



Would you become our new STEAM superhero?

meaningful quests for developing creativity and critical thinking
within and outside the schools



THE TALE OF FEATHER

Introduction



Unplugged - Unplugged approach of computational thinking for children towards creativity and culture - unites children's education enthusiasts who are strongly committed to creativity in learning.

The Unplugged project, coordinated by the University of Aix-Marseille, has been approved and funded by the Erasmus + Programme under the extraordinary calls launched in 2020 to support digital education readiness and creative skills in the framework of the COVID-19 sanitary crisis. Its implementation takes place in 5 European countries - France, Belgium, Italy, Austria, and Bulgaria - gathering a multidisciplinary consortium.

Unplugged has been designed to **empower the relations between the formal (schools) and informal learning ecosystems (museums, libraries, associations, families ...)** in developing creative practices to support students positioning as critical thinkers and active citizens in the 21st-century society.

This gamebook presents the full Unplugged Quest, a comprehensive game, composed of **several gamified challenges**, united in a **unique universe** proposing a consistent pathway in the development of citizenship behaviours allowing children to recognize the needed values for living in community.

The Unplugged set of games can also be used as a **one-stop-shop of playful activities** that can apply both in the classroom and at home, all linked to several parts of the national primary school mandatory curricula.

CONTRIBUTIONS

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DESIGN & CREDITS

EU project consortium

The contributors credited in this coursebook form part of the Unplugged consortium that you can discover here: www.unplugged-quest.eu. The consortium is composed of: Université d'Aix-Marseille, Université Côte d'Azur, Explora - The Children's Museum of Rome, Muzeiko, Digitale Wolven, ZeUGMA OOD, Hands On! - International Association of Children's Museums, La Fabulerie.

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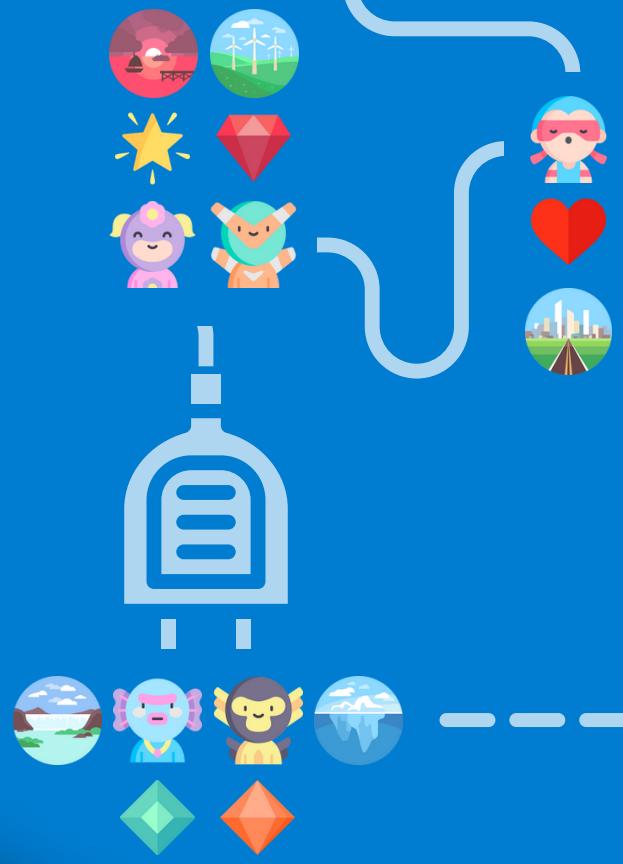
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EU contribution

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Enter the Unplugged Quest



Welcome



The Unplugged quest is a board game composed of diverse activities, all settled in the framework of the classroom through clear pedagogical choices. All the contents have been drafted, developed and designed by non-formal educational actors, coming from creative and cultural universes. The Unplugged universe offers teachers plurality in addressing citizenship topics and in the games' settlement and dynamics themselves, to keep pupils focused and motivated.

The unity in the Unplugged universe comes from a general mindset around citizenship and critical thinking, encouraging interdisciplinarity and creativity and translated into the little Feather Story ... a tale in which the children, pupils and teachers have their role to play ...

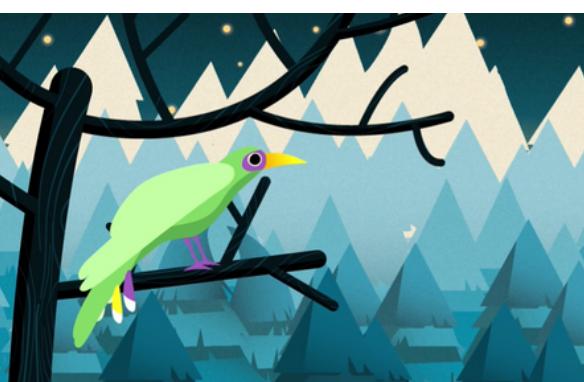
ALL ABOUT FEATHER ...

Feather is a rainbow bird that travels the world and symbolises the harmony of living beings. Seeing the planet Earth polluted and societies evolving towards anger, his despair made him lose his feathers and he disappeared.

To help him fly and travel the world again, you are tasked with thinking about how to make the world a better place through 4 territories:

- Explore the peaceful island and become a concerned citizen,
- Explore the city streets of the community to build harmonious collective societies.
- Navigate through the crazy bayou preserving natural ecosystems.
- Use your imagination in the Fantasy Factory to shape a better world.

Let's get back to the colours of Feathers!



OVERVIEW OF THE UNPLUGGED JOURNEY

Get onboard - Welcome to the Unplugged Universe

The first universe has been built as the launchbase for the whole Unplugged Quest in the form of a regular and yet amazing school area! Teachers & pupils will discover the game dynamics and perform the onboarding four games to acquire 4 basic skills that will be useful for performing the full quest!

First territory - Explore the Peaceful Island

To begin with, pupils will reflect on their own vision of citizenship, what it means to them, and how they approach this concept at the individual level. Games around equity, inclusion, learning about others, and fighting against poverty will be proposed.

Second territory - Explore the Strong Community

Once self-reflection on my citizenship role as an individual agent of the society has been made, a collective approach can be applied to assess how to live together in the territories. The second planet has the objective to approach several concepts related to communities, governance, public services ...

Third territory - Explore the Crazy Bayou

Once sustainability will be achieved at the level of the collectivity, reflection on how our behavior faces natural ecosystems will be stimulated. Games related to resources management and experimentations to approach key concepts behind environmental indicators are proposed.

Final territory - Fine-tune our world in the Fantastic Factory

The last universe is dedicated to implementing all the competencies, knowledge and know-how acquired to draw our own vision of the future society by unleashing imagination and creativity for fantastic and sustainable universes. Maybe in this universe, build by our creative minds, Feather will be back ...

Discover our games and play

You will find in this gamebook the whole introduction to the game including the Feather tale step by step and the description of the quests! To access each game in details and download the material to play, discover our metaverse here <https://www.unplugged-metaverse.eu/games!>



Feather was a rainbow bird who spent his life travelling the world and flying over beautiful places. His colours represented harmony and gave hope and joy to living creatures. But little by little, for every social or environmental problem our earth faced, the majestic bird lost a feather. Overwhelmed by fatigue and despair, Feather called out to humans for help before disappearing. In order to fly again and restore its beauty to the world, the little bird asked brave adventurers to go in search of its lost feathers.

"To help me on this quest, you will need to be smart and willing. You will explore four territories where my feathers have been lost. Fix what is wrong with these lands. Bring me back my colours so that I can return to my mission: to fly around the world making the eyes and minds of living beings shine again. Good luck my adventurers! One last piece of advice: open your heart, unlock your imagination and free your brain. Come back soon, I'm waiting for you."



Likadislike

Express and understand feelings and emotions. Learning to express an opinion, overcoming preconceived notions in the classroom. The game fosters children's emotional development, learning to express their opinions and respect others' views and feelings. A player draws a card, describes a situation and reads it out loud to the others. Then, all players express with an emoji card face down whether they like, dislike or love the situation described. All players turn over the emoji cards at the same time and discuss without judgment each other's feelings.

Brain twister & Programming a Choreography

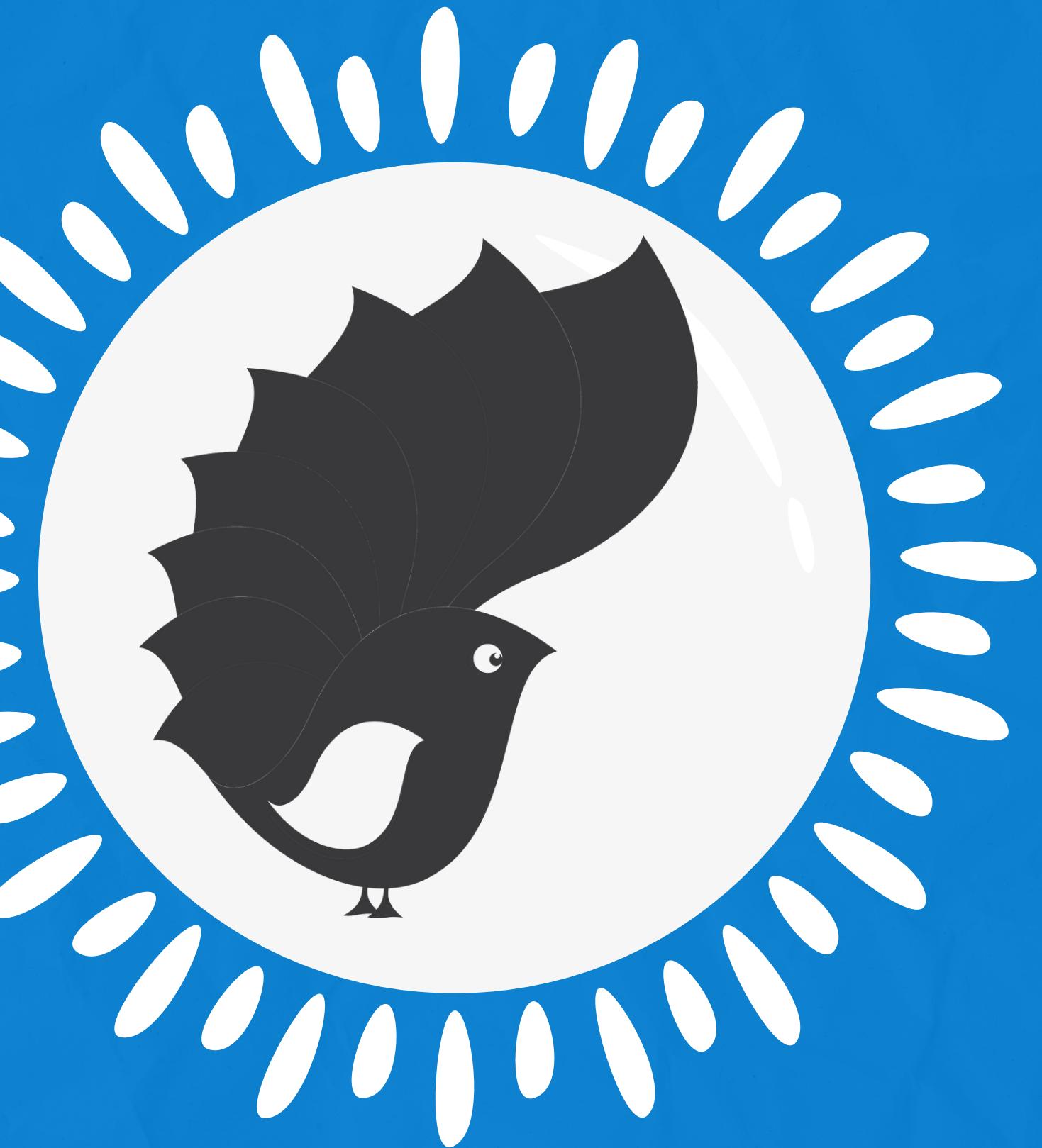
Learning to express yourself with logic and comprehensibility and move in the space. Interacting with robots will become common in the future. To speak to a machine you need to give very clear orders. This game trains children in providing clear orders to a machine using only numbers and directions. The teacher draws a table on the ground. One player is the game leader who gives instructions to the robots. The other players are the robots. To win the game, the game leader needs to place the robots correctly on the table to match a preset figure from a card.

Brainstorming

Exchange and discuss. Unleashing kids' creativity through discussions. The game fosters children's emotional development, learning to express their opinions and respect others' views and feelings. A player draws a card, describes a situation and reads it out loud to the others. Then, all players express with an emoji card face down whether they like, dislike or love the situation described. All players turn over the emoji cards at the same time and discuss without judgment each other's feelings.

Binary counting

Compute information and think logically. Understanding computational processes and unplugged activities. Children learn to count like a computer (using the binary number system) offline. The binary number system is a base-2 one. An understanding of binary numbers, the binary system, and how to convert between binary and decimal is essential for anyone involved in computers, coding, and networking.



Congratulations, little adventurers! Thanks to onboarding, you can start bringing back Feather colours! Here is the first piece of the puzzle! Print and cut it, more parts will come soon ...

You have arrived on the first territory: the peaceful island! Here you will learn about citizenship, inclusion and fairness! Complete this mission to find the yellow and orange feathers of our little bird! Are you ready?

Have you seen Feather the Bird?

"Well, the last time I saw him was a while ago. He tried to land to sing but people were bored, too busy with their own problems. A man waved him off and a little girl threw a stone at him. Sadly, he dropped the yellow feather from his tail. Since then, things have only gotten worse. To find the feather, get to know yourself, work on your own emotions and make peace with the outside world, otherwise your quest is in vain."



Poverty-free game collection

Fostering creativity while discussing access to leisure activities for all. People from poorer backgrounds are often excluded from social life, just because they cannot afford to join such activities. Players in this quest are asked to create in teams a game out of objects within the classroom, play and assess it.

Equal

Overcoming gender stereotypes. The "Equal Game" offers the opportunity to reflect and learn about equality and gender stereotypes through the disruption of gender bias associated with jobs and working roles. This game is based on a series of challenges whose aim is to get children to guess professions through the description, mime and drawings.

Cookies and Peace

Understanding sustainable food systems. The game gives children a feel for inequality in terms of the distribution of resources and emphasizes the importance of establishing a sustainable and equal world. Participants work in groups to bake successfully their cookies. What they do not know is that each group will be allocated a different set of resources to accomplish this task. Whilst some groups will have too much of certain ingredients, others will not have enough, or will not have any of these ingredients.

Form Factor

Confronting children with the need for inclusiveness. Geometry and abstraction. This is a game of modeling complex shapes with basic ones through communication and cooperation in teams. The goal of the teams is to fill in a complex shape to the best possible way without going beyond their outlines with simple shapes players have available. Winners are selected following a group vote.

Clay and Sculpture

Expressing, interpreting and understanding one's own and others' feelings. The game supports children in identifying, expressing and managing their feelings and emotions and interpreting the ones of the others. Players divide into pairs: one player acts as the modelling clay and the other - as Michelangelo who sets the modelling clay's body position to express a certain feeling, e.g.: fear, joy, tension, despair, etc. The clay person does not know which feeling the sculptor is modelling and guesses it, providing feedback on the feeling the position provokes.

Peace Magic Grid

Identifying and correcting errors in data transmission. Children are presented with grids and are explained the principles of parity check. They are given the task to discover a message hidden in the grid by performing the demonstrated parity check and correcting respective errors. Reflection on the message and an interactive discussion then takes place to relate it to today's world challenges.

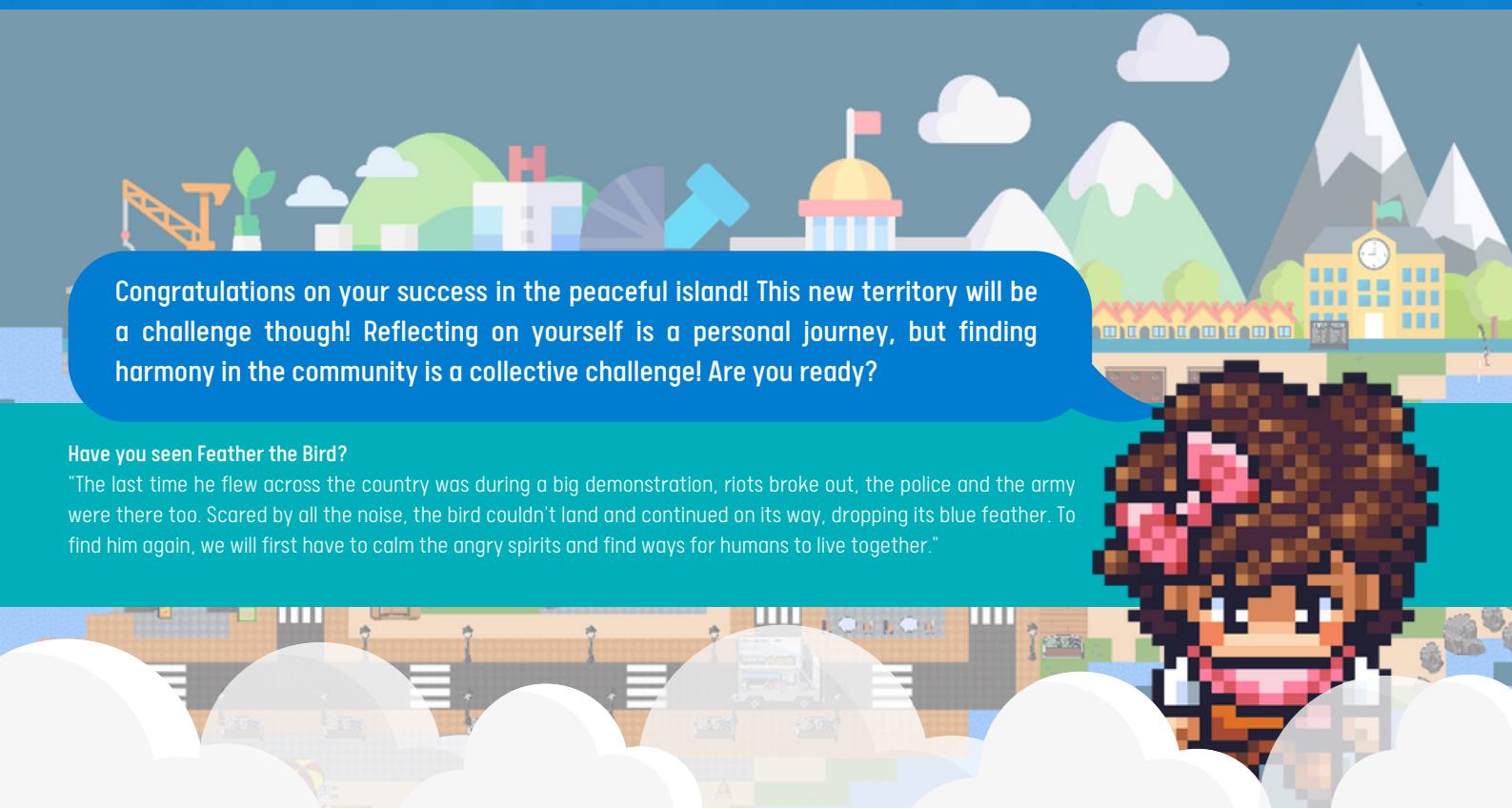


Congratulations, little adventurers! Thanks to your hard work on this territory, you have already collected 2 feathers out of 8! Keep going and explore! Feather is getting closer!

The feathers in printable version are available in the achievements booklet! Don't hesitate to colour them, create patterns and be creative for bringing back colours to our little bird!!

Second territory - Explore the Community

unplugged
Gamerbook



Have you seen Feather the Bird?

"The last time he flew across the country was during a big demonstration, riots broke out, the police and the army were there too. Scared by all the noise, the bird couldn't land and continued on its way, dropping its blue feather. To find him again, we will first have to calm the angry spirits and find ways for humans to live together."

Dr. Hanoï

Fostering logics, illustrating chemistry. The game takes place in a chemistry laboratory, with test tubes, formulas and chemical elements. Players have to find a vaccine with the correct chemical formula by transferring the elements from one test tube to another!

Live in Harmony

Reflection on identity in forming one's personality. A gamified STEAM activity in which children explore all aspects of identity: personal, regional, nation-state and European. They discuss the issues of equality in terms of gender, education and opportunities. Math is applied to introduce main European geographical features. A final gamified art project reinforces the whole experience.

Reroute better world

Understanding the impact of personal actions towards others, spatial orientation and strategy. The action takes place on European Union. Players plan their cargo logistics from one place to another based on several pre-conditions. The game fosters children's reasoning and spatial orientation to plan their cargo transport to a predefined point, where the other carriers (players) have the same objective. Players need to overcome barriers of coming across other players.

Farm in the city

Fostering urban & resource planning, logical and critical thinking. Networks present many opportunities for developing algorithms that are practically useful. In this activity, junctions, or larger "nodes" are placed in such a way that all other nodes are at most one step away from one another. The objective of the players is to find a solution of combining the least possible nodes which connect to all points.



What brave adventurers we found for helping our friend Feather! You have managed to build a sustainable community, in harmony! Here are 2 feathers for you!

The feathers in printable version are available in the achievements booklet! Don't hesitate to colour them, create patterns and be creative for bringing back colours to our little bird!!

Third territory - Explore the Crazy Bayou

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Gamerbook

Living harmoniously in a community also means finding sustainable ways to manage resources! Let's explore the issues of human impact on ecosystems in this third territory: Madness in the Crazy Bayou!

Have you seen Feather the Bird?

"He used to come and rest in the ponds on the bayou. In the morning, when the sun came up, you could hear him singing. But the last time he came, all the land was devastated. The grass no longer grew, the trees had been cut down to make wrappers, and the earth had been drilled to extract its elements. Too sad to land, Feather continued to fly. He dropped his green feathers and continued on his way. To find it, you will have to make peace with the earth, and feed it to restore it so that flowers and trees can grow again. Then the animals and insects will return.



Ecosystem in a jar

Understanding biological lifecycle and the impact of human interference. This is an experiment which introduces components of the miniature ecosystem in a jar. Once a jar is closed, the plant uses the water, sunlight, and nutrients from the soil to survive. As the plant loses some leaves, they are broken down by bacteria and become nutrients in the soil. With the right balance, the ecosystem inside the jar can survive for years. By observing these changes and interactions among organisms and their environment, children will understand how the CO₂ cycle works, how each factor influence the natural cycle etc.

Good Ways

Raising awareness on SDGs, fostering dexterity. This an observation and precision game, where players draw a continuous line without raising their hand from a transparent piece of paper to reproduce as close as possible a route shown on a separate picture. The aim is to win as many bonuses as possible and to avoid obstacles.

PotLuck March

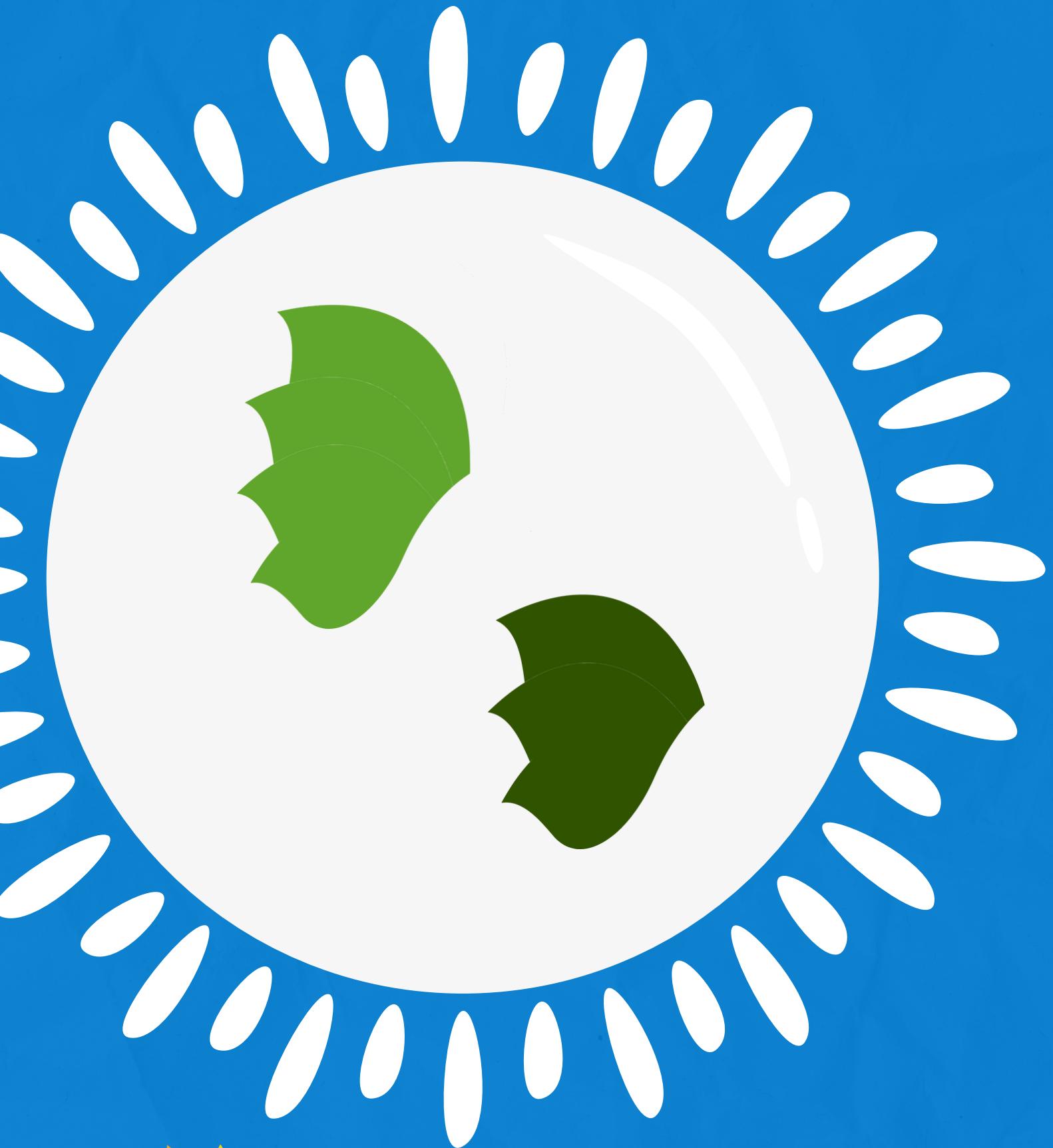
Challenging accessibility and unequal distribution of food resources. Children learn about accessibility to food resources, inequalities and challenges in their distribution. Each player is given a random quantity of food which gives them a certain amount of energy, allowing them to take a certain number of steps to move forward towards the finish line. Inevitably, some players will not make it to the finish line and some players who have abundance of energy resources can share these with others to help them advance.

Plastic Continent

Addressing the harmful consequences of human activity on earth and oceans, reasoning and logic. The action takes place in the middle of a plastic continent created by man's negligence. A dolphin imprisoned in its midst must make its way through the heap of mountains of garbage to get out! Players move the garbage piles on the board to free the trapped dolphin.

The Visitor of the Future

Addressing the concepts of finite state automata. Computer programs often require the processing of a sequence of symbols such as letters or words in a document, or even the text of another program. Computer scientists often use a finite state machine for this purpose. This automaton follows a set of instructions to see if the computer will recognise the word or string. In order to approach this concept in a simple and fun way, we propose to work on the concepts of causality through a mission of exploration to find the egg of Feather the bird.



**Amazing! You have successfully completed the Crazy Bayou!
No Voodoo or Witch can stop you in these messing swamps!
Here are 2 more feathers! You are almost there... Keep on!**

The feathers in printable version are available in the achievements booklet! Don't hesitate to colour them, create patterns and be creative for bringing back colours to our little bird!!

You've managed to acquire all the skills you need to be in charge of reshaping a future in which Feather can bring back joy and harmony!

To help you in this ultimate mission, discover the tools of the fantastic factory!

Have you seen Feather the bird?

"He would often fly over the city, land on top of a building and cheer us up with his song. But the last time he came by, he couldn't find his way. He was dazzled by the lights of the factories, couldn't find the sun and stars that were hidden behind huge skyscrapers, and was disoriented by the dense wireless network that confused his senses. He lost his last coloured feathers and disappeared. To find these feathers, learn to use your machines and screens to create a social link between living beings and improve living conditions. Reshaping the future is in your hands!"



Fantasy out there!

Stimulating imagination, open-mindedness and creativity. Through the classroom window, you can see the sky, but if you stick a plastic sheet on which you have drawn dinosaurs, superheroes or UFOs, it will look like a bygone era, a comic book come true or an alien invasion! Turn the classroom window view into a Jurassic Park jeep window, a panoramic view of Stark Tower or a Space Invaders game level! Have first discussions about augmented reality!

The Perfect City

Learning to handle manipulative behaviours and question information. The quest aims at teaching children to detect and overcome manipulative behaviours by questioning information, intentions and fact-checking. Participants are divided into small groups and each group is joined by an adult. The teams task is to build "a perfect city", by drawing it on paper. The adult in each group has a hidden agenda to manipulate the results to reach their own specific goal. At the end of the game, the groups show their city to the other groups and explain, why their city is the perfect city and how they felt about the instructions of the adult.

Pop-up city of the Future

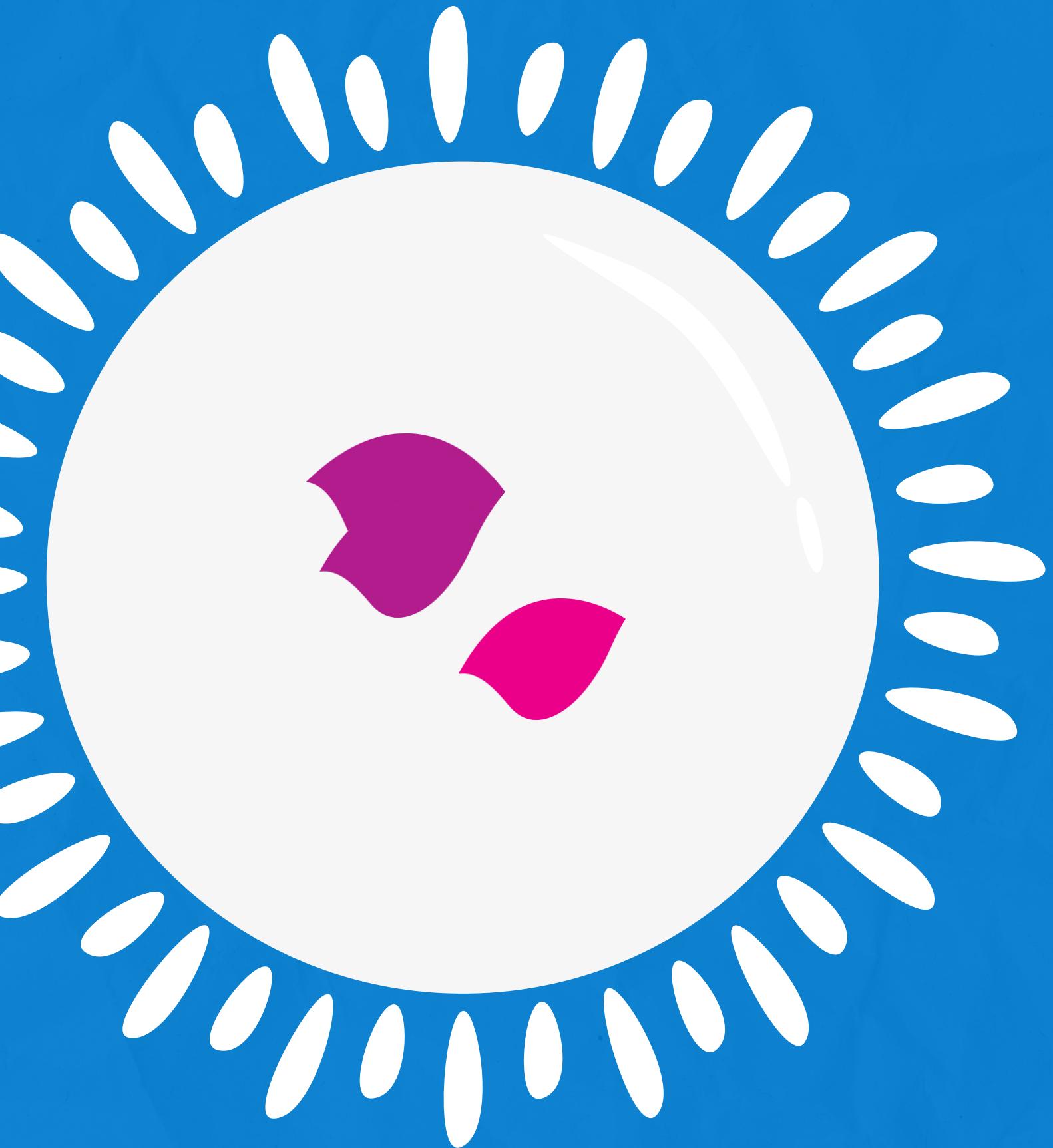
Creating artistic universes, understanding sustainable development processes. Players are asked to project an imaginary city, metamorphosed following energy, environmental, and demographic transformations ... Four universes are then explored by the participants and staged in the form of interactive pop-ups. Underwater, in the air, underground and in trees. The different Pop-ups can be assembled in Leporello (accordion book).

Memory

Discovering computation and programming. In the Memory quest, children link words (e.g. computer devices or Scratch commands) with a picture. The images are related to programming and computers. Children learn more about the world of technology and game programming, without using any real devices.

Iterative Clues

Raising awareness on legal and economic requirements to new technologies. Discover today's and tomorrow's world and new technologies while having fun! In this game a player (the referee) draws a concept card from a pile, keeps it secret and tells the first clue at the top of the card. All players can answer at the same time, but can only give 1 answer. The objective is to find the answer after disclosing all clues.



The future society seems in good hands! You have your role to play for making it real and sustain it! Congratulations! Here are the final feathers! Our little bird thanks you for bringing back harmony!



Congratulations brave adventurers, you overcome all the challenges along the way and found my feathers back. I can now fly again! Your bravery touched me and I will do my best to make the world a better place. Carry on in this way, love yourselves, be nice and fair with each other, take care of nature and invent machines that will lead to a better future. Together we can change things and hope for turning our planet into a perfect place.

Your turn to play!



25 Unplugged games, experiments and challenges are now ready to be used. The Unplugged project team would like to invite you to contribute to the improvement of our Unplugged educational game and playful interdisciplinary quests.

Is developing 21st century skills for the next generation a priority for you? Do you find the possibilities offered by Unplugged fascinating and applicable? Do you want to be part of the Unplugged Community?

Be part of the #UnpluggedAmbassador through your desire to inspire the willing to learn in young people! Play with children and give us feedback to co-create effective and fun STEAM and citizenship education activities.

BENEFITS FOR YOUR SCHOOL / ORGANISATION

- Be part of an international community and apply active pedagogies - peer exchange, competitive challenges, interaction at teacher and student level.
- Access and co-create innovative, fun, multidisciplinary learning activities that enhance students' intrinsic motivation and learning capacity.
- Be recognised for your action through certificates for participation in STEAM learning activities; open badges for problem-solving skills, computational thinking, SDO awareness, collaboration and co-creativity.
- Develop students' knowledge of active citizenship issues related to the SDGs, critical thinking, computational thinking, STEAM topics.

YOUR COMMITMENT

- Providing the infrastructure and logistics to deliver the Unplugged demonstration activities in classrooms.
- Supporting the identification of enthusiastic teachers to implement the learning activities in classrooms.
- Providing incentives, including time and possibly material resources, for the project - exchange of teachers to organise classroom learning activities.

PARENTS?

- Take advantage of Unplugged quests to have fun at home with simple, inexpensive, fun and meaningful activities.
- Make the link between school lessons and the issues children face in real life.
- Address complex concepts such as inclusion, respect and living together through guided activities.

OUR COMMITMENT

- Providing a complete set of Unplugged quests, brought together in a compelling narrative that leads through the Unplugged themed activity territories.
- Offering expertise and advice on how to implement the quests in the classroom.
- Helping to carry out the Unplugged learning activities in the classroom, if necessary.
- Providing virtual and physical access to the Unplugged ecosystem of educational tools and resources, including a set of craft materials, game boards (virtual and physical), the Unplugged community, gamified meeting rooms, etc.

We keep in touch!



COLLECT YOUR TOKEN OR ASK US QUESTIONS

Get in touch with us **by mail**: contact@unplugged-quest.eu and **collect your tokens and prizes!** We are here to help, do not hesitate to ask!



DISCOVER OUR PARTNERS

Visit us physically in **France, Belgium, Bulgaria, Italy and Austria** and discover our amazing spaces or discover us online through our website: <http://unplugged-metaverse.eu/>



CREATE YOUR OWN GAMES FOLLOWING OUR APPROACH

Feel free to **create your own games** thanks to our freely accessible template available here: https://miro.com/app/board/uXjVP9M0ggA=/?share_link_id=716659515511



GIVE US FEEDBACK AND CORRECTIONS

This quest and associated games have been made with the best quality possible and a true will to participate in the emergence of amazing content in the field of computational thinking, creativity and gamification in primary schools. Though, we are only humans! Should you discover mistakes or corrections to be made, do not hesitate to get in touch with us! We will make sure you get rewarded and credited for your help!



PARTNER WITH US IN NEW PROJECTS

All the members of the consortium are open to new cooperation, either with schools but also with creative companies and actors. We are launching regularly new initiatives. Keep us updated if you want to join them with us!



<http://unplugged-metaverse.eu/>



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