GENDER EQUALITY: THE ADVENTURE OF BOTTI AND HIS SPACESHIP

Digital Educational Mat & Coding

START

FINISH

LESSON 1

HELP ME FIX THE SPACESHIP!

PETROL

IDENTIFY THE CORRECT ENERGY SOURCE

LESSON 2

HELP ME FIND WATER!

ANSWER THE QUESTIONS!

WHAT IS AN ATOM?

WHAT ARE OXYGEN AND HYDROGEN AS WELL AS THE GREENHOUSE GASES?

HOW IS WATER MADE UP?

TALK ABOUT BIOLOGICAL GENDER

LESSON 3

HELP ME FIND ANTENNA!!

TIME TO BECOME AN ARTIST!

- Collage
- Storyboard
- Digital Drawing

COMPOSE THE WORK BY REARRANGING THE PIECES.

MUSEUM

THE PERSISTENCE OF MEMORY - SALVADOR DALÍ - 1931
It is one of the most iconic and recognizable paintings of Surrealism. The painting depicts a dreamworld in which common objects are deformed and displayed in a bizarre and irrational way.

DAVID - MICHELANGELO - 1501/1504
It is a statue of a shepherd, David. Michelangelo has carved the figure naked. He shows David before the fight, just as he is looking at Goliath and planning what to do.

MONA LISA - LEONARDO DA VINCI 1503/1519
Many people think Mona Lisa's smile is mysterious. It is so often studied, recognized and copied that it is the most famous painting in the world.

LESSON 4

DOESN'T WORK!!

MATCH WITH THE CORRECT TASK

TYPES OF JOBS AND THEIR PECULIARITIES

START

CONTEXT ANALYSIS

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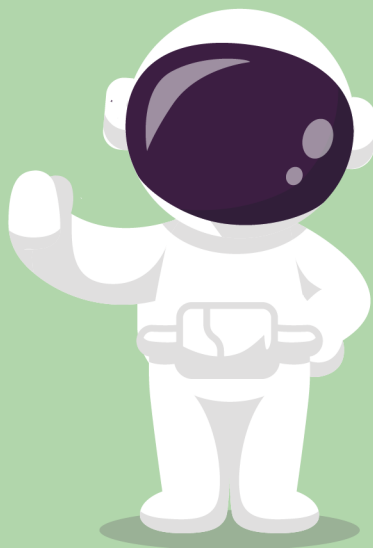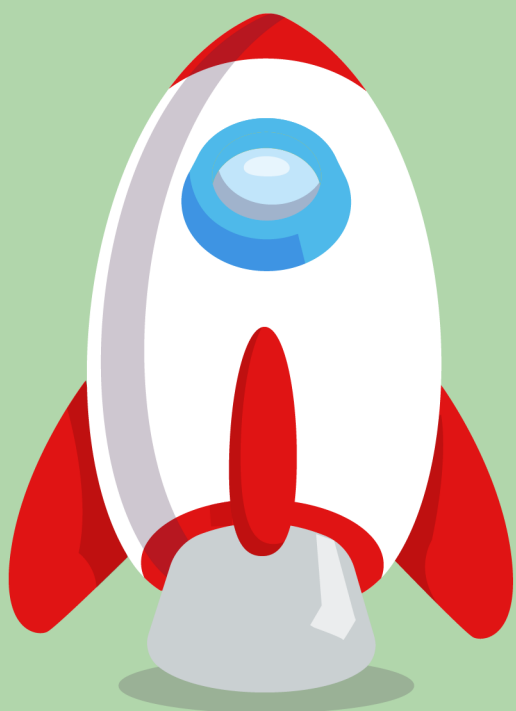
GENDER EQUALITY: THE ADVENTURE OF BOTTI AND HIS SPACESHIP

Teaching program set-up

This project is developed in 4 meetings of about one hour each to be completed sequentially. This kit illustrates the practical indications for each activity and the related timing.

Scenario

This project addresses the vital themes of gender equality and the dismantling of societal prejudices through a fictional narrative. The main character, Botti, an alien robot en route to the planet Xylokron, finds himself making an unplanned landing on Earth. As Botti embarks on a series of encounters with Earth's inhabitants, he becomes increasingly aware of the complex social norms, gender roles and stereotypes.

The overarching aim of this project is to foster an understanding of gender equality from both social and professional perspectives, while encouraging critical examination of ingrained biases. Botti's experiences serve as a vehicle to explore important questions: Why do certain profes-sions appear male-dominated? How do societal expectations shape the way individuals express themselves based on gender? And, how can we challenge historical stereotypes?

Through four lessons kids will be invited to reflect on these issues:

1. Gender Representation in the Workforce. Botti encounters a workplace where only men are employed. This lesson encourages discussion on the barriers and biases that exist in professional environments and the importance of promoting equal opportunities for all genders.

2. Body Image and Gender Norms. At the beach, Botti observes the varied ways in which humans dress and interact with one another. This lesson will explore societal pressures regarding appearance and the need to foster body positivity and acceptance of diverse identities.

3. Freedom of Expression. While visiting a museum, Botti discovers that artistic expression transcends gender. This lesson highlights the right of every individual to freely express themselves, and the importance of recognizing creativity as a human trait unrestricted by gender.

4. Breaking Stereotypes in STEM Professions. When Botti requires assistance in repairing his spaceship, he is surprised to learn that a retired female engineer possesses the required expertise. This lesson addresses the historical gender stereotypes in science, technology, engineering and mathematics (STEM) fields, and emphasizes the progress made towards gender inclusivity in these areas.

Involved subjects
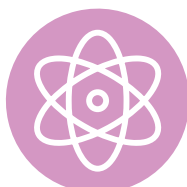
SCIENCE

CIVICS

TECHNOLOGY

ART

Pedagogical needs

This project is designed to meet key pedagogical needs for children aged 7-8, focusing on gender equality, social-emotional learning, and cognitive development. Below are the essential needs addressed:

- Early exposure to the concept of gender equality that helps prevent the internalization of stereotypes and encourages the belief that all genders are equal in abilities and opportunities;
- Children develop empathy by exploring Botti's confusion about societal norms, learning to understand and respect others regardless of gender;
- By questioning gender norms, children are encouraged to challenge assumptions and think independently, developing cognitive flexibility;
- Fostering children's ability to express themselves freely, promoting individuality and the acceptance of diverse identities;
- Through discussions of body diversity, the project encourages children to embrace and respect differences in physical appearance;
- Children are guided to understand the values of fairness and equality, helping to form a strong moral foundation;
- Group activities foster teamwork and the ability to articulate ideas respectfully, essential for social and emotional growth.

Pedagogical objectives

These pedagogical objectives align with the goals of fostering gender equality awareness, critical thinking, and inclusive behavior. They are:

- Promote gender equality awareness: help children understand that opportunities should not be limited by gender;
- Develop empathy: encourage respect for others' feelings and perspectives, regardless of gender;
- Enhance critical thinking: encourage questioning of societal norms and stereotypes;
- Support confident self-expression beyond traditional gender roles;
- Encourage positive body Image: promote self-esteem and acceptance of diverse appearances;
- Break down STEM stereotypes and inspire interest in STEM fields for all genders;
- Instill fairness and ethical awareness: teach the importance of fairness and equality;
- Promote collaboration and communication: encourage teamwork and respectful communication on social issues.

Methodology

The **DEMING CYCLE (PDCA Cycle)** is a method for implementing improvements continuously, test changes and solve problems.

PLAN	DO	CHECK	ACT
01	02	03	04
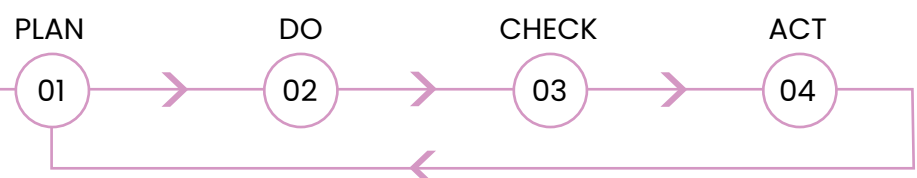
01_Plan and schedule teaching units/activities.

02_Carry out the activities (teaching units; theoretical training sessions; practical training/laboratory sessions).

03_Continuous control that the objectives are achieved and that all students have acquired new skills in a homogeneous way.

04_At the end of each session the teacher evaluates the work, observes and identifies critical issues and ways to implement corrective actions for the future.

SEARCHING FOR FUEL
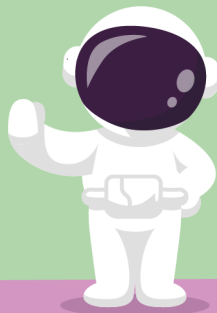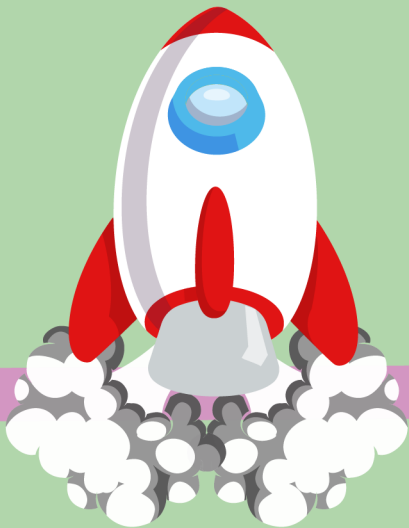
HELP ME FIX THE SPACESHIP!
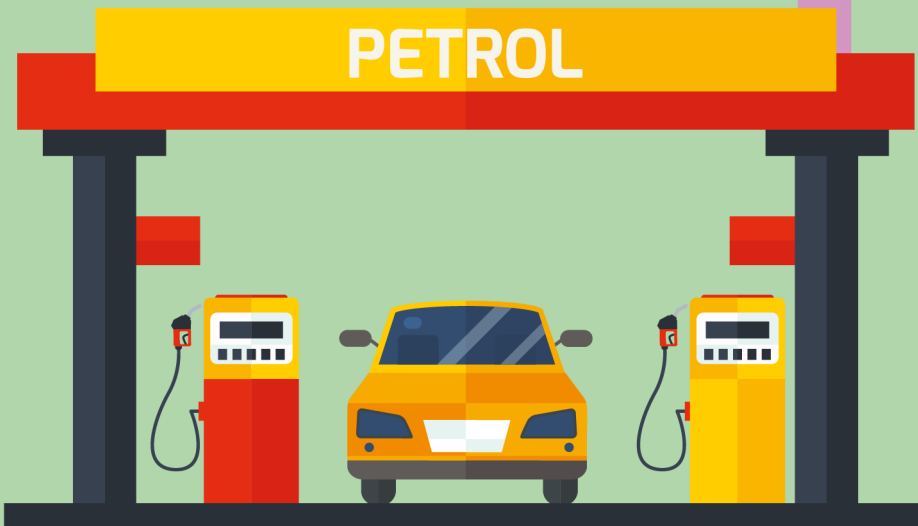
PETROL

1

LESSON

IDENTIFY THE CORRECT ENERGY SOURCE

This section of the map is dedicated to the first lesson.
On a graphic level it presents all the elements useful for narration and related activities.

HELP ME FIX THE SPACESHIP!

LESSON 1

PETROL

IDENTIFY THE CORRECT ENERGY SOURCE

Pedagogical objectives

The following objectives ensure that the project fosters critical thinking, teamwork, gender equality, and technological literacy, while also encouraging children to pursue their interests freely and confidently.

- Raise Awareness of Gender-Based Job Divisions: explain that some people divide jobs by gender, believing certain roles are for men and others for women;
- Promote Gender-Neutral Career Choices: teach children that career choices should be based on passion, not gender;
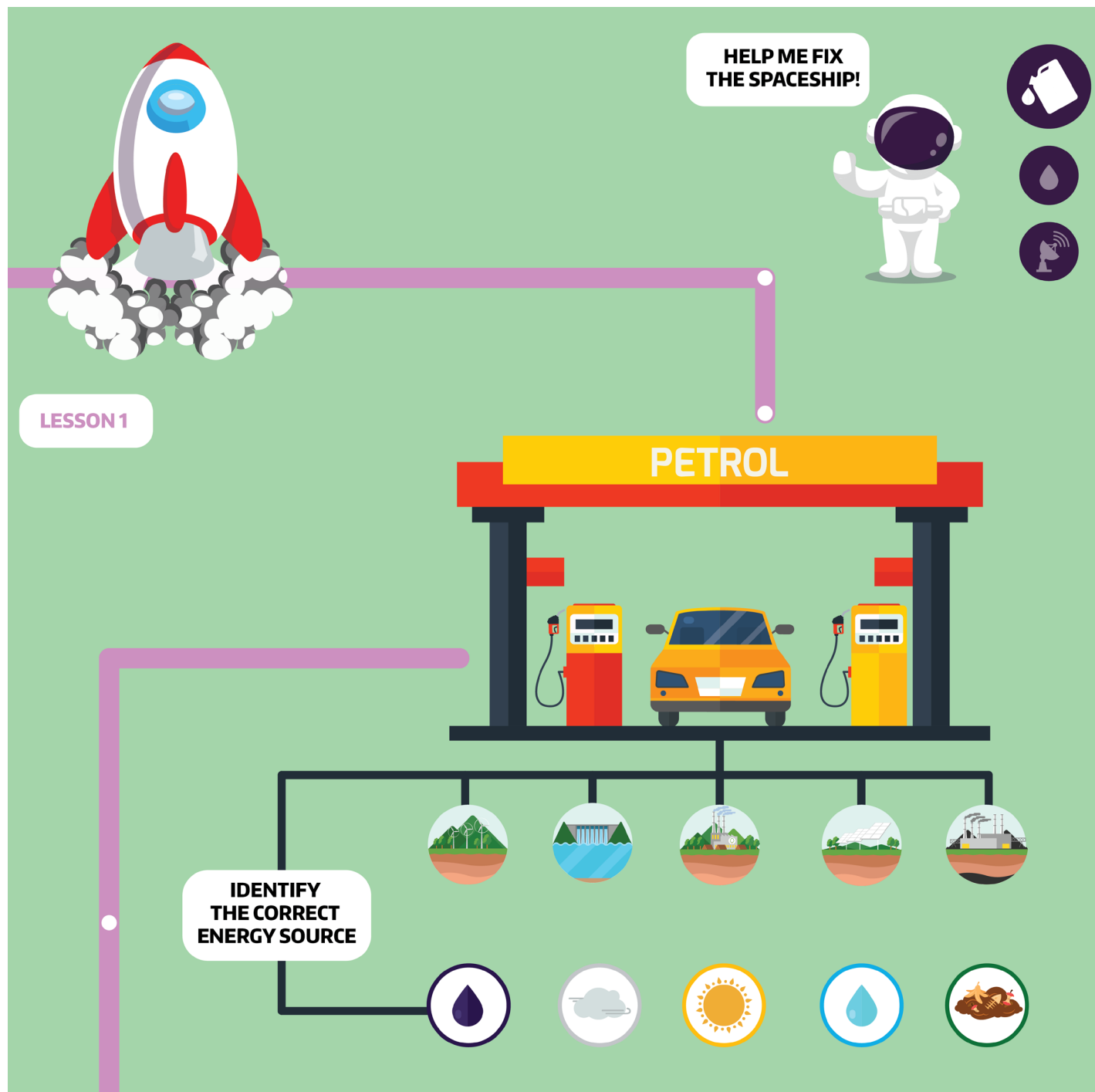- Use Real-World Examples of Stereotypes: illustrate stereotypes with examples like women not working at gas stations and encourage children to identify others;
- Promote Gender Equality: challenge and question gender stereotypes in the workforce;
- Foster Environmental and Scientific Awareness: teach children about energy sources, emphasizing sustainability;
- Develop Social Skills: encourage teamwork and reflection;
- Encourage Collaboration and Empathy: foster teamwork as children help Botti with tasks;
- Introduce Technological Skills (Scratch): teach basic programming concepts using Scratch;
- Promote Self-Exploration and Career Reflection: encourage children to consider future careers without gender limits.

Necessary aspects

The story and its activities require:
- an educator who will actively participate during the lesson;
- a display on which to screen the map during and after reading the story and to view the videos proposed for some activities;
- a computer/tablet with which children can carry out part of the activities and programming on Scratch (a free programming environment, with a graphical programming language);
- paper and pencils for drawings.

Methodology

ATTENTION:
Time of correction

A mistake in STEAM is a fundamental moment: all mistakes teach something and from them we can learn and improve together. The error must be corrected in a positive way without any penalty (reprimand, negative judgement, etc.)
The correction involves the whole group in searching for the best solutions and explaining the reasons (cooperative learning - collective intelligence).

NARRATION (STEP 1) - 5 min
The first 5 minutes will be dedicated to storytelling. During the narration the educator will project the map on a screen and involve the children with relevant questions.

ACTIVITY 1 /MATCHING GAME AND DISCUSSION - 15 min
Children will match coloured cards (present on the map) identifying the source with the type of energy and then choose the one needed for Botti.

ACTIVITY 2 /ROLE PLAY - 20 min
Children will participate in role plays or scenarios where they will explore jobs traditionally associated with one gender.

CODING ON SCRATCH (STEP 2) - THROUGHOUT THE LESSON & 10 min
This part is to introduce block programming on Scratch and play activities throughtout the lesson.

REFLECTION AND SHARING (STEP 3) - 10 min
This phase allows students to do a short recap of the lesson and the concepts learned. This activity can be integrated with a creative part: a drawing in which children represent their future profession without gender restrictions.

1

Searching for fuel

The first lesson will start with Botti who tells children about itself and its story. The educator reads carefully the story to the children encouraging them to participate.
Specifically, in the story reported here, some parts are indicated with asterisks that suggest to the educator some breaks from the story in which to actively involve the children with questions.

An alien robot called Botti was traveling to the planet Xylokron, but ran out of fuel halfway through the trip. The station found a closer planet to look for fuel and asked the robot to make an emergency landing on Earth. The robot lands on this planet and asks the children, whom he has just met, to help him find different objects.

Botti must find as the first object, in order to repair his spaceship and return home, gaseous fuel. Botti will come across different places where there are different types of energy. Helped by the children, he will finally reach the nearest service station to collect fuel. Botti then asks the gas station attendant (GSW) how many other sources of energy there are on Earth, since he has seen strange vehicles moving without making any noise. It is then that GSW explains that some of them are:

Solar energy: this energy comes from the sun. We can use special panels called solar panels to capture sunlight and turn it into electricity or heat for our homes.

Wind energy: This is generated by the movement of air. Wind turbines, which are like giant fans, capture the energy of the wind and turn it into electricity.

Hydroelectric energy: This energy comes from flowing water, such as rivers or waterfalls. We can build dams to capture the energy of moving water and turn it into electricity.

Geothermal energy: This comes from heat deep within the Earth. We can use this heat to produce electricity or to directly heat buildings.

Biomass energy: This comes from organic materials such as wood, crops or waste. We can burn these materials to produce heat or electricity or convert them into biofuels such as ethanol.

After collecting the fuel, the robot looks around and notices that there are only men working at the gas station. Out of curiosity, he asks one of the workers, «Why are they all men? Are women not allowed to work here?»

Interactive part where the teacher will ask the same question and children express their opinions on male and female jobs

GSW answers: «Interesting question! No, anyone can work here, but some jobs like this are considered "men's jobs". This is because some people believe that women are weaker than men and cannot cope with the conditions. The opposite also applies to men: there are not so many male representatives for the job of nanny, for example, because some people believe that men take care of children worse than women!»

Interactive part where the teacher will ask: "What other types of division of labor do you know?" Possible student answers: nanny, stylist, chef, designer, lumberjack, driver, politician for a woman

GSW continues: «There are many jobs that I can name that are claimed based on gender, but it's not fair because everyone should do what they love and what they are passionate about regardless of gender.»

Botti says: «Wow, humans have so many professions! And which one do you want to become?»

Interactive part where the children start to think and tell the robot who they want to become

Finally, Botti returns to the spaceship to put fuel in a tank of the spaceship. After that, Botti thanks the children and asks them to continue helping him repair the spaceship another time.

ACTIVITY 1

Before starting the activity the educator will explain the need for gaseous fuel for the spaceship; then the topic of different energy sources available will be introduced, followed by the matching game using the illustrations on the map.
At the end the educator will lead a short discussion on what has been learned.

In this engaging visual search activity, students will work to identify the correct energy sources from a set of visual cues. The activity begins with a matching game where children are presented with cards (placed appropriately on the map) representing various energy sources, including gaseous fuel, solar energy, and wind energy. Students will look closely at the illustrations on the cards and match each one with the corresponding type of energy. This interactive task helps them learn about the diversity of energy sources available and encourages them to think about how these sources are used in the world around them.

Following the matching activity, a short group discussion will take place, allowing students to think about the characteristics and uses of each energy source. The discussion will touch on important concepts such as renewable vs. non-renewable energy, the benefits of clean energy such as solar and wind energy, and the role of gaseous fuels. This activity not only promotes visual and cognitive skills, but also develops fundamental knowledge about energy and its importance to the environment and society.

ACTIVITY 2

At this point, the role of the educator is very delicate because, in addition to having to guide the role play, he/she will also have to explain in a clear and simple way to the children the problem related to gender stereotypes.

In this engaging role-play activity, children will explore jobs traditionally associated with one gender, allowing them to reflect on gender equality and challenge stereotypes. By taking on various roles, they will actively question societal expectations while gaining insight into the importance of gender-neutral opportunities in the workplace.

The activity aims to foster empathy, encourage critical thinking, and empower children to recognize that everyone can pursue any career, regardless of gender.

Situation 1: *Role Swap*
Description: Children will work in pairs and choose professions traditionally linked to the opposite gender. For instance, a boy may take on the role of a nurse, while a girl may become a builder.

In their roles, children will engage in an interactive scenario where they perform job-specific tasks, confront stereotypes, and challenge assumptions about who can or should do certain jobs. After the role play, they will share their experiences, discussing how these perceptions affected them and reflecting on how they can help break down gender barriers in the real world.

Situation 2: *Discovering Skills*
Description: In this scenario, children will explore a variety of tasks and skills typically associated with specific gender roles. For example, a boy might take on the role of a cook, while a girl might play the part of an engineer. As they work through challenges related to each profession—such as preparing a meal or solving a technical problem—children will discover that abilities and talents are not determined by gender. After completing the activity, they will discuss how these experiences helped them recognize the value of individual skills and the importance of looking beyond social norms.

The reflection will encourage them to apply this understanding to their own lives and future aspirations.

Through these interactive scenarios, children will not only have fun but also develop a deeper awareness of gender equality, learning that careers and skills are open to everyone, regardless of traditional stereotypes.

Step 2

The educator helps children to carry out the block programming code on Scratch.

During this lesson the class led by the educator will use block programming on Scratch following the steps explained in the first chapter of the dedicated additional pamphlet called ***MAT1. Coding literacy for the lessons***.

In this specific part the educator will give a brief explanation on the use of Scratch, in order to recreate the story on the program together with the children.

Step 3

The educator will guide the discussion among the children, directing it and encouraging them to address all the steps carried out in the lesson.

At the end of the lesson, a short recap will be conducted to reinforce the key concepts explored throughout the session, focusing on gender equality, the importance of challenging stereotypes, and making career choices based on personal passion rather than societal expectations. This reflection will ensure that children grasp the main ideas and can relate them to their own lives.

Following the recap, students will engage in a creative activity designed to help them internalize the lesson's message. Each child will write or draw a short personal statement of commitment regarding gender equality and their future professional choices. Specifically, they will be encouraged to draw or creatively represent their dream profession, free from any gender restrictions. They can choose any job they aspire to, regardless of traditional roles, and express how they see themselves in that profession.

Once their drawings or statements are complete, children will be invited to share their choices and motivations with the group. This sharing process will foster an open discussion, allowing children to celebrate diverse aspirations and support each other's dreams. It will also reinforce the idea that everyone, no matter their gender, can pursue any career they are passionate about. The activity aims to inspire confidence in their future ambitions and solidify their understanding of the importance of equality and self-expression in the professional world.

THE WATER MISSED

ANSWER THE
QUESTIONS!

?

HELP ME FIND
WATER!
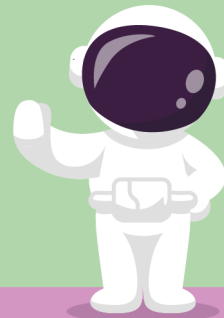
2

LESSON

TALK ABOUT
BIOLOGICAL GENDER

This section of the map is dedicated to the second lesson.
On a graphic level it presents all the elements useful for narration and related activities.

HELP ME FIND WATER!

LESSON 2

ANSWER THE QUESTIONS!

?

WHAT IS AN ATOM?

WHAT ARE OXYGEN AND HYDROGEN AS WELL AS THE GREENHOUSE GASES?

HOW IS WATER MADE UP?

TALK ABOUT BIOLOGICAL GENDER

Pedagogical objectives

The learning objectives are directly linked to the project's narrative and aim to develop both scientific knowledge and social awareness.

- Basic Chemistry: children will learn that water is composed of hydrogen and oxygen, relating this to Botti's need for these elements to repair the spaceship;
- Gender in Biology: children will explore biological gender differences and learn that many societal inequalities are culturally constructed, as illustrated through Botti's interactions at the beach;
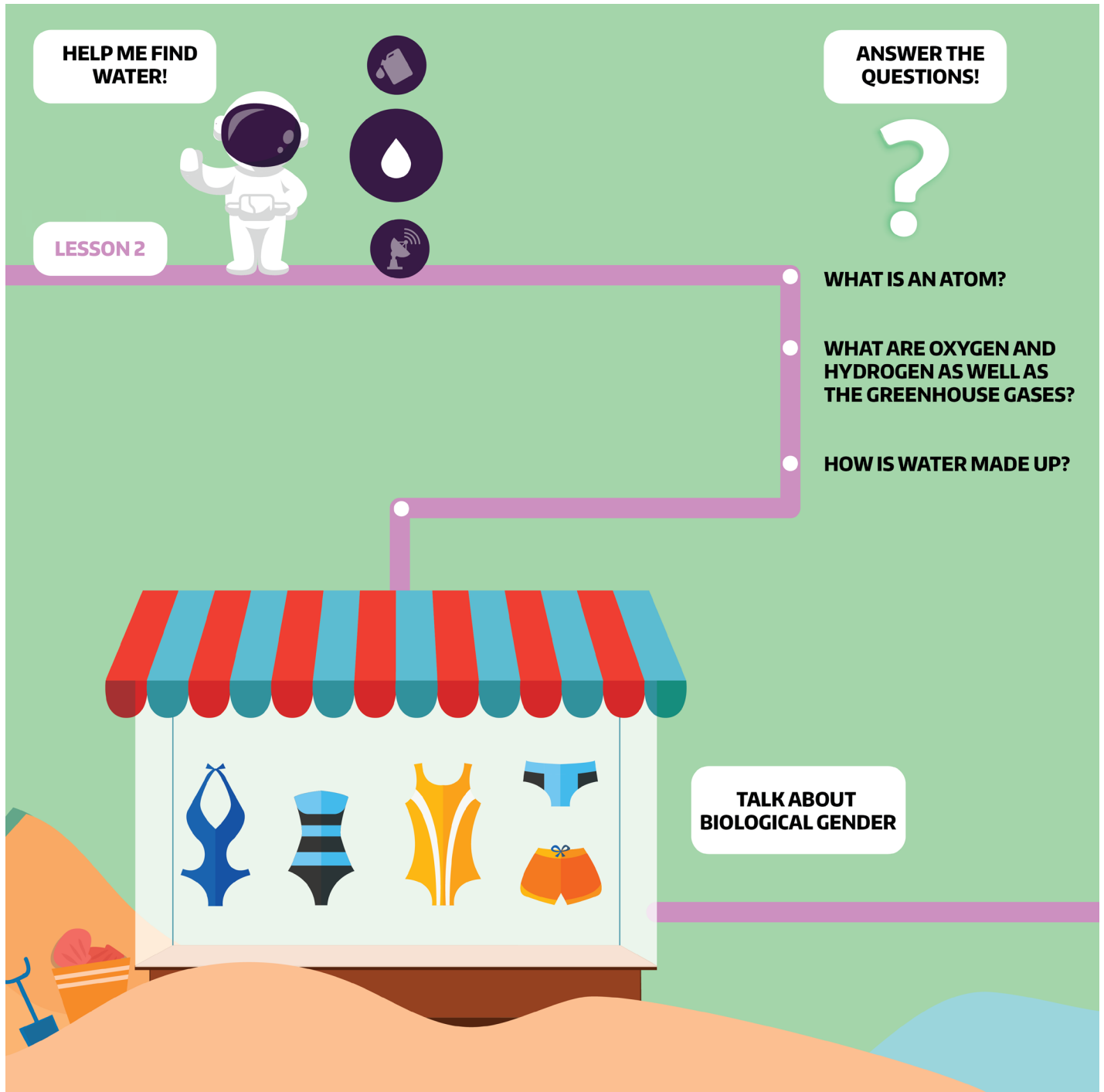- Freedom of Expression: the project will encourage children to reflect on how cultural norms can restrict self-expression, especially in relation to gender;
- Challenging Gender Stereotypes: children will understand and challenge gender stereotypes, particularly those related to clothing and social roles;
- Respect for Diversity: children will learn to recognize and respect diverse gender identities and expressions, promoting equality;
- Science Content: children will understand the composition of water and be introduced to the concept of the atom;
- Soft Skills: through interactions with Botti, children will improve communication skills, develop empathy, and engage in critical thinking about social norms and stereotypes.

These objectives balance scientific learning with discussions on gender equality, empathy, and social reflection.

Necessary aspects

The story and its activities require:

- an educator who will actively participate during the lesson;
- a display on which to screen the map during and after reading the story and to view the videos proposed for some activities;
- a computer/tablet with which children can carry out part of the activities and programming on Scratch (a free programming environment, with a graphical programming language).

Methodology

ATTENTION:
Time of correction

A mistake in STEAM is a fundamental moment: all mistakes teach something and from them we can learn and improve together. The error must be corrected in a positive way without any penalty (reprimand, negative judgement, etc.)
The correction involves the whole group in searching for the best solutions and explaining the reasons (cooperative learning - collective intelligence).

NARRATION (STEP 1) - 5 min

The first 5 minutes will be dedicated to the first part of the storytelling. During the narration the educator will project the map on a screen.

ACTIVITY 1 /DISCUSSION AND ONLINE RESOURCE - 15 min

The educator will explain the fundamentals of chemistry, following what is illustrated on the map and providing access to an interactive link that goes into more detail on the topic.

ACTIVITY 2 /DISCUSSION - 20 min

Starting from a discussion about beach dressing habits, the educator will start a conversation about gender in biology. A focus will be made on research and technological development that tend to use only the male sex as a universal reference.

CODING ON SCRATCH (STEP 2) - 10 min

This part is to review some topics covered during the lesson using block programming on Scratch.

REFLECTION AND SHARING (STEP 3) - 10 min

This phase allows students to do a short recap of the lesson and the concepts learned. The class will also debate about the freedom of expression in clothing.

The water missed

The educator, together with the pupils, recaps what happened in the previous lesson.
He/she now reads carefully the story to the children encouraging them to participate.
Specifically, in the story reported here, some parts are indicated with asterisks that suggest to the educator some breaks from the story in which to actively involve the children with questions.

Botti informs everyone that two minerals are missing for the spacecraft to function: oxygen and hydrogen. Botti and the children discover how water is made up of these two chemical elements and the robot goes in search of a water source, heading towards the sea. There the robot finds many people enjoying the weather. The robot finds it confusing that humans are wearing different types of swimming trunks.

While addressing some of them and asking them for a bucket to fetch water from the sea, Botti also asks why there is a difference in the swimming costumes.

Before the educator responds through a character from the story, children are encouraged to reflect and answer Botti's question*

A bather responds that humans often cover their sexual body parts with swimming costumes.

Through this occasional moment, children are confronted with gender difference, biologically speaking*

They are also made in different shapes and sizes, continues the bather, but people should be proud to be the way they are. The robot thus recognises that the women are covered by a two-piece suit. Botti then asks a nearby person with one-piece suit: «Hey, man, can I borrow your bucket to carry water?»

The person responds: «Sure, but I'm a girl!», which makes the robot even more confused and asks why, explaining what he has learned; she tells the robot that humans can be and therefore wear whatever they want as long as they are happy and that they don't need to follow a generic rule to belong in this world. Curiously, she wears a total body suit and so explains to him that there are different swimming costume models for humans. This makes the robot impressed with the humans.

They collect the water and take it back to the spaceship. Botti finally deposits the water in the spaceship, warning the children that next time he will need their help to find a... Antenna!

The educator will guide the children in the learning process, starting from the questions on the map.
If deemed necessary and

The first activity focuses on introducing children to basic chemistry concepts, specifically the composition of water. Through interactive questions (written on the map) and guided learning, children will explore how water is made up of hydrogen and oxygen atoms. The activity is structured as a series of steps, with each correct answer allowing the robot, Botti, to move to the next stage of its mission. The teacher will

functional to the explanation, it is possible to integrate a creative activity that involves the creation of a model of an atom.

guide the children through the process, encouraging participation and deeper understanding.

The steps of the activity are:

1. What is an Atom?

The educator will begin by explaining the concept of an atom, using simple language and visual aids to help the children understand.

To reinforce learning, an optional creative activity could be included where children are asked to draw what they imagine an atom looks like. This can help them connect with the abstract concept through art and imagination.

2. What are Oxygen, Hydrogen, and Greenhouse Gases?

The educator will introduce oxygen and hydrogen as speci ic types of atoms. A brief discussion on greenhouse gases can also be included, helping children understand the broader role these gases play in the environment. This stage encourages children to recognize that oxygen and hydrogen are the building blocks of water, and greenhouse gases are different atoms or molecules present in the atmosphere.

3. How is Water Made?

At this stage, children will learn the chemical composition of water: two hydrogen atoms and one oxygen atom (H_2O). The educator will challenge students to grasp this concept by asking questions and engaging them in discussions about how these atoms combine to form water. An online resource, provided with interactive games, can be introduced to further reinforce the concept, making learning fun and visualizing how water molecules are formed.

Explore the ocean and ways of water with Matty the water molecule and friends!
- **Click here to play the new game in a web browser.**
- **Click here to download the game as an Android app.**
- **Click here for the iOS app** for iPhones and iPads.

Press the button to go to the online resource

The activity is designed to be engaging and interactive, helping children understand basic chemistry while integrating elements of creativity and problem-solving. By answering questions correctly and advancing Botti to the next stage, children will feel a sense of achievement, reinforcing their understanding of atoms and the composition of water. The online game will further support their learning by providing a dynamic and playful way to explore the concepts discussed in class.

In order to correctly introduce the topic of gender in biology, the educator will remind the children of the part of the story in which Botti is amazed by the difference in beachwear between men and women.

He will then specify that at a biological level - and not a social one - there is indeed a distinction.

The educator will begin by facilitating a discussion on beach dressing habits, using this as a starting point to explore broader themes related to gender in biology. The conversation will highlight how research and technological development often use the male sex as a universal reference, overlooking the need for gender-specific analysis. This session aims to foster critical thinking about the role of gender in scientific research and its implications for both health and society.

Interactive Talk on Gender in Biology

The discussion will focus on the tendency of research and technological development to use the male sex as a default reference. Historically, research has often extrapolated findings from male subjects and applied them to both sexes. In many cases, female subjects are included later in the research process and are analyzed as deviations from an established male-centered norm. This approach neglects crucial biological differences between the sexes, which can significantly impact the results and relevance of scientific studies.

The educator will emphasize that considering the sex variable should be a fundamental requirement in any type of research involving people, animals, tissues, or cells. Including both sexes from the outset ensures more accurate, reliable, and inclusive outcomes. This involves reflecting on and deciding the sex composition of research samples, as the inclusion of both sexes - or focusing on one - should be a deliberate and justified choice based on the object of study.

Key Considerations

1. Balanced Representation: Depending on the research focus, it may be crucial to guarantee the participation of both sexes or, in some cases, conduct sex-specific analyses to obtain meaningful results;

2. Explicit Justification: Whether a study includes both sexes or focuses on one, this decision must be clearly justified and aligned with the research goals. Ignoring sex differences can lead to misleading or incomplete conclusions.

Example: Medicine and Biotechnology

An example of the importance of gender inclusivity in research can be drawn from clinical trials in medicine and biotechnology. In the case of COVID-19 vaccine trials, the side effects were initially analyzed predominantly based on male data. As a result, there was a higher incidence of side effects reported in women, highlighting the disparity in how clinical trials were conducted and analyzed. This illustrates why it is essential to include both sexes in medical research to account for different biological responses, which can have significant consequences for public health.

Through this discussion, students will learn to appreciate the importance of gender-specific research and its role in advancing both scientific understanding and equitable treatment in fields such as medicine, biotechnology, and beyond.

The educator helps children to carry out the block programming code on Scratch.

During this lesson the class led by the educator will use block programming on Scratch following the steps explained in the second chapter of the dedicated additional pamphlet called *MAT1. Coding literacy for the lessons*.

In this specific part will helps the educator to do a brief recap of some topics that have been covered during the lesson and to explain how Botti's story will relate to the next lesson.

Step 3

The educator will guide the discussion among the children, directing it and encouraging them to address all the steps carried out in the lesson and to explore the concept of freedom of expression.

In this interactive debate, students review the main points of the lessons, focusing on the concept of freedom of expression as it relates to clothing, examining how personal style and attire can reflect identity, culture, and societal norms. The discussion will delve into the various ways clothing is used not only as a form of self-expression but also as a tool for reinforcing or challenging gender roles and social expectations.

1. Clothing as Self-Expression

The debate will begin by discussing how clothing allows individuals to express their personalities, preferences, and values. Students will be encouraged to reflect on how their own clothing choices make them feel, and how these choices communicate who they are to the world.

2. Cultural and Societal Expectations

The conversation will shift to exploring how different cultures and societies have established norms about what is considered appropriate clothing for different genders, age groups, and occasions. Students will debate whether these expectations restrict personal freedom and whether such norms are evolving in today's society.

3. Gender and Clothing

A key focus will be on the gendered nature of clothing, where certain styles, colors, and types of clothing are traditionally assigned to specific genders. The debate will encourage students to question why certain clothing is considered "masculine" or "feminine," and whether these distinctions limit individual freedom of expression.

4. Freedom vs. Conformity

The group will consider situations where freedom of clothing choice is constrained by societal or institutional rules, such as school uniforms, workplace dress codes, or cultural dress expectations. The debate will explore the balance between personal freedom and the desire to conform to societal norms, asking whether these restrictions are neces-sary or unfairly limiting.

5. Challenging Stereotypes

The discussion will also address how clothing can be a powerful tool for challenging gender stereotypes and breaking down barriers. Examples of individuals or movements that have used clothing to make statements about equality, gender identity, and freedom of choice will be examined, inspiring students to think about how clothing can be both a personal choice and a political statement.

Students will be invited to reflect on their own experiences with clothing, whether they've ever felt judged or restricted in their clothing choices, and how they can promote a more inclusive environment where everyone feels free to dress according to their identity without fear of judgment.

Through this debate, students will develop a deeper understanding of the intersection between clothing and freedom of expression, as well as the ways in which clothing choices can both reflect and challenge societal norms. The goal is to encourage critical thinking about individuality, gender equality, and social expectations, empowering students to express themselves confidently and authentically.
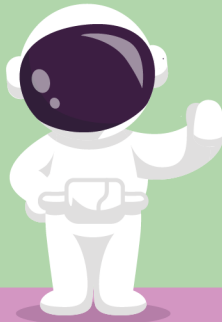
This section of the map is dedicated to the third lesson.
On a graphic level it presents all the elements useful for narration and related activities.

HELP ME FIND ANTENNA!!

TIME TO BECOME AN ARTIST!

LESSON 3

– Collage
– Storyboard
– Digital Drawing

COMPOSE THE WORK BY REARRANGING THE PIECES.

MUSEUM

THE PERSISTENCE OF MEMORY – SALVADOR DALÌ – 1931
It is one of the most iconic and recognizable paintings of Surrealism. The painting depicts a dreamworld in which common objects are deformed and displayed in a bizarre and irrational way.

DAVID – MICHELANGELO– 1501/1504
It is a statue of a shepherd, David.
Michelangelo has carved the figure naked. He shows David before the fight, just as he is looking at Goliath and planning what to do.

MONA LISA – LEONARDO DA VINCI 1503/1519
Many people think Mona Lisa's smile is mysterious. It is so often studied, recognized and copied that it is the most famous painting in the world.

Pedagogical objectives

The following objectives ensure a balanced approach to fostering equality, artistic appreciation, and soft skills, while integrating both scientific knowledge and creativity in a way that is engaging and accessible for young learners These are:

- Equality: challenge gender stereotypes by demonstrating that artistic expression is independent of gender, promoting equal opportunities for all to engage in and appreciate art;
- Scientific Content: explore the relationship between technology and art, introducing scientific and technological concepts in a way that connects both fields within the narrative;
- Develop empathy through understanding the robot's lack of creativity compared to humans, and promote effective communication through interactions with the robot and the artist couple;
- Encourage critical thinking by reflecting on the individuality of artistic expression;
- Appreciation of Art: encourage the exploration and appreciation of various works of art, emphasizing creativity and self-expression. Facilitate artistic experimentation by allowing children to create their own drawings or sculptures, reflecting on how their moods influence their work.

Necessary aspects

The story and its activities require:

- an educator who will actively participate during the lesson;
- a display on which to screen the map during and after reading the story and to view the videos proposed for some activities;
- a computer/tablet with which children can carry out part of the activities and programming on Scratch (a free programming environment, with a graphical programming language);
- newspapers, magazines, paper sheets, pencils, scissors and glue.

Methodology

ATTENTION:
Time of correction

A mistake in STEAM is a fundamental moment: all mistakes teach something and from them we can learn and improve together. The error must be corrected in a positive way without any penalty (reprimand, negative judgement, etc.)
The correction involves the whole group in searching for the best solutions and explaining the reasons (cooperative learning - collective intelligence).

NARRATION (STEP 1) - 5 min
The first 5 minutes will be dedicated to the first part of the storytelling. During the narration the educator will project the map on a screen.

CODING ON SCRATCH (STEP 2) - 10 min
This part to do block programming on Scratch.

ACTIVITY 1 /ARTS AND CRAFTS - 25 min
With the help of the educator, children will have the opportunity to experiment with different artistic tools and techniques to tell an everyday event that happened to them and that they consider interesting for themselves.

ACTIVITY 2 /PUZZLE - 10 min
The children guided by the educator will solve the puzzles on the map. In this phase the educator will have the opportunity to show the class some of the most important works in the history of art.

REFLECTION AND SHARING (STEP 3) - 10 min
This phase allows students to do a short recap of the lesson and the concepts learned. The class will also reflect on the connection between gender and artistic expression, declaring their ideas on the topic.

Extraordinary museum

Step 1

The educator, together with the pupils, recaps what happened in the previous lesson.
He/she now reads carefully the story to the children encouraging them to participate.

Specifically, in the story reported here, some parts are indicated with asterisks that suggest to the educator some breaks from the story in which to actively involve the children with questions.

Later, Botti talks about a third object that he has to collect to repair the spaceship: the object is basically an antenna, which came off the ship during the emergency landing. However, Botti reflects on the fact that fortunately this antenna can be found because it has a GPS chip.

Then the journey begins. Botti heads towards an unknown building: he understands thanks to a banner that the building is an "art museum". Then Botti enters the museum and, since the antenna is on the roof of the building, he goes up to the floors of the museum where various works of art are exhibited. Intrigued, he begins to observe them more closely.

The teacher will talk to the children about some of the most famous works of art in history

After seeing the works, Botti reaches the roof and, fortunately, finds the antenna. Later, going down the stairs, Botti meets some artists who have come to draw inspiration from the exhibition. Botti talks to them and says that he is impressed by the works of art he saw and asks if they are somehow connected to being a man or a woman.

This question is also asked by the teacher to the children

The couple answers that there is no correlation between being a man or a woman and the works of art created. In practice, the field of art focuses on expressing oneself in a deeper way: every human being, with creativity, tries to express what he feels in a work of art, and the final product has nothing to do with gender.

Botti thanks the couple of artists and says that on his planet there is no creativity, robots only focus on the logic of things and repetitive actions. That is why he thanks them for showing him a new perspective on what to do. Botti returns to the spaceship to attach the antenna to the ship itself, repairing it.

Botti is now ready to leave planet Earth because the ship is completely repaired. He says that he will remember these fantastic adventures and tell them with his robotic friend on his planet. Botti starts the engine when then he hears... a bang...

Step 2

The educator helps children to carry out the block programming code on Scratch.

During this lesson the class led by the educator will use block programming on Scratch following the steps explained in the third chapter of the dedicated additional pamphlet called **MAT1. Coding literacy for the lessons**.

ACTIVITY 1

In this phase the educator will guide the children in the creative process, encouraging each of them to express themselves in total freedom and with the artistic means they prefer.

The first activity involves encouraging students to experiment with different tools and techniques to creatively represent an everyday event that they find personally meaningful or interesting. To guide their artistic process, in this first part students will be introduced to a selection of techniques, all of which are commonly used in the art world today. This exploration allows students to experiment with different mediums and express themselves through art.

First part: Techniques for Drawing and Storytelling

1. Collage: Students will cut out images from magazines or newspapers that represent elements of their chosen everyday event and assemble them into a visual composition. This technique is particularly suitable for those who prefer working with pre-existing images, offering a hands-on experience with visual composition. Educators should provide a variety of magazines and newspapers for students to cut images from before starting the activity;

2. Storyboard: In this technique, students will divide a sheet of paper into squares and draw a sequence of images that narrate their event in chronological order, much like a comic strip. This approach develops skills in visual storytelling and organizational thinking, helping students to break down and represent a narrative through images;

3. Digital Drawing: Using drawing applications or programs on tablets or computers, students will create digital illustrations of their chosen event. This technique blends traditional art with technology and is particularly engaging for students familiar with electronic devices. The digital aspect encourages experimentation with AI tools for making variations of their artwork, expanding their artistic possibilities. Educators should ensure the necessary software is downloaded and ready for use before the session.

Second Activity: Sculpture and Mood Representation

The second part of the activity involves working with sculpture to explore and express emotions. Students will be asked to choose a mood (from a set provided by the educator) and create a sculpture that reflects or embodies that emotion. The use of plasticine is recommended for this dynamic activity, as it allows students to easily mold and manipulate the material, fostering hands-on engagement with three dimensional art.

Through these activities, students will not only experiment with different artistic techniques but also develop a deeper understanding of self-expression, storytelling, and the relationship between art and emotions.

ACTIVITY 2

The educator will use the elements appropriately illustrated on the map but, if necessary, will show the details of the works of art on the internet.

In this activity, children, under the guidance of the educator, will work together to solve puzzles illustrated on the map. These puzzles are designed to stimulate critical thinking and problem-solving skills while engaging students in a fun and interactive way. During this phase, the educator will also take the opportunity to introduce the class to some of the most significant and iconic works in the history of art, integrating a rich educational experience into the puzzle-solving activity.

1. The Persistence of Memory by Salvador Dalí
The educator will present this famous surrealist painting, explaining how Dalí used dream-like imagery and melting clocks to represent the fluidity of time. Children will be encouraged to think about how art can challenge our understanding of reality.

2. David by Michelangelo
This masterpiece of Renaissance sculpture will be introduced to highlight the incredible skill and realism achieved by Michelangelo in carving the human form from marble. The educator can discuss how David symbolizes both strength and beauty, and how Michelangelo's work has influenced countless artists.

3. Mona Lisa by Leonardo da Vinci
As one of the most famous paintings in the world, the Mona Lisa offers a perfect opportunity to explore mystery and expression in art. The educator will guide kids in analyzing the painting's famous enigmatic smile and discuss the techniques used to create this timeless piece.

Through this combination of puzzle-solving and the exploration of art history, students will not only develop cognitive skills but also gain an appreciation for some of the world's greatest artistic achievements. This approach blends active learning with the cultural enrichment of visual arts, making the lesson both intellectually stimulating and creatively inspiring.

Step 3

The educator will guide the discussion among the children, directing it and encouraging them to address all the steps carried out in the lesson and to explore the concept of freedom of expression.

In this interactive debate, students review the main points of the lessons. They will also engage in a guided reflection on the lack of a connection between gender and artistic expression. Through an open discussion led by the teacher, students will be encouraged to share their personal viewpoints and ideas. The teacher will facilitate the conversation, providing examples from art history and contemporary practices to illustrate how art transcends gender boundaries.

Key Discussion Points:

- The teacher will guide students to explore how artistic talent, creativity, and expression are not confined to any gender and that both men and women have historically contributed equally to the richness of the art world;
- By highlighting notable male and female artists, the teacher will emphasize that creativity is a human trait, and any individual - regardless of gender - can become a successful artist;
- Through reflective questioning, the children will be led to understand that artistic expression is a form of self-expression, driven by personal experiences, emotions, and creativity, none of which are defined by gender.

By the end of the discussion, the goal is for students to come to the realization that gender does not dictate artistic ability or expression, fostering a sense of equality and inclusivity in the classroom. This activity will help students break free from stereotypes and appreciate art as a universal mode of expression accessible to all.
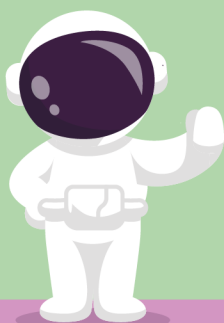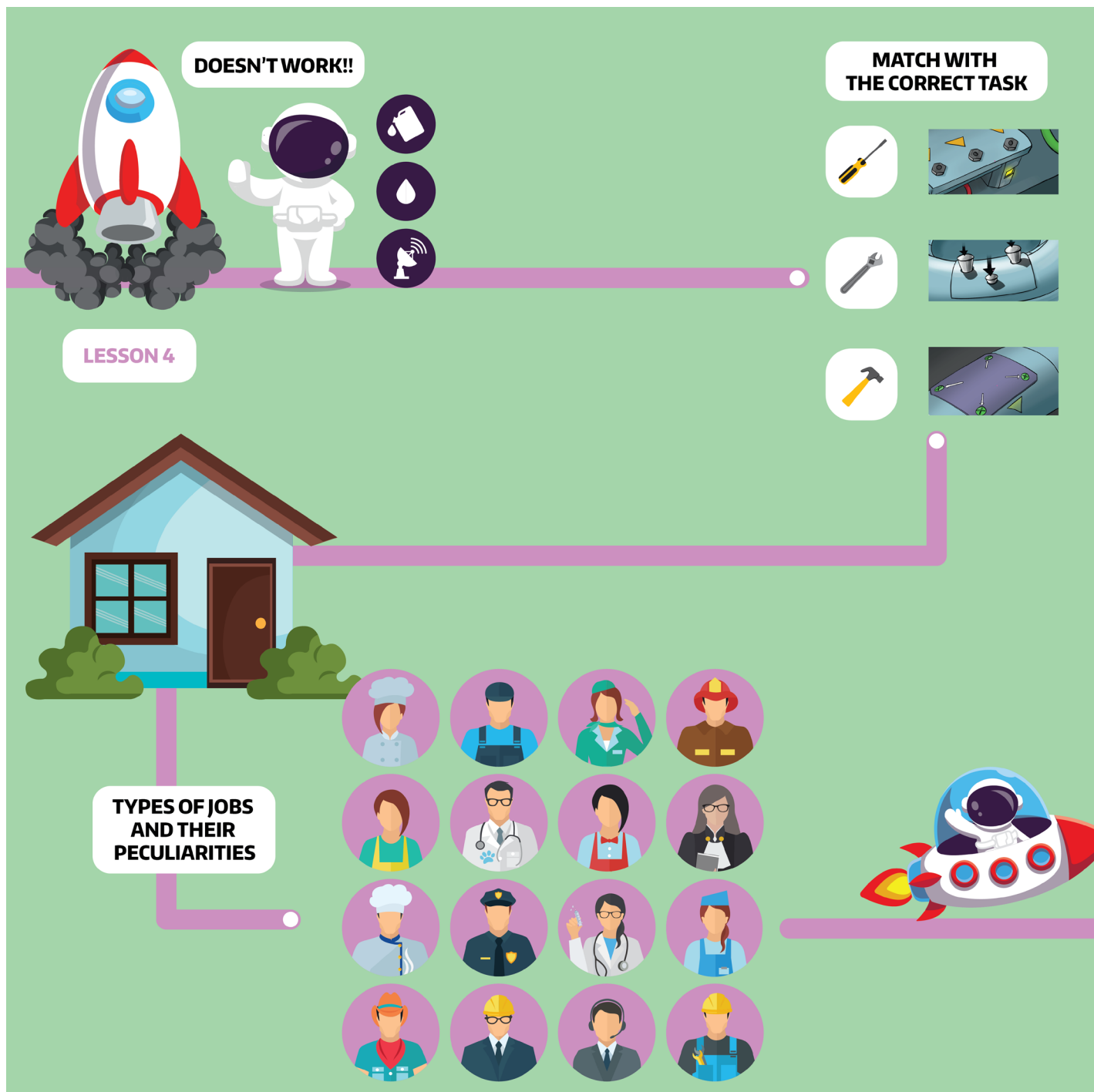
This section of the map is dedicated to the fourth lesson.
On a graphic level it presents all the elements useful for narration and related activities.

DOESN'T WORK!!

MATCH WITH THE CORRECT TASK

LESSON 4

TYPES OF JOBS AND THEIR PECULIARITIES

Pedagogical objectives

The following objectives aim to blend gender equality education, career exploration, and the development of critical thinking and communication skills. These are:

- Promote awareness of gender roles and challenge existing stereotypes associated with certain professions;
- Encourage students to challenge the belief that specific jobs are inherently linked to one gender, fostering an understanding that all careers are open to both men and women;
- Highlight the importance of equal opportunities for all genders in every field, particularly emphasizing science, technology, engineering, and mathematics (STEM);
- Introduce foundational concepts about a variety of professions, with a focus on those in the scientific and technological sectors;
- Encourage an appreciation of the diversity of roles in society, helping students understand how different jobs contribute to the community;
- Encourage problem-solving through interactive activities, such as matching tools to specific careers and discussing various job roles;
- Develop communication skills through interactions with the educator and peers during discussions about careers and gender equality;
- Stimulate critical thinking by challenging students to reflect on and question the perceived link between gender and intelligence, encouraging open dialogue about biases and assumptions.

Necessary aspects

The story is structured in blocks and requires:

- an educator who will actively participate during the lesson;
- a display on which to screen the map during and after reading the story and to view the videos proposed for some activities;
- a computer/tablet with which children can carry out part of the activities and programming on Scratch (a free programming environment, with a graphical programming language).

Methodology

ATTENTION:
Time of correction

A mistake in STEAM is a fundamental moment: all mistakes teach something and from them we can learn and improve together. The error must be corrected in a positive way without any penalty (reprimand, negative judgement, etc.)
The correction involves the whole group in searching for the best solutions and explaining the reasons (cooperative learning - collective intelligence).

NARRATION AND INTERMEDIATE ACTIVITY (STEP 1) - 10 min
The first 5 minutes will be dedicated to the first part of the storytelling. During the narration the educator will project the map on a screen.

ACTIVITY 1 /MATCHING GAME - 10 min
In this phase the educator will summarize the salient points of the story and subsequently, using the illustrations on the map, they will have to match the tools (hammer, screwdriver, wrench) and tasks.

ACTIVITY 2 /DISCUSSION - 10 min
The class, led by the educator, will explore different jobs (engineer, doctor, lawyer, artist, scientist) and their peculiarities in a group discussion.

ACTIVITY 3 /ONLINE GAME - 15 min
The children, guided by the educator, will play an online game in which they will have to match the profession with the right picture.

CODING ON SCRATCH (STEP 2) - THROUGHOUT THE LESSON
During the lesson children will do block programming on Scratch.

REFLECTION AND SHARING (STEP 3) - 10 min
This phase allows students to do a short recap of the lesson and the concepts learned. The class will also reflect on the connection between intelligence and gender, declaring their ideas on the topic.

The comeback

The educator, together with the pupils, recaps what happened in the previous lesson.
He/she now reads carefully the story to the children encouraging them to participate.
Specifically, in the story reported here, some parts are indicated with asterisks that suggest to the educator some breaks from the story in which to actively involve the children with questions.

Botti is ready to return to his planet. He started the spaceship, but suddenly there was a big explosion. One last problem must be solved! Botti asks the children to help him understand what the problem is.

Inside the spaceship there are three different tools that can be used but he needs a professional.

Botti says: «Can you help me find someone who can help me repair the spaceship?». Botti really needs a scientist or... an engineer! Botti walks towards a house and asks the owner (an elderly woman) to use her wi-fi to search the Internet for a scientist available to help him on the Internet. The robot, looking for engineers to help him, discovers that there are more male engineers than female engineers. However, he does not find anyone who can help him, so he leaves the house, thanks the woman for helping him and explains why he needed Wi-Fi. But before leaving he asks her the reason for this disparity, naively thinking that there is a difference in intelligence between men and women.

As usual, in this case the children are also called to answer the question

The woman answers Botti that there is no difference in intelligence given by gender, and that if women do not choose to be scientists much it is because the culture in which they are conceived ties them more to artistic things. However, this is not true for all women: she will later reveal that, fortunately for Botti, she is a great retired engineer and will gladly go to help him repair his spaceship.

Then they return to the spaceship which after a while is ready to fly! Botti thanks the old woman, stating that she is the right example for a planet in which the way of being human is not tied to gender, but to the particular passions and affinities it expresses! Botti then asks him to take a selfie with the woman, saying that he will show his engineer-heroine to all his robot friends on his planet.

Finally, Botti says goodbye to all his human friends and takes off from Earth.

In this phase the educator will summarize the salient points of the story and subsequently show the map to complete the tool - task matching activity.

In this activity, Botti, through the educator's narration, introduces children to various tools that could be useful for repairing the spaceship: a hammer, a screwdriver, and a wrench. Children are then tasked with matching each tool to its correct task.

Through this interactive and playful exercise, students will gain a basic understanding of how different tools are used in real-life situations,

particularly in the context of the story, where Botti must repair and assemble different parts of the spaceship.

Key Learning Points:
- When children match tools to tasks or professions, they will develop a sense of how these tools are essential in various careers and daily activities;
- The activity will encourage hands-on learning, allowing students to explore how tools work and how they can be used to disassemble and reassemble objects, promoting logical thinking;
- By playing this tool matching game, students will also strengthen their problem-solving skills, learning how different tools serve specific purposes and how selecting the right tool is critical to completing a task efficiently.

This activity not only reinforces practical knowledge of tools and their applications, but also promotes critical thinking, logic, and fine motor skills as children tackle each challenge. Through play, they will understand how tools are linked to specific professions, connecting the lesson to broader concepts of technology and problem-solving.

ACTIVITY 2

Using the guide reported here, the educator talks to the class about some types of work professions and their peculiarities.

In this activity, children will assist Botti in identifying the type of worker he truly needs to solve his problem. By describing and discussing different professions, children will help Botti understand the unique roles and responsibilities of various jobs. The educator will guide the children in defining what it means to be an engineer, doctor, lawyer, artist, scientist, and more. Through this process, the children will not only develop their understanding of these professions but also improve their ability to articulate ideas and think critically about career paths.

Guide for Explaining Different Professions:
- **Engineer**: An engineer is someone who designs, builds, and improves things. Engineers can work in many fields, such as civil engineering, where they construct bridges, buildings, and roads, or software engineering, where they develop applications, video games, and technology systems. Engineers use their creativity, combined with math and science, to solve problems and make the world a more efficient place;

- **Doctor**: A doctor helps people stay healthy and treats them when they are sick or injured. Doctors spend many years studying the human body and learning how to diagnose and treat various illnesses. They work in hospitals, clinics, and doctor's offices, providing essential care to keep people well;

- **Lawyer**: A lawyer is a professional who helps people solve legal problems and understand the law. They may represent individuals in court, defend their rights, or provide advice on complex legal matters. Lawyers study laws, rules, and regulations extensively to protect people's rights and guide them through legal challenges;

- **Artist**: An artist creates beautiful and meaningful works of art using their imagination and artistic talents. Artists can work in various mediums, such as painting, sculpture, drawing, or even designing fashion. Some artists work independently in studios, while others collaborate on large-scale projects that are admired by people worldwide;

- **Scientist**: A scientist is someone who explores the world around us by asking questions and conducting experiments. Scientists study a wide range of topics, from biology (the study of animals and plants) to astronomy (the study of space). Their curiosity drives them to discover new information about how the world and universe work, helping us understand and improve our surroundings.

By engaging in this discussion, children will help Botti identify which profession is best suited to address his current needs. This activity fosters critical thinking, communication skills, and a deeper understanding of different career paths. Additionally, it encourages students to appreciate the diversity of jobs and how each profession plays a critical role in solving problems and advancing society.

ACTIVITY 3

The children, helped by the educator, will play this game with a PC or tablet.

This online game, developed with *Genially* specifically to help children practice their knowledge, it consists of 10 questions relating to working professions and their specific characteristics.
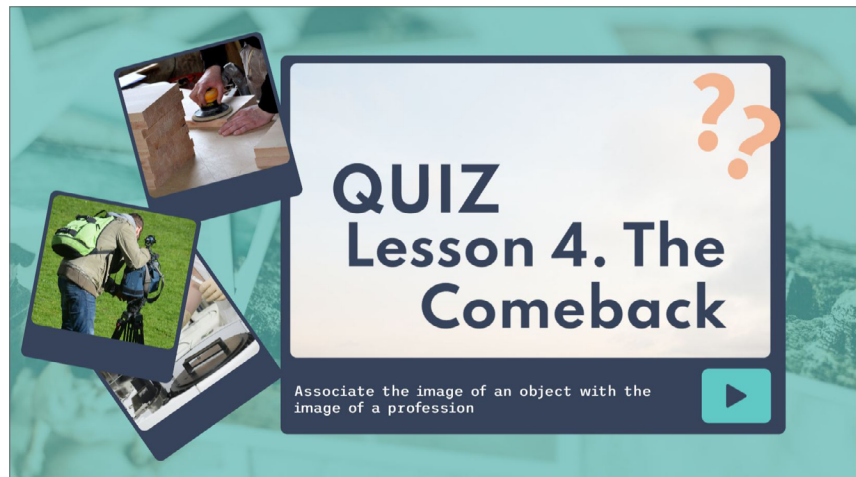
Press the button to play the online game

Step 2

The educator helps children to carry out the block programming code on Scratch.

During this lesson the class led by the educator will use block programming on Scratch following the steps explained in the fourth chapter of the dedicated additional pamphlet called ***MAT1. Coding literacy for the lessons***.

The educator will guide the discussion among the children, directing it and encouraging them to address all the steps carried out in the lesson.

They will also explore the importance of choosing a career based on your passion and not your gender.

In this activity, the educator will lead a discussion with the children on the commonly held beliefs and stereotypes about the relationship between intelligence and gender, particularly in the workplace. The goal is to encourage students to share their opinions and reflect deeply on the topic, helping them realize that intelligence and capability are not determined by gender. This will prompt students to think critically about gender roles and challenge the notion that certain jobs or skills are more suited to one gender than the other.

Key Points for Discussion:

- Children will be asked to express their views on whether they believe intelligence is linked to gender, especially in relation to different professions. Through this process, the teacher will guide them to reflect on why such stereotypes exist and whether they hold any merit;

- The conversation will emphasize that passion and dedication are what truly drive success in any field, not one's gender. The aim is to help children understand that they can pursue any career or goal, as long as they approach it with passion and commitment;

- The educator will also highlight the importance of creating an inclusive and equitable workplace, where people are valued for their skills and talents, not limited by outdated stereotypes.

Supporting Activity

To further stimulate the debate, students will be invited to use an image generator to search for visual representations of the correlation between intelligence and gender in the workplace. By exploring these generated images, students will have the opportunity to reflect on how media and visual culture can reinforce or challenge stereotypes. This exercise will encourage them to critically analyze the influence of societal perceptions on gender and intelligence, prompting discussions on how such biases can be dismantled.

Through this dialogue and accompanying visual activity, children will become more aware of the harmful effects of gender stereotypes, particularly in the workplace, and the importance of pursuing careers based on passion and interest rather than societal expectations. The discussion will empower them to believe that their potential is limitless, regardless of gender, and that true success comes from following one's dreams and talents. This activity not only fosters critical thinking but also promotes an understanding of equality and fairness in both education and professional environments.

PARTNERS

FINISH

5
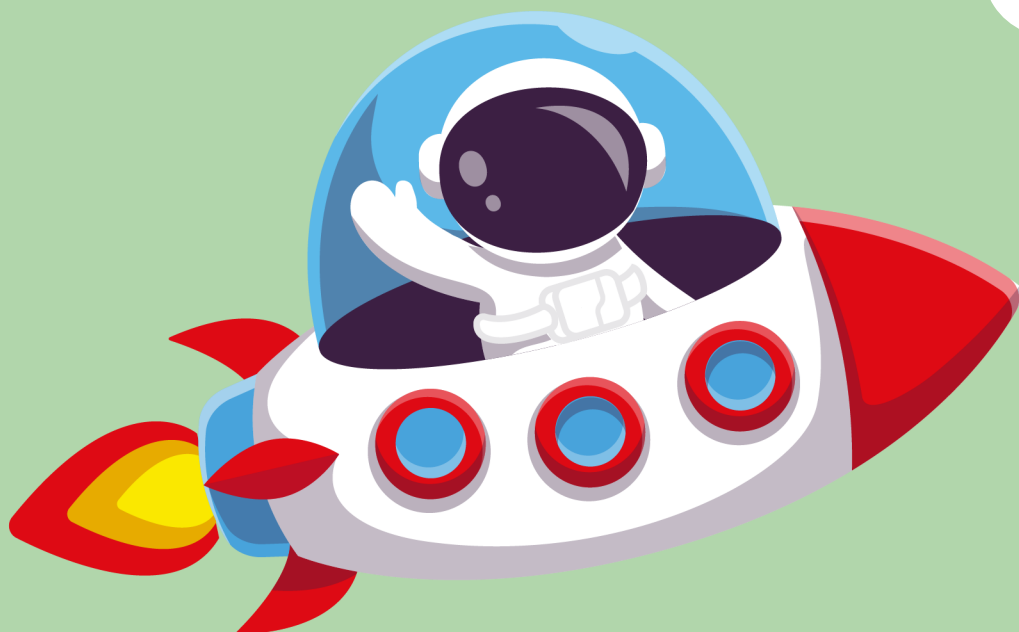
SPAIN
Esciencia is an SME based in Zaragoza established in 2006 as a spin-off of the University of Zaragoza. **Esciencia Eventos Cientí icos S.L.** is dedicated to the management and organization of science dissemination projects. The company offers both consulting services and the design of educational programs.

ITALY
Sapienza University of Rome, (**Department of Planning, Design, Technology of Architecture**). Sapienza was founded by Pope Boniface VIII in 1303. It's one of the oldest universities in the world and the second largest University in EU, with 11 faculties, 63 departments, 111.000 students and more than 4.700 professors.

All partners

ITALY
The CISL Scuola (Confederazione Italiana Sindacati Lavoratori - Scuola) is the union of the staff of primary and nursery schools, secondary schools and vocational training of the CISL. It was founded in 1997 by the union of SINASCEL (National Union Elementary School) and SISM (Italian Union of Middle School).

ITALY
Pixel is an education and training institution based in Florence (Italy). Pixel was founded in 1999. Pixel's mission is to promote an innovative approach to education, training and culture, this is done mostly by trying to exploit the best potential of ICT for education and training.

ROMANIA
EuroEd Primary School includes a Kindergarten and a primary school. Both are accredited by the Romanian Ministry of Education. It promotes the EU dimension of education and it also encourages multiculturalism and multilingualism by providing education to children of different nationalities or ethnic groups.

PORTUGAL
The **Agrupamento de Escolas Miguel Torga** is a school located in Bragança, Portugal, an inland city of the country. The school consists of three buildings, two for preschool and elementary school and one for secondary and high school. There are 88 teachers, 2 psychologists and also a speech therapist.

BULGARIA
Zinev Art Technologies Ltd. is a company developing, implementing and managing European projects and providing consultations in the spheres of culture, art, Internet-based activities and education, VET, e-learning and school education development, as well as regional development.