicated for the youngest ones to write a sequence of geometric shapes with the same number of steps).
Assessment Exercise	Once the practical part was finished. The students sat all together and were asked about the basic concepts of the lesson: what is a program, an algorithm and their differences.
Others	

Feedbacks	
Students	The part about the dancing robots was a lot of fun.
Teachers	The students participated very actively in the lesson. It is highly recommended to repeat the lesson several times so that the students can fix the knowledge well

General Information			
Date	12/06/2023	Total Duration	3h
School/ Country	EIPACA Manosque /France		
Year Group	4- 5 years old	Grade level	MS - GS
Number of students	8-10 students	Number of teachers	2 teachers

Module	Module 6
Lesson Plan	BeeBot Mat counting 1-10 & BeeBot Daily routines
Material Used	Two Beebot robot One Beebot board numbers One Beebot board routines One set of Cards to work with numbers two sets of Bee-Bot Command Cards One set of Bee-Bot Roles cards Scissors Sticky tape
Location description	Classroom
Others	Taking advantage of the fact that it was a multilevel class without many students. The two lessons were done on the same day, but in different sessions separated by a long break. The students had previously completed the previous lesson. Where it was explained how to communicate with the robots.

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Work cooperatively to achieve an objective	Yes	The students cooperated to achieve the proposed remains. But despite the fact that all students performed all the proposed roles, some students had problems when it came to working as a team. Evidently all the students wanted to program the robot.
To be introduced to the functions of a Bee-Bot robot. Program their Bee-Bot robot	Yes	The students quickly and easily understood how to operate the robot.
Decompose a larger “problem” into smaller parts to more easily solve it. To perform a complex program for the Bee-Bot robot	Yes	To program the robot to follow the routines performed, the students started with four actions and from there they added one routine at a time.
The order of the instructions/steps in a program is important.	Yes	

Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	The students completed the entire sequence of activities without any problems.
Duration of the lesson Plan	2 hours
Sequence of warming-up activities	The activities were carried out as described in the lesson. The students participated actively in the discussion. Avoid giving the robot to the students until it is necessary for them to pay attention to the conversation.
Sequence of guided activities	The use of roles was very useful in organizing the work and avoiding conflicts. All students performed all the roles. The students worked very well on the lessons...working from the less complicated programs (the numbers lesson) to the most complicated programs (the generation of the daily routines).
Assessment Exercise	Throughout the lesson it was verified that all students understood and performed all the established roles. Once the practical part was finished. The students sat all together and were asked about the basic concepts of the lesson
Others	

Feedbacks	
Students	The students really enjoyed doing the lessons with the BeeBot robot.
Teachers	The lesson was very engaging and fun for the students. They quickly learned how to operate the robot

General Information			
Date	13/06/2023	Total Duration	1h45
School/ Country	EIPACA Manosque /France		
Year Group	6 years old	Grade level	GS
Number of students	17 students	Number of teachers	3 teachers
Module	Module 6		
Lesson Plan	Let's create the story if the seasons		
Material Used	Tablets and smartphones with the Scratch Jr. application downloaded and installed.		
Location description	Classroom		
Others	We establish groups of three students per group.		

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
The student has been able to work cooperatively in a group to tell a history	Yes	Some students at this age find it difficult to share and work in groups.
All students should come up with creative ideas to create the story	Yes	Students at this age tend to be very creative and have very original ideas. They really like being able to use their creativity
The story meets the established requirements. To do so, the students have had to use the following functions: <ul style="list-style-type: none"> Combine different motion blocks into programmed sequences 	Yes	In order for students not to stop at the first steps, it is necessary to encourage/guide them to move to the next level.

<ul style="list-style-type: none"> • Customize the characters • Record sounds and add them to projects • Implement different backgrounds 		
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	Most of the students carried out the programmed sequence of activities. There was a minority of students who found it difficult to complete some of the sequences
Duration of the lesson Plan	3 hours divided into two sessions of 1h30
Sequence of warming-up activities	This part of the activity went smoothly and the students were very participative
Sequence of guided activities	The students were particularly impressed by the possibility of personalizing the characters with their own photos and the customization of colors. It is recommended to motivate the students to move on to the next phases of the lesson
Assessment Exercise	The groups found it very interesting to show their story to the rest of the class.
Others	

Feedbacks	
Students	The part about the dancing robots was a lot of fun.
Teachers	The lesson has been very engaging for the students. It would be very interesting to repeat the lesson in class so that the students could fix their knowledge. Some teachers feel that additional training is necessary to handle the software well



5.6. Module 7 Arts

General Information			
Date	31.10.2023	Total Duration	50min
School/ Country	EuroEd Kindergarten, Romania		
Year Group	5-6	Grade level	Big group
Number of students	15	Number of teachers	1 + 1 teaching assistants
Module	Module 7		
Lesson Plan	Shapes and colours		
Material Used	<ul style="list-style-type: none"> • PC, smartboard, sheets of paper, water colours, paintbrushes • pencils/crayons/plasticine/clay, white sheets, coloured building blocks/ a model house • images (https://tinyurl.com/4up2hw3b https://tinyurl.com/4nu3nbvs https://www.houzz.ie/photos/garage-apartment-maine-coastroundwindowinstairwellphvwvp~372188 https://tinyurl.com/bdh2pyxf https://tinyurl.com/4r9ekctk https://www.atlasobscura.com/places/kindergarten-wolfartsweier) • Worksheets 		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Recognize/name shapes and colours	Yes	All children were able to recognize shapes and colours
Discuss characteristics of different shapes.	Yes	All children were able to talk about the characteristics of different shapes
Compare and contrast different shapes.	Yes	All children were able to compare and contrast different



		shapes
Observe and identify the shapes used in drawing/painting a house and the environment around the house.	Yes	All children were able to observe and identify the shapes used in drawing/painting a house and the environment around the house
Use adequate geometric shapes / colours to draw a house and the environment.	Yes	All children were able to use adequate geometric shapes/colours to draw a house and the environment
Skills: oral-linguistic skills, independent work skills, the ability to observe and correctly translate what they visualize, conscious listening skills, fine and gross motor skills, enthusiasm for learning	Yes	The activities contributed to developing children's various skills: oral-linguistic skills, independent work skills, ability to observe and correctly translate what they visualize, conscious listening skills, fine and gross motor skills, enthusiasm for learning
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	judging by the children's engagement and participation throughout the lesson, all of the activities were suitable for this age group.
Duration of the lesson Plan	
Sequence of warming-up activities	The well-chosen warm-up exercises piqued the children's interest and aroused their curiosity. It was also a wonderful chance for the teacher to find out what the children already knew about the subject, reinforce important language, and set children in good mood (songs).
Sequence of guided activities	<ul style="list-style-type: none"> • They were well selected, with connections to what children previously knew, and building on previous knowledge (Smooth and timely transitions between activities). <p>The activities had the following features:</p> <ul style="list-style-type: none"> • Preparing and engaging students in the activities • Good use of digital and traditional activities (the digital wheel was a good introduction and raised children's interest in the topic)



	<ul style="list-style-type: none"> • Good use of TPR • Stimulating children’s creativity and imagination by asking them to draw and colour/paint the house of their dreams using geometrical shapes • Engaging helping children to explore the topic (from concrete to more abstract levels, from observation to analysis and talks) • Good balance between movement and static activities • Balanced use of arts (songs, painting and drawing) • Developing speaking and listening skills • Developing children’s presentation skills by asking them to present their dream house • Helping children to express their opinions by asking them to share their ideas about their peers’ house in a supportive and non-judgmental environment • All the activities were modelled and demonstrated by the teacher with the help of the children • Developing critical thinking skills (children had to justify their answers/preferences/opinions) • Respecting each child’s needs and individuality (when some children struggled with the abstract representation of shapes the teacher resorted to concrete objects). • Encouraging good behaviour and respect for the others’ viewpoints and preferences • Developing confidence and self esteem
Assessment Exercise	All children participated in the assessment by presenting their drawings and also sharing their opinions about their classmates’ paintings, without being judgemental.
Others	

Feedbacks	
Students	They expressed their enthusiasm and appreciation for the lesson.
Teachers	The teacher told us that she had achieved all the activities, which were suitable for the students’ age and very engaging

General Information			
Date	25.10.2023	Total Duration	50min
School/ Country	EuroEd Kindergarten, Romania		
Year Group	5-6	Grade level	Big group
Number of students	15	Number of teachers	1 + 2 teaching assistants
Module	Module 7		
Lesson Plan	Seasons		
Material Used	PC, smartboard, sheets of paper, white paper plates or white cardboard circles – 1 per child; scissors – 1 per child; paper fasteners – 1 per child; markers; magazine pictures or photographs that depict different types of weather/children’s drawing; cotton/ribbon; glue -Links to season wheels: https://wordwall.net/resource/10000259/seasons https://wordwall.net/resource/32198159/seasons -Worksheets		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To recognize the seasons on the wheel	Yes	All children were able to name and identify the seasons on the wheel
To identify specific elements of spring	Yes	All children were able to identify specific elements of spring/autumn
To identify different types of Weather	Yes	All children were able to identify different types of weather
To use symbols representing types of weather	Yes	All children were able to use symbols representing all types of weather
To create a weather clock	Yes	All children were able to create a weather clock

Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	all of the activities were suitable for this age group (illustrated by children’s engagement in the activities).
Duration of the lesson Plan	
Sequence of warming-up activities	The warm-up activities were well selected and fired children’s imagination and curiosity. It was also a good opportunity for the teacher to elicit from the students what they knew about the topic, and also to repeat the key vocabulary and create a pleasant atmosphere (song).
Sequence of guided activities	<p>They were well selected, with connections to what children previously knew, and building on previous knowledge. The suggested activities were part of a sequential and thoughtful plan enabling children to move smoothly between activities and also to engage with each task.</p> <p>The activities had the following features:</p> <ul style="list-style-type: none"> -Preparing and engaging students in the activities -Good use of TPR -Good balance between digital and traditional activities -Good use of arts (music, painting) -Good balance between movement and static activities -Connecting the lesson to children’s context and what children know about the topic -Creating expectations of learning and stimulating creativity and imagination (activities firing children’s imagination: the fashion parade and the weather clock) -Developing speaking and listening skills -Developing children’s awareness of the sequence of events -Developing pair work and groupwork -Developing confidence and self esteem -All the activities were modelled and demonstrated by the teacher with the help of the children -Developing critical thinking skills (children had to justify their answers) -Encouraging good behaviour and respect for the others’ viewpoints and preferences -Respecting each child’s needs and individuality
Assessment Exercise	All children participated in the assessment and participated in the role play activity by helping each other. The activity was also encouraged and supported by their teacher.

Others	

Feedbacks	
Students	They expressed their enthusiasm and appreciation for the lesson.
Teachers	The teacher told us that she had achieved all the activities, which were suitable for the students' age and very engaging. The teacher also highlighted that the lesson plan is transferable to other topics – so given the current season (autumn) she changed the topic from Spring to Autumn and it worked very well

General Information			
Date	25.10.2023	Total Duration	50min
School/ Country	EuroEd Kindergarten, Romania		
Year Group	5-6	Grade level	Big group
Number of students	15	Number of teachers	1
Module	Module 7		
Lesson Plan	Numbers		
Material Used	<ul style="list-style-type: none"> - PC, Electronic Whiteboard - Worksheets (the 2 worksheets) - Audio and video system - 15 Preschool Counting Songs, Fingerplays & Rhymes https://childhood101.com/15-preschool-counting-songs-fingerplaysrhymes/ -Counting Songs for Preschool https://www.teachingexpertise.com/classroom-ideas/counting-songs-forpreschool/ -Flashcards with numbers 1-5/ https://tinyurl.com/yv957exb -Worksheets 		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To recognize the number and the digit 1 and associate it with the quantity.	Yes	All children recognized the number and the digit 1 and associated it with the quantity.
To become receptive to the rhythm of beats.	Yes	All children made specific gestures necessary to write number 1 correctly and were receptive to the rhythm of beats.

To make specific gestures necessary to write number 1 correctly	Yes	All children were able to create necessary gestures to write number 1
To be aware of the position that number 1 has in the numerical scale.	Yes	All children were aware of the position that number 1 has in the numerical scale.
To aesthetically colour the number 1.	Yes	All children aesthetically coloured the number 1/created number 1 from their bodies.
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	all children actively participated in the lesson; all of the activities were suitable for this age group.
Duration of the lesson Plan	50 minutes (enough time to do all activities and respect children's individual pace)
Sequence of warming-up activities	The warm-up activities were well selected and raised children's interest and motivation. The children sang the song and also counted from 1 to 5 a few times while counting their fingers and toes or counting their actions such as jumping, shaking hands and clapping five times. The children also learned that a number is more than just a word since it denotes a value when they sing a song about 5 of something, which then changes to 4 when one leaves, then to 3, etc. It was also a good opportunity for the teacher to repeat the key vocabulary and create a pleasant atmosphere (song).
Sequence of guided activities	They were well selected, from concrete to more abstract concepts. Children guided by their teacher moved smoothly between activities and stayed focused and engaged with each task. The activities had the following features: <ul style="list-style-type: none"> -Preparing and engaging students -Good use of TPR -Good use of arts (music, drawing, colouring and sculpture) -Good balance between digital and traditional activities -Introduction and good use of digital exercises -Good balance between movement and static tasks -Creating expectations of learning and stimulating creativity and imagination (children were asked to draw the figure 1 in flour, colour it in their worksheets or create it from their bodies)



	<ul style="list-style-type: none">-Developing confidence and self esteem (the children were always encouraged by the teacher to do their tasks)-All the activities were modelled and demonstrated by the teacher with the help of the children-Developing critical thinking skills (children had to justify their answers)-Encouraging good behaviour and respect for the others' viewpoints and preferences-Respecting each child's needs and individuality. (when one of the children found it difficult to identify the number 1 the teacher helped the child by resorting to more concrete aids or the child's context)
Assessment Exercise	All children participated in the assessment stage. The teacher focused on what they needed. She encouraged them and helped them correct themselves.
Others	

Feedbacks	
Students	The children liked what they were doing participating enthusiastically in all activities
Teachers	The teacher told us that she had achieved all the objectives and the activities were suitable for the students' age and very engaging. She also told us that she adapted the lesson plan to her children and used a digital activity as assessment.

General Information			
Date	27.10.2023	Total Duration	50min
School/Country	EuroEd Kindergarten, Romania		
Year Group	5-6	Grade level	Big group
Number of students	15	Number of teachers	1 + 1 teaching assistants
Module	Module 7		
Lesson Plan	Daily routine		
Material Used	-PC, smartboard, sheets of paper -Clean Up Song Kids Song for Tidying Up Super Simple Songs https://www.youtube.com/watch?v=SFE0mMWbA-Y -Images: https://www.123rf.com/clipart-vector/tidy_up.html https://www.shutterstock.com/search/messytidyhttps://play.google.com/store/apps/details?id=air.com.devgameapp.KinderkardenGirlsGames&hl=en_ZA -Worksheets		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
Learn about the space around us.	Yes	All children learned about about the space around them
Regulate their behaviour (paying attention to putting their toys away/tidying up).	Yes	All children engaged in the activities and were able to regulate their behaviour.



Enhance motor skills through music and dance (by arranging toys through song and dance - movement).	Yes	All children were able to enhance their motor skills through music and dance.
Provide children with opportunities to reflect on their actions (what may happen if they don't tidy up).	Yes	All children were given opportunities to reflect on their actions (what may happen if they don't tidy up). The activities raised their awareness about the consequences of their actions.
Follow the logical line of events.	Yes	All children were able to follow the logical line of events.
Develop skills such as: consciously ordering toys, oral-linguistic skills during singing, independent work skills, active listening, etc.	Yes	All children worked on skills such as: consciously ordering toys, oral-linguistic skills during singing, independent work skills, active listening, etc.
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	all of the activities were suitable for this age group, engaging children body and soul.
Duration of the lesson Plan	OK
Sequence of warming-up activities	The warm-up activities were well selected and raised children's interest and curiosity. It was also a good opportunity for the teacher to elicit from the students what they knew about the topic, and also to repeat the key vocabulary and create a pleasant atmosphere (song This is the way..).
Sequence of guided activities	They were well selected, with connections to what children previously knew, and building on previous knowledge. The activities had the following features: -Preparing and engaging students in the activities -Good use of TPR



	<ul style="list-style-type: none"> -Good use of music(songs which created a positive state and set children in a good mood by enhancing concentration, reinforcing memory, stimulating motivation and enabling children to internalize the message through repetition). -Good balance between movement and static activities. -Creating expectations of learning and stimulating creativity and imagination (the story is first played without the sound and children are asked to imagine the story, and then compare it with the original) -Developing speaking and listening skills -Developing children’s awareness of the sequence of events and the consequences of their actions (what happens if they don’t to put their toys away). -Helping children to follow the instructions -Developing pair work and groupwork -Developing confidence and self esteem -All the activities were modelled and demonstrated by the teacher with the help of the children -Developing critical thinking skills (children had to justify their answers) -Encouraging good behaviour and respect for the others’ viewpoints and preferences -Respecting each child’s needs and individuality. -Using a range of arts to familiarize children with daily routines -Transferable to new context (the teacher introduced new activities completing children’s daily programme).
Assessment Exercise	All children participated in the assessment by sharing their ideas about their classmates’ paintings, without being judgemental. The appraisal of their works was consolidated by their teacher.
Others	

Feedbacks	
Students	They expressed their enthusiasm and appreciation for the lesson.
Teachers	The teacher told us that she had achieved all the learning objectives, which were suitable for the students’ age and very engaging. She also stated that if the teacher needs more activities with older children, they can revise children’s



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	whole daily programme and thus add activities focused on the song This is the way...(https://www.youtube.com/watch?v=Pd4WnsXwdqw)
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General Information			
Date	13,10,2023	Total Duration	50min
School/ Country	EuroEd Kindergarten, Romania		
Year Group	5-6	Grade level	Big group
Number of students	15	Number of teachers	1 + 2 teaching assistants
Module	Module 7		
Lesson Plan	Parts of the body		
Material Used	PC, smartboard, sheets of paper, water colours, paintbrushes https://www.craftplaylearn.com/if-youre-happy-and-you-know-it/ https://youtu.be/9xplXWmJ_Wo -Worksheets		
Location description	Classroom		
Others			

Learning Objectives		
List or Learning Objectives	Achieved/ Not Achieved	Remarks
To identify/name the parts of the human body	Yes	All children named the parts of the body, pointed to them, and worked with them in their worksheets.
To develop children's awareness and control of the body	Yes	Similar to the first point. All children showed awareness of the actions they can do with their body.
To develop fine motor skills and coordination	Yes	All children were able to move their parts of the body according to the teacher's instructions.
To enhance their memory and concentration	Yes	All children were able to retain and repeat all parts of the body.



To develop their language skills	Yes	All children were able to repeat and use the new words related to the parts of the body in their own sentences.
To boost their self-esteem and confidence	Yes	All children took pride in and appreciated the art gallery with their paintings
Other remarks about the learning objectives:		

Remarks/ Proposals for improvement	
Adequacy of the activities to the proposed age group	judging by the children's engagement and participation throughout the lesson, all of the activities were suitable for this age group.
Duration of the lesson Plan	the lesson is very dense, so the teacher has to be well organized and in control of the children's unexpected reactions.
Sequence of warming-up activities	The warm-up activities were well selected and raised children's interest and curiosity. It was also a good opportunity for the teacher to elicit from the students what they knew about the topic, and also to repeat the key vocabulary and create a pleasant atmosphere (song).
Sequence of guided activities	<p>-They were well selected, with connections to what children previously knew, and building on previous knowledge. The activities had the following features:</p> <ul style="list-style-type: none"> -Preparing and engaging students in the activities -Good use of TPR -Creating expectations of learning and stimulating creativity and imagination (the story is first played without the sound and children are asked to imagine the story, and then compare it with the original) -Developing speaking and listening skills -Developing children's awareness of the sequence of events -Developing pair work and groupwork -Developing confidence and self esteem -All the activities were modelled and demonstrated by the teacher with the help of the children -Developing critical thinking skills (children had to justify their answers) -Encouraging good behaviour and respect for the others' viewpoints and preferences. -Good balance between movement and static activities.



	-Respecting each child's needs and individuality.
Assessment Exercise	All children participated in the assessment by sharing their ideas about their classmates' paintings, without being judgemental. The appraisal of their works was consolidated by their teacher.
Others	

Feedbacks	
Students	They expressed their enthusiasm and appreciation for the lesson (happy faces, hugs).
Teachers	The teacher told us that she had achieved all the activities, which were suitable for the students' age and very engaging.



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