

# AQUA HEROES



**8+**  
**YEAR**  
**OLDS**

**TEACHER'S BOOKLET**

**5 INNOVATIVE GAMES ABOUT  
WATER CONSERVATION**

# Legal Notices

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## Institutional partners

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## Project partners

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**LE PARTENARIAT  
CENTRE GAÏA**

Le Partenariat realised this booklet with the following partners:



**HOCHSCHULE NORDHAUSEN**  
University of Applied Sciences

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## Credits

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# Games for Goals



Games for innovative, global citizenship education for the Sustainable Development Goals, or 'Games for Goals', is a project financed by the Erasmus+ European Union programme. The project was created by a consortium of non-governmental organisations and higher education institutes from 5 European countries, and is led by the French NGO Le Partenariat.

It addresses school education and aims to support teachers, school leaders and other teaching professionals through the stimulation of innovative learning and teaching practices in primary education. It aims to achieve these objectives while focusing on topics related to global citizenship & sustainable development. Its end goal is to trigger individual and collective behavioural change towards the Sustainable Development Goals (SDGs).

The project (2022-2025) aims to provide teachers with turnkey educational activities (games), a catalogue of resources and a methodology on innovative education. The project was conducted with the participation of many local actors, including primary-school teachers and higher education students.

This booklet presents the first game created by the Games for Goals team: Aqua heroes! Find more information about our other resources see: [www.gamesforgoals.eu](http://www.gamesforgoals.eu)



# SUSTAINABLE DEVELOPMENT GOALS

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future.

At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries, both developed and developing, in a global partnership. They recognise that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and promote global partnerships that support sustainable economic growth – all whilst tackling climate change and working to preserve our oceans, woodlands and wildlife.



source : <https://sdgs.un.org/goals>

# Global citizenship education

Global Citizenship Education (GCE), or Education for Citizenship, is a teaching practice that has its roots in popular education. GCE encourages authentic contributions and exchanges via positive dialogue.

GCE is based on the idea that: 'we are connected not just with one country but with a broader global community. So by positively contributing to it, we can also influence change at regional, national and local levels'.

GCE is part of a long-term educational approach that values collective intelligence and cultural diversity and encourages participants to take action and commit themselves to active citizenship. The idea is to raise awareness of global citizenship issues across all types of audiences.

One of the main methodologies used in GCE is active teaching, which places the participant at the heart of their learning, based on the premise that we learn best by doing.

GCE's approach is a vehicle for understanding the major challenges of our time (equality, human rights, the environment, etc.). The use of participatory teaching tools creates a learning environment that encourages discussion and stimulates collective intelligence.

*Source :*

*<https://www.unesco.org/en/global-citizenship-peace-education/need-know>*

# Innovative éducation

7

Aqua Heroes aims to enhance the innovative teaching of global citizenship and sustainable development in primary education across Europe.

By integrating the SDGs into the curriculum, children not only learn about these crucial objectives but also develop a sense of agency and empowerment.

The game achieves this through a pedagogy that is playful, holistic, and participative. By gamifying the SDGs, Aqua Heroes makes these goals tangible and realistic, thereby fostering active participation and engagement among children.

Holistically designed and consisting of 5 sub-games, Aqua Heroes offers a wide variety of activities that cater to the head, heart, and hands. It combines storytelling, arts-based and embodied pedagogies with more traditional cognitive approaches. This diverse methodology ensures a comprehensive learning experience.

The game emphasizes conviviality, encouraging collaborative problem-solving and solidarity among students. Through this approach, Aqua Heroes cultivates a supportive and engaging learning environment, preparing children to become informed and active global citizens.

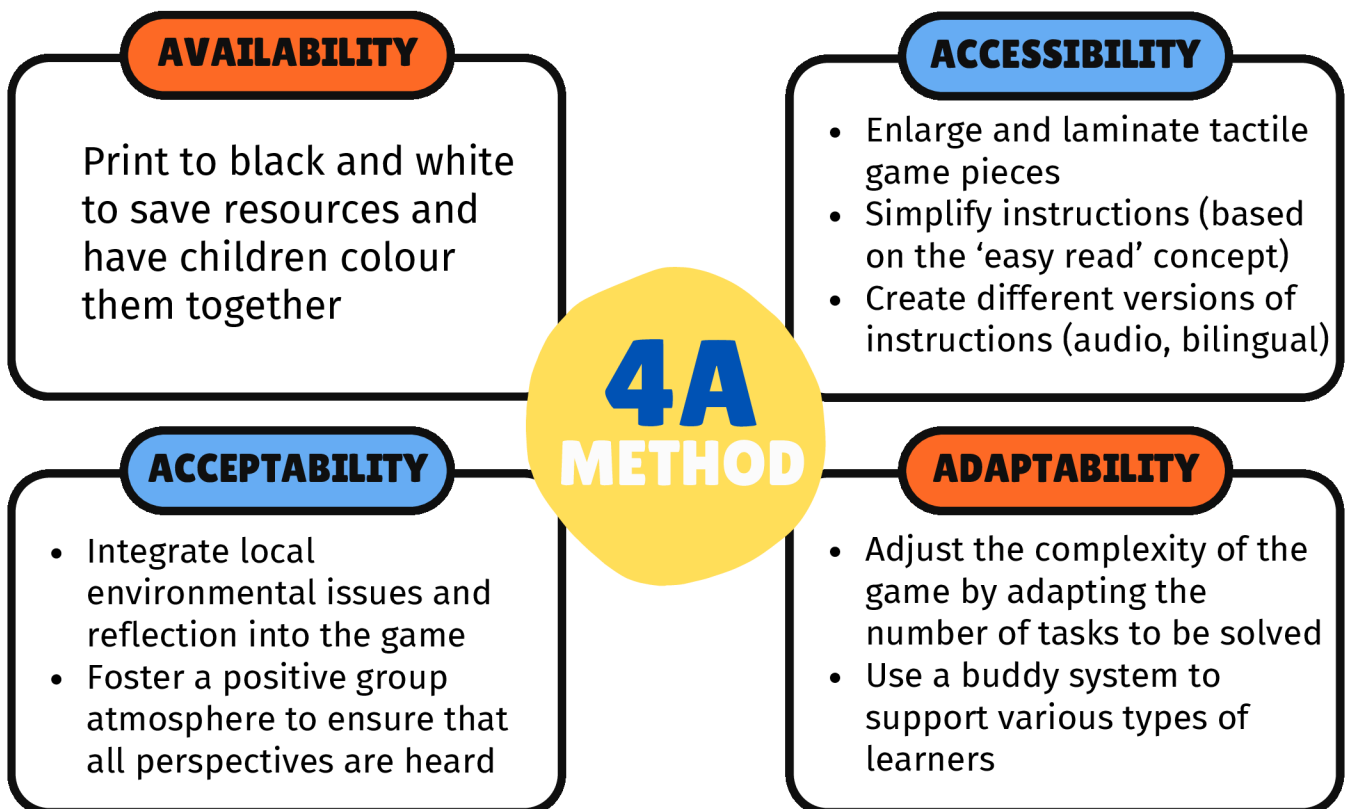


# Inclusive éducation

Inclusive education ensures that every child, regardless of ability, background, or learning needs, can meaningfully participate in learning activities. This aligns with the principles of the UN Convention on the Rights of Persons with Disabilities (CRPD), which emphasizes the right to inclusive education for all, and which Aqua Heroes supports.

Thus inclusive education needs to be implemented in a way that allows all pupils to participate. To this end, the game has been intensively tested in European classrooms to identify challenges and refine its design. Nonetheless, this type of print-and-play games for groups recognises its limitations, such as the reliance on reading, the cognitive demands of understanding complex concepts, less durable and tangible physical materials, a lack of audio or digital interactivity, time constraints, and group dynamics that may hinder full participation.

To address these issues, teachers can apply various frameworks to enhance inclusivity. For example, both the UN 4-A framework and the Universal Design for Learning (UDL) allow for theory-based and practical approaches to education that facilitate the participation of every child by recognizing their unique abilities and learning needs.





# Water focus



Water and sanitation are at the core of sustainable development, however in recent decades over-exploitation, pollution, and climate change have led to severe water stress across the world.



Sustainable Development Goal 6, on water and sanitation, as part of the 2030 Agenda for Sustainable Development, provides the blueprint for ensuring sustainable management and availability of water and sanitation for all.

## KEY FIGURES

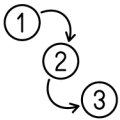


# Aqua Heroes games



## LEARNING OBJECTIVES

- During the game pupils work together on a common goal towards sustainability.
- Pupils can explain the causes and consequences of threats to clean water and possible solutions.
- Pupils share their reflections on their own use of water.
- Pupils plan actions together for a sustainable use of water for all life forms in their environment.



## LESSON PLAN

- 10' : introduce the game and give the main instructions
- 30' : playtime for sub-games in groups
- 10' : groups come together for the final assignment
- 15-30' : discussion



## PREPARATION

Set up the room with one central table (without chairs) and five tables for the groups (with as many chairs as required for all your pupils).



*Recommendation: play the game up to five times with the same class, switching the groups around!*

# Aqua heroes games

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## INITIAL SITUATION - CONTEXT

*Our heroes are five children who live in different villages next to a river, together with their families and grandparents. Many of their rivers are suffering from pollution. The grandparents often tell stories about how clean and full of life the rivers used to be when they were young. Our heroes become aware of how important a healthy river is and how the river's well-being affects all the plants, animals, fish and people who live in and around it.*

*Our heroes decide to go on a quest to discover where the pollution comes from. On the way they will face all sorts of challenges. Luckily they will be helped by the wisdom their grandparents shared and the beings they meet on the way.*

*The players' goal is to regenerate the power of the rivers. On the way, each player might very well discover their own special power! At the end of their quest, they will need to all come together to understand what causes the problems and how to find solutions together.*

Create 5 groups, and assign each group to a table/board. Each group needs to start by reading their start/instructions card, which will guide them along their path. Only one group (plastic pollution) has no card, they simply start on page 1 of their booklet.

Once each group has finished solving all their challenges, they will be instructed to go to the main table/board. While waiting for the other groups to finish, they should follow the instructions to reflect on their journey.

Take note: your group has 30 minutes to complete all the challenges and reach the end of the river!

# 1. Misuse



Laura



30MN



## LEARNING OBJECTIVES

- Pupils share their reflections on their own use of water.
- Pupils think about how to use less water at home.



## MATERIALS

- Board with 5 houses (orange, red etc.)
- 5 envelopes with a drawing of each house (orange, red etc.)
- 5 sets of challenge cards (orange, red etc.)
- a set of solutions cards (orange, red, etc)
- a start card



## PREPARATION

- Put the challenge cards in the same coloured envelopes.
- Put the envelopes on the same coloured part of the board, with the drawing of the house face up.
- Put the solution cards in a pile, face down, next to the board.
- Put the start card face up, next to the board.

# Misuse

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## ACTIVITY DESCRIPTION

During the game, the pupils will explore the village and meet its inhabitants. They will move from house to house, but they do not know yet in which order!

Every envelope represents a house, and includes a challenge they have to solve.

Every time they overcome a challenge, the solution card will tell them which house they need to go to next.

They start the game by opening the orange envelope, to discover why there is no water in the village.



## KEYS TO LEAD THE DISCUSSION

- What is the main problem in the village?
- What are the causes behind the problem?
- What solutions did you find for the problem?
- What daily activities consume a lot of water?
- What can you do to reduce water waste?
- Why is it important not to waste water?



Go to page 31 to download the contents of the game

## 2. Plastic Pollution



30MN



### LEARNING OBJECTIVES

- Pupils think about the impact of plastic in the water.
- Pupils think about how to reduce plastic pollution.



### MATERIALS

- The booklet
- A pen and piece of paper
- The game envelopes
- The crossword, puzzle, river items (pictures) and question cards



### PREPARATION

- Glue the 3 envelopes into the right place in the booklet
- Put the 16 puzzle pieces into envelope A
- Put the 6 questions cards into envelope B
- Put the 57 river items into envelope C
- Laminate the crossword
- Place the start card face up on the table

# Plastic Pollution

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## ACTIVITY DESCRIPTION

By reading the booklet during the game, the pupils will explore the river in the village and discover what the problems with the plastic are.

The booklet will function as a *choose-your-own-adventure* book, and invite the pupils to make strategic choices together.

They start by opening the first page of the booklet and reading the instructions.



## KEYS TO LEAD THE DISCUSSION

- What is the main problem in the village?
- What are the causes behind this problem?
- What solutions did you find?
- What daily activities generate plastic pollution? Why & How?
- What can you do to reduce plastic pollution?
- Why is it important not to pollute rivers?



Go to page 31 to download the contents of the game

# 3. Chemical Pollution



Sara



30MN



## LEARNING OBJECTIVES

- Pupils think about the impact of chemical pollution in water.
- Pupils think about how to reduce chemical pollution.



## MATERIALS

- A board with empty spaces for 5 envelopes
- 5 'task' envelopes
- 5 'solutions' envelopes
- A start card



## PREPARATION

- Put the items for each task, or the solutions cards, in the right envelope.
- Put the solution envelopes in the corresponding task envelopes.
- Put the tasks envelope on the right place on the board, with the *dirty* side up.
- Put the start card face up, next to the board.



# Chemical Pollution

77



## ACTIVITY DESCRIPTION

During the game, the pupils will do 5 tasks to understand river pollution. Each task is in an envelope, so move from one envelope to the next, following the instructions written on each one.

When the pupils have completed a task, they can turn over the envelope to make the river clean again.

After solving all the tasks, they will go to the central board to join the other players.



## KEYS TO LEAD THE DISCUSSION

- What is the main problem in the village?
- What are the causes behind this problem?
- What solutions did you find?
- What activities generate chemical pollution? Why & How?
- What can you do to reduce chemical pollution?
- Why is it important not to pollute water?



Go to page 31 to download the contents of the game

# 4. Flooding

Alex



30MN



## LEARNING OBJECTIVES

- Pupils share their reflections about the causes of flooding.
- Pupils think about how to reduce flooding.



## MATERIALS

- A board
- A weather die
- 35 water tiles
- The items for each task
- A start card



## PREPARATION

- Put the board in the middle of the table.
- Distribute 30 water tiles across the squares on the board.
- Keep 5 tiles aside.
- Put the items for the tasks next to the board.
- Put the start card face up next to the board.



For the task 'Be logical' you can have some tiles in place already if it seems too complex for your pupils.

# Flooding

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## ACTIVITY DESCRIPTION

During the game, pupils will try to help to reduce the amount of flooding.

The objective is to remove water tiles from the board so that the areas around the river are no longer flooded.

For each successfully completed task, they can remove water tiles.

They must try to complete as many tasks as possible to reduce the flooding.



## KEYS TO LEAD THE DISCUSSION

- What is the main problem in the village?
- What are the causes behind this problem?
- What solutions did you find?
- What daily activities cause flooding?
- What can you do to help to reduce flooding?
- Why is this important?



Go to page 31 to download the contents of the game

# 5. Drought



Samuel



30MN



## LEARNING OBJECTIVES

- The pupils share their reflections about the causes of drought.
- The pupils think about how to reduce drought.



## MATERIALS

- A board representing a dried-up river
- 17 river tiles
- 6 cards in 5 sets: mime/dance, draw, missing word, quiz, memory
- 5 challenge card rules
- A start card



## PREPARATION

- Put the board in the middle of the table.
- Put the river tiles next to the board.
- Put each set of cards in a pile, face down on the table.
- Put the 5 challenge card rules face up on the table.
- Put the start card next to the board.

# Drought

21



## ACTIVITY DESCRIPTION

During the game pupils will try to make water flow back into the river by taking on challenges.

There are five types of challenges: Draw, Mime or Dance, Memorise, Multiple Choice Quiz, and Missing word and each type of challenge has 3 levels.

The more difficult the challenge is, the more water will flow back!

If pupils fail to overcome the challenge, the river won't flow back and they will have to pass their turn.

The aim is to make the river flow again completely.



## KEYS TO LEAD THE DISCUSSION

- What is the main problem in the river?
- What are the causes behind this problem?
- What solutions did you find?
- What daily activities cause drought?
- What can you do to avoid drought?
- Why is it important?



Go to page 31 to download the contents of the game

# Final challenge



10MN



## MATERIALS

- Token from Misuse: a seed (*metaphor of knowledge*)
- Token from Drought: soil
- Token from Flooding: a flask of water
- Token from Plastic pollution: a plastic bottle
- Token from Chemical pollution: organic fertilizer



*Recommendation: Use real items and plant seeds with pupils so they can watch them grow.*



## ACTIVITY DESCRIPTION

Read the text on the next page as a conclusion for the 5 games. Then give a token to each team, depending on the game they played.

The teams have to cooperate to discover the order in which they have to gather the tokens, and to see what happens when they put the tokens together. The tokens can be slotted together to create one symbolic object (see p24).

Cut along the red lines to slot the tokens together in this order:

1. Plastic bottle - as a flower pot
2. Soil
3. Seeds
4. Water
5. Natural fertilizer



## KEYS TO LEAD THE DISCUSSION

- What did you learn from the game and from the final challenge?
- Why is it important to protect water? Why is it called *blue gold*?
- What can you do at school to protect water?
- What are you ready to do in your life to conserve water?
- How do you think you can influence your family to save water?

# Final challenge

23



## FINAL SITUATION

*Congratulations Aqua Heroes!*

*You have completed all the challenges and received tokens as a reward.*

*They represent the knowledge and skills you have gathered and the actions you have taken to help regenerate the rivers.*

*After your long journey you emerge out of a forest and in the distance you see a big city. You have seen pollution on your journey, but could the city be the source of the problems that are harming your rivers? You set off to find out more. As you get closer to the city you see smoke coming out of the chimneys, plastic and rubbish in the water, private swimming pools and a once beautiful lake that is now a barren wasteland.*

*On the way you notice you are not alone, there are other groups of children travelling towards the city. As you walk along you share the stories of your journey. Like you they are also carrying different tokens. You become curious, what do they have? Once you get to the city you decide to share everything: a plastic bottle, soil with seeds, natural fertilizer, a flask of water and your knowledge of sustainable water use.*

*This is your final task. You each hold a part of the puzzle, so collaboration is the key. The challenge is to figure out how these elements work together to create a sustainable future for the city. When every group has shared their tokens and you have placed them in the right order, something incredible happens! The city starts to transform. The seeds you plant grow into beautiful gardens that bring life back to the city. What's more, the inhabitants finally understand how precious water is and how essential it is for all living beings. They promise to take more care.*

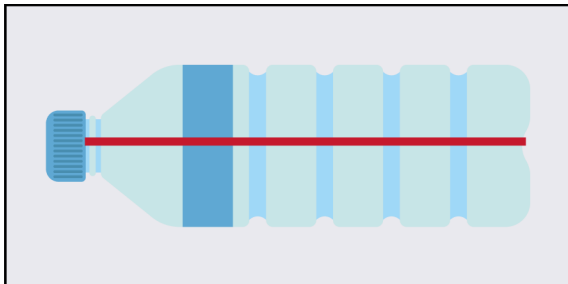
*You have learned that by working together, being brave and using your skills and knowledge, your actions have an impact. Now you can return to your villages and their clean, healthy rivers.*

*Thank you for playing this game, we hope you enjoyed it! By the way, did you also discover your own special power?*

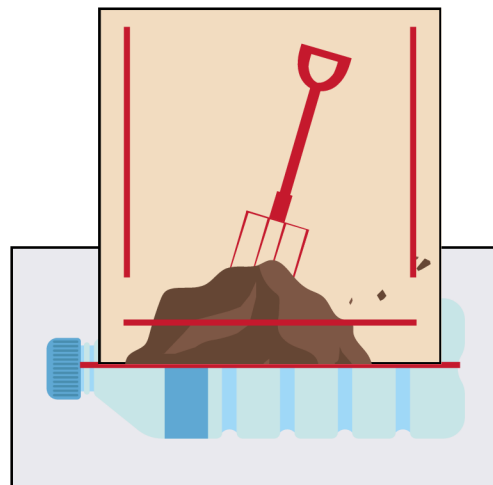
# Instructions to assemble the tokens

Cut along the red lines and assemble the tokens in the following order:

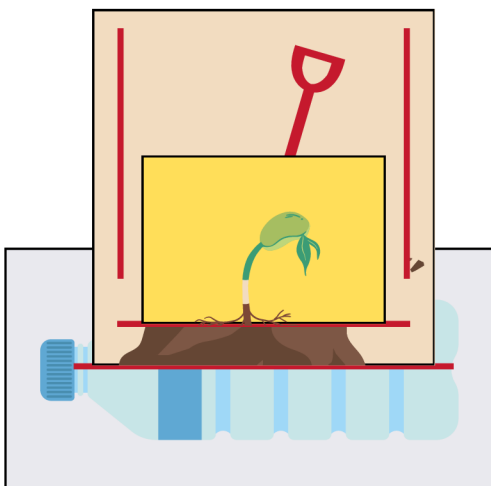
1



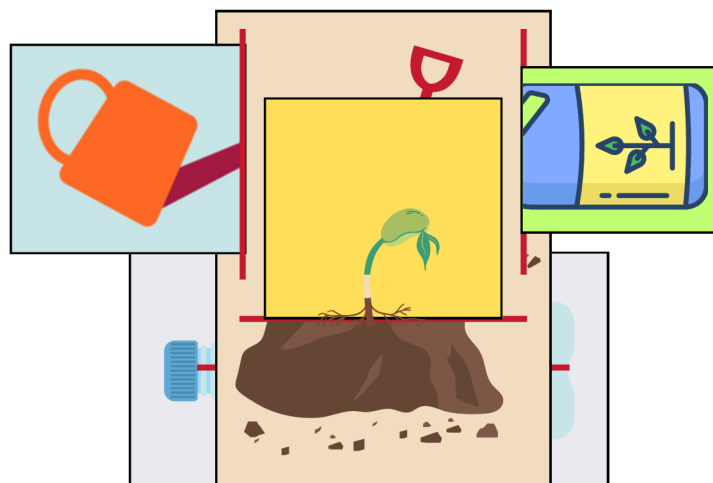
2



3



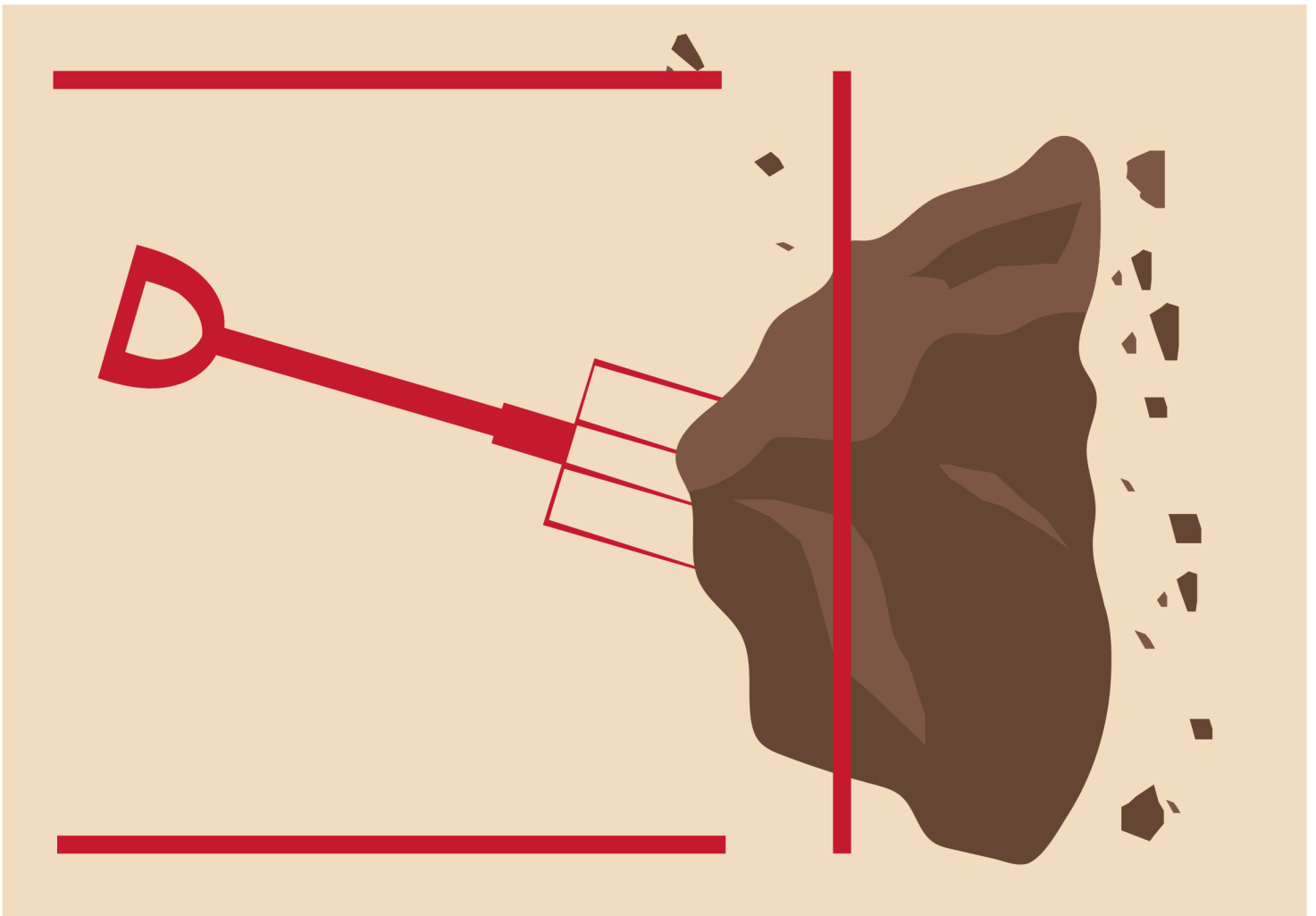
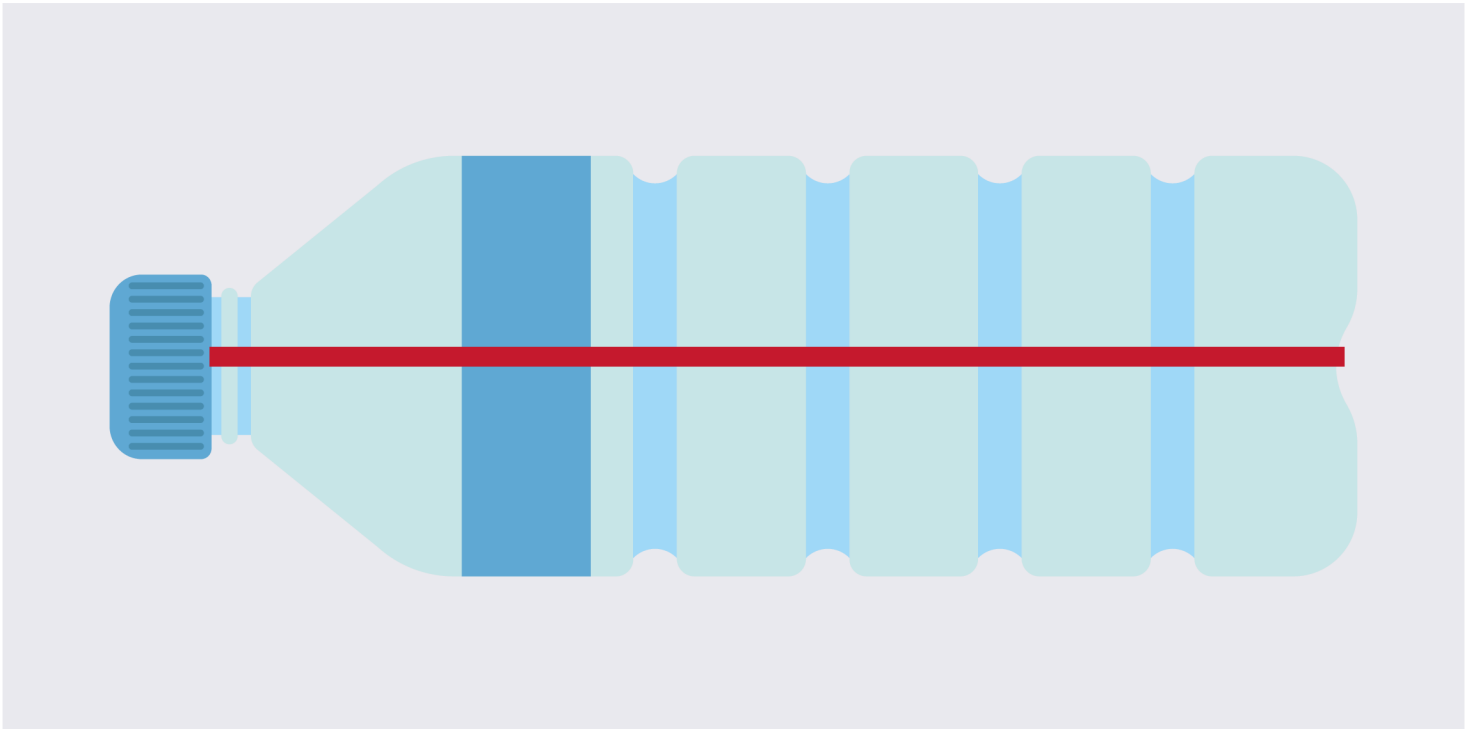
4





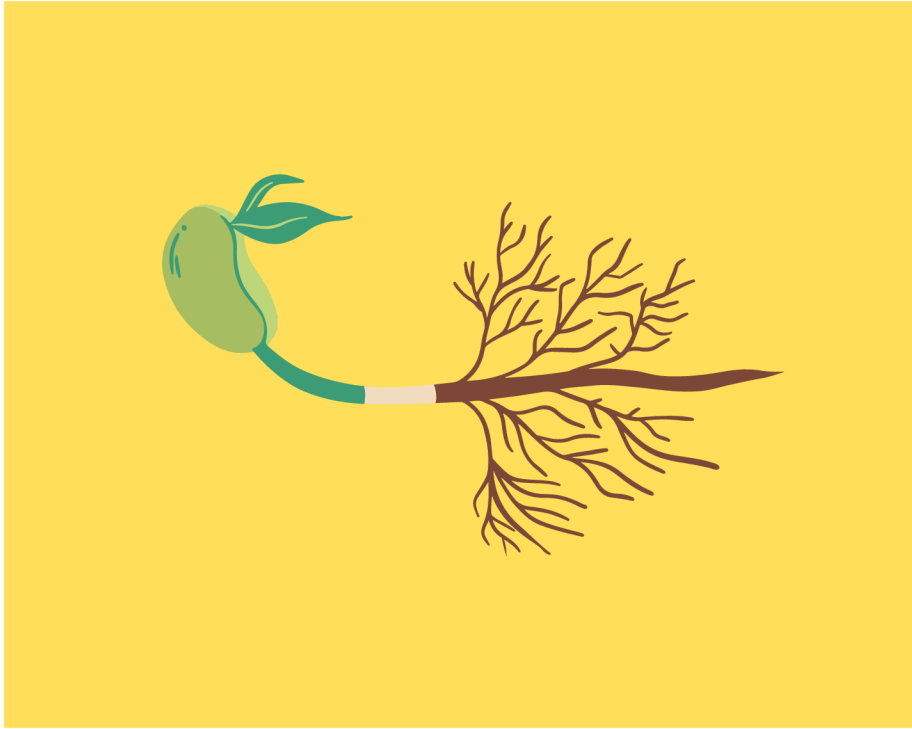
# Tokens

Cut out the following cards and give one to each group (see 'Materials' on page 22) for the collective final challenge.



This page is here so that you can print the whole document double-sided and cut out the pictures on the last pages easily.

# Tokens



This page is here so that you can print the whole document double-sided and cut out the pictures on the last pages easily.

# Rewards for the groups



**Plastic bottle**



**Organic  
fertilizer**



**Seeds of  
knowledge**



**Water**



**Soil**

This page is here so that you can print the whole document  
double-sided and cut the pictures of the last page easily.



# Links

Click on the button to download game materials or scan the QR code

**Game materials**

**Impact questionnaire**



**DOWNLOAD VERSIONS OF THE GAMES IN OTHER LANGUAGES FROM THE WEBSITE**



Dutch



French



German



Portuguese

Find more information about  
**Games for Goals** project on  
[www.gameforgoals.eu](http://www.gameforgoals.eu)

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