



EARTHIAN VS PLASTIC



Funded by
the European Union



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About the game

Earthian vs Plastic is a board game born out of passion, creativity, and love for our planet! It provides players with not only a fun and engaging experience but also valuable insights into how we can protect our planet - especially Europe - from plastic pollution.

In the game, the “Earthians” are the heroes who take on the plastic enemy, safeguarding European countries and working to eliminate plastic pollution.

This innovative game was created by a team of young and enthusiastic environmental educators as part of the inspiring project, **EARTHgames4EyoUth**. The project was funded by the European Union, through the Erasmus+ Programme.

How to play

Firstly, let's get you acquainted with all the pieces of the game and the rules will shortly follow!



The playing board

This is your “battle” ground for the entire game. European countries are depicted in an original interpretation. Since we are only ONE EUROPE, we chose not to have a geographically accurate map, but rather a fun and surprising approach, by mixing countries!

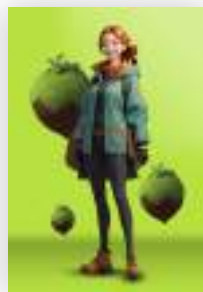
On this board, you will place your mini-Earthians and the “Protected from plastic” labels, on the countries you are protecting.



The heroes

There are 4 Earthians in the game, each inspired by one of the four natural elements: water, air, earth, fire. Each Earthian also has their mini version, to be placed on the playing board, during the game.

There is also a fifth player involved: the Master of the Game (MoG), who will make sure players follow the rules, distributes points and instruction cards, reads the questions from the cards and so on. The role of the MoG is detailed in the next pages.



The instruction cards

Each player has a small instruction card, which summarizes the rules of the game.



"Protected from plastic" label

These small labels are placed on a country on the playing board, once the Earthian manages to protect it from plastic (by gathering enough points).



Points of power, Q&A cards, Challenge cards, Plastic facts cards

Earthians need to gather enough points in order to protect their countries from plastic. The points can be gathered in 4 ways:

1. **Q&A cards:** a series of cards with questions, related to different information on plastic pollution, waste pollution in general, EU directives etc. The cards have different levels of difficulty and a certain number of points. The player receives the points if the answer is correct or very close! The MoG will decide upon this. Some cards can be found twice in the game, so pay attention to the answers!



Q: For 1 point: what product can you use to replace a plastic bag for your groceries?

Textile bag, paper bag, any A: kind of reusable bag

2. **Challenge cards:** by performing different challenges, players can win points. These cards also include lucky & risky cards, meaning that they can simply win a number of points, or simply lose pointswithout doing anything. Some challenges can be found twice in the game.



Spot 3 recyclable plastic objects around you in under 20 seconds.

Collect 2 points upon completion.

3. **Plastic facts cards:** these cards contain more detailed information about different plastic facts. The players need to read this out loud, discuss with the other players and share the points, no matter who chose the card. The cards encourage debate, critical thinking, argumentation, but also cooperation and empathy for the other players. But the discussion has a limit of 2 minutes, so everyone needs to express their opinion during this time. The points go to all active players in the discussion. The MoG can decide upon who receives the points and can also extend the discussion time up to 5 minutes, if needed.



The Green Deal is the EU's key to climate-neutrality and sustainability, it is a roadmap for Europe becoming a climate-neutral continent by 2050. Together with the other players, search online for the Green Deal goals and discuss them. Each player active in this task receives 3 points.*

Each player active in the debate receives 3 points.

*Information source: European Parliament

4. **Roll a double dice on the first try:** this gives the player 1 point. It can be done online, at this link: <https://virtualdiceroll.com/2/en/two-dice> or following the QR code.



Small eco-friendly note: we chose not to have 3D plastic components and tried to keep the pieces at a minimum, to be faithful to our principles! This is why you won't find any dice or plastic figures for the Earthians.

The game pieces on short:

- 1 playing board
- 4 Earthians (each with 5 mini-Earthians)
- 4 instruction cards
- 10 "Protected from plastic" labels
- Points of power cards: 20 × 1 point, 20 × 2 points, 20 × 3 points
- 15 Q&A cards
- 25 Challenge cards
- 15 Plastic facts cards

And now for the actual **RULES OF THE GAME!**

HOW TO START

Each player chooses their Earthian, hopefully by friendly consent with the other players. You can establish the order of playing on your own, through whatever method you want. We encourage you to make your own decisions! Or the MoG can help you decide!

After choosing your Earthian, in the established playing order you can choose the first country you want to protect. Place a mini-Earthian on that country, on the playing board, so that everyone knows who is protecting it.

The MoG will give you your first 3 points of power and also an instruction card, which will be useful to remind you the rules during the game.

HOW TO CONTINUE

The next step is to start gathering more points of power for protecting your first country.

To gather more points, you have the 4 options presented before: Q&A cards, Challenge cards, Plastic facts cards and roll a double dice on the first try. You can only choose one per turn and you need to go through all of them before you can choose the same again (for example, if you start by rolling the dice, you will need to go through the other methods on the next turns, before being able to roll the dice again).

For 10 points, you can purchase the "Protected from plastic" label and place it on your country, on the playing board. Only after you do this, you will be able to move to the second country you want to protect.

HOW IT ENDS

The game ends when the first Earthian protects 3 countries and becomes the most amazing superhero!

Small fun and friendly note: the rules are at a minimum so to speak, because we wanted to encourage players to adapt the game to their team. So, if you find yourself wondering "What do we do in this situation? There is no explanation for this in the instructions!", that means that you can decide as a team what to do. Use your freedom of thought and adaptability to make this a fun experience!

Tasks of Master of the Game (MoG)

The fifth player should be the MoG, who has the tasks below. If there is no fifth person in your team, you can adapt and one of the other players can take also this role or you can split the tasks among yourselves. Be creative! *Just be aware that Q&A cards have answers on them, so another player has to read them, and not the one who chose them!*

- Arranges the cards on the playing board on their respective places
- Distributes instruction cards to all players;
- Distributes Earthian and mini-Earthians cards to all players, after they choose their hero;
- Distributes points (3 for each player at the beginning of the game and later depending on how many points players gather on each turn);
- Reads out loud the questions on the Q&A cards and decides if the answer was close enough for the player to receive the points;
- Reads out loud challenge cards and gives points if the challenges are fulfilled;
- Reads out loud the plastic facts cards and decides if all players were active in the discussion to receive points. MoG also keeps time for the 2-minute discussions;
- Takes back points from players when the case;
- Gives "Protected from plastic" labels when players have enough points;
- Makes sure players follow the game rules.

Let's get started!



Authors - Andreea-Ștefania Ionașcu and Anca-Maria Panait, *Mare Nostrum* NGO

Graphic Designer - Vlăduț-Andrei Sucmănaru

Instruction card

These are the summarized instructions for playing **Earthian vs Plastic**. Check the instruction brochure for more details!



Choose your Earthian and take 3 points from the Master of the Game (MoG)



Establish the playing order together with the other players or with the help of MoG



Choose the first country you want to protect



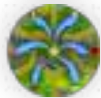
Place your mini-Earthian on the chosen country on the playing board



Gather 10 points of power and purchase the "Protected from plastic" label



Place the label on your country on the playing board



Choose the second country you want to protect and repeat!

The game ends when the first Earthian protects 3 countries and becomes the most amazing superhero!

Ways of gathering points of power: Q&A cards, Challenge cards, Plastic facts cards, rolling a double on the first try (check instruction brochure for QR code/ link). You can only choose one per turn and you need to go through all of them before you can choose the same again (for example, if you start by rolling the dice, you will need to go through the other methods on the next turns, before being able to roll the dice again).

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Q & A



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PLASTIC FACTS

CHALLENGE





One Europe.
It doesn't matter where you are.

<p>Q: For 1 point: what's the name of the EU's roadmap for Europe becoming a climate-neutral continent by 2050?</p> <p>a. Cool Climate b. Green Deal c. Climate Deal</p> <p>A: Green Deal</p> <p>Information source: European Parliament</p>	<p>Q: For 1 point: does the EU have a plastic strategy?</p> <p>A: Yes</p> <p>Information source: European Parliament</p>	<p>Q: For 2 points: approximately how many tonnes of plastic are produced each year? You have 2 chances to guess the correct answer.</p> <p>a. 50-55 million b. 200-250 million c. 400-450 million</p> <p>A: 400-450 million</p> <p>Information source: UNEP</p>	<p>Q: For 2 points: approximately how many tonnes of plastic are estimated to be produced by 2050, if we continue in the same way? You have 2 chances to guess the correct answer (or to get as close as possible!).</p> <p>A: 1100 million</p> <p>Information source: UNEP</p>	<p>Q: For 2 points: what percentage of single-use plastic products for food and beverage containers ends up in landfills or as unregulated waste?</p> <p>a. 15% b. 35% c. 70% d. 85%</p> <p>A: 85%</p> <p>Information source: UNEP</p>
<p>Q: For 2 points: what percentage of single-use plastic products are produced from fossil fuel?</p> <p>a. 2% b. 57% c. 98%</p> <p>A: 98%</p> <p>Information source: UNEP</p>	<p>Q: For 1 point: what product can you use to replace a plastic bag for your groceries?</p> <p>A: Textile bag, paper bag, any kind of reusable bag</p>	<p>Q: For 1 point: what sustainable alternative do you have for plastic straws?</p> <p>A: Metal straws, paper straws, glass straws, bamboo straws</p>	<p>Q: For 1 point: how can you use fewer plastic bottles but still be hydrated all the time?</p> <p>A: By using a glass bottle, a metal flask, a thermos bottle</p>	<p>Q: For 1 point: when discarded in nature, do plastic items fully disappear in time?</p> <p>A: No. Surprise: 1 bonus point if the player says the plastic items break down in small pieces (microplastics)</p>

Q: For 2 points: can you name at least 5 plastic-free products that you already buy or can buy from now on, to reduce plastic when shopping?

A: Any product that can be bought without packaging or with sustainable packaging: paper, cardboard, textile etc.; products that can be put in your own containers; products that can be bought in bulk thus reducing the packaging material; handmade or locally produced items that use less or no plastic. Be creative with your answers!

Q: For 1 point: give an example of how you can avoid plastic for your cosmetics or hygiene products.

A: Using a soap or shampoo bar, wrapped in paper, instead of a shower gel or classic shampoo; making your own products, such as toothpaste, deodorant or soap bars; using a bamboo toothbrush or bamboo buds; buying long-term reusable products, such as metallic razors, reusable makeup remover pads, luffa sponge etc.

Q: For 1 point: does plastic have benefits? Name one of them.

A: It is affordable, it can successfully replace glass objects that can break easier, a lot of plastic objects can be used for many years, it is light-weighted, it is very versatile etc.

Q: For 1 point: briefly explain what microplastic is in your own words.

A: Researchers define microplastics as plastic particles ranging in size from 5 millimeters (mm), which is about the size of a pencil eraser, to 1 nanometer (nm). Acceptable explanations include the terms "very small pieces/ particles", "microscopic pieces/ particles", "plastic breaking down in small pieces/ particles" and similar.

Q: For 1 point: how can you convince people to use less plastic?

A: A large range of answers is acceptable. Some examples include using social media to raise awareness, organizing campaigns to highlight the impact of plastic pollution, sharing images or videos of environmental damage, or setting a personal example by using reusable items and encouraging friends to do the same.





<p>You are lucky!</p> <p>You win 2 points!</p>	<p>You are lucky!</p> <p>You win 1 point!</p>	<p>You risked it, but unfortunately you were unlucky.</p> <p>You lose 2 points :{</p>	<p>You risked it, but unfortunately you were unlucky.</p> <p>You lose 1 point :{</p>	<p>You risked it, but unfortunately you were unlucky.</p> <p>You lose 2 points :{</p>
<p>You risked it, but unfortunately you were unlucky.</p> <p>You lose 1 point :{</p>	<p>You risked it, but unfortunately you were unlucky.</p> <p>You lose 2 points :{</p>	<p>You risked it, but unfortunately you were unlucky.</p> <p>You lose 1 point :{</p>	<p>Make a social media story about playing the game.</p> <p>You win an advantage: block a player for 1 turn, whenever you want during the game.</p>	<p>Make a social media post about plastic pollution.</p> <p>Collect 3 points upon completion.</p>

Spot 3 recyclable plastic objects around you in under 20 seconds.

Collect 2 points upon completion.

Create a campaign text to convince people to be more "plastic aware", in 30 seconds.

Collect 2 points upon completion.

Name 5 sustainable objects in 20 seconds.

Collect 2 points upon completion.

Name 3 products that you can use as an alternative to plastic products, in 20 seconds.

You win an advantage: block a player for 1 turn, whenever you want during the game.

Take a selfie with your Earthian.

Collect 1 point upon completion.

Be creative! Mime a person that doesn't care about plastic pollution.

Collect 1 point upon completion.

Be creative! Mime a person that cares about plastic pollution.

Collect 1 point upon completion.

Name 3 reasons for avoiding plastic, in under 30 seconds.

Collect 2 points upon completion.

Name a type of plastic waste that you consider to be very dangerous for the oceans, seas or rivers. Explain your choice.

You win an advantage: block a player for 1 turn, whenever you want during the game.

Look around and find an object that contains plastic and that you think it's hard to recycle in your country.

Collect 2 points upon completion.

CHALLENGE



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CHALLENGE



Name 3 different types of plastic waste that you see very frequently on the streets.

Collect 1 point upon completion.

For sure, at some point in your life you didn't recycle an object that could have been recycled.

You lose 1 point :(

You didn't always choose the most sustainable products.

You lose 1 point :(

You should choose more often to avoid plastic products!

You lose 2 points :(

You went to the market without your textile bag and you had to buy a plastic bag.

You lose 1 point :(

CHALLENGE



CHALLENGE



CHALLENGE



CHALLENGE



CHALLENGE



<p>In June 2019, the EU adopted new rules to target the issue of plastic marine litter. It includes a 25% target for recycled content in plastic bottles by 2025 and 30% by 2030. Debate with the others if you think this is achievable and why or why not.*</p> <p>Each player active in the debate receives 2 points.</p> <p>*Information source: European Parliament</p>	<p>In Europe, the most used way to dispose of plastic waste is energy recovery, which means turning plastic waste into usable heat, electricity, or fuel through incineration or other processes. Recycling is the second most used way of treating plastic waste. Debate with the others which country in Europe you think manages best and worst the disposal of plastic waste.*</p> <p>Each player active in the debate receives 2 points.</p> <p>*Information source: European Parliament</p>	<p>About 22 million tonnes of plastic found its way into soils, rivers and oceans in 2019, and plastic leakage is projected to double by 2060. What do you think you and your family & friends can do to prevent it? Debate with the others.*</p> <p>Each player active in the debate receives 3 points.</p> <p>*Information source: European Parliament</p>	<p>In 2019, plastics generated 1.8 billion tonnes of greenhouse gas (GHG) emissions – 3.4% of global emissions – with 90% of these emissions coming from their production and conversion from fossil fuels. By 2060, emissions from the plastics lifecycle are set to more than double, reaching 4.3 billion tonnes of GHG emissions. Debate with the others what solutions exist for preventing this from happening.*</p> <p>Each player active in the debate receives 3 points.</p> <p>*Information source: European Parliament</p>	<p>The main issues complicating plastic recycling are the quality and price of the recycled product, compared with their unrecycled counterpart. Plastic processors require large quantities of recycled plastic, manufactured to strictly controlled specifications and at a competitive price. If you had a plastic recycling facility, what would you do? Debate with the others.*</p> <p>Each player active in the debate receives 2 points.</p> <p>*Information source: European Parliament</p>
<p>In April 2024, the European Parliament adopted new measures to make packaging more sustainable and reduce plastic packaging waste in the EU. The rules require EU countries to reduce total packaging waste per capita compared to 2018 by 5% by 2030; 10% by 2035 and 15% by 2040. Debate with the others if you think this is achievable and why or why not.*</p> <p>Each player active in the debate receives 2 points.</p> <p>*Information source: European Parliament</p>	<p>The Green Deal is the EU's key to climate-neutrality and sustainability, it is a roadmap for Europe becoming a climate-neutral continent by 2050. Together with the other players, search online for the Green Deal goals and discuss them. Each player active in this task receives 3 points.*</p> <p>Each player active in the debate receives 3 points.</p> <p>*Information source: European Parliament</p>	<p>As part of the European Green Deal (the roadmap for Europe becoming a climate-neutral continent by 2050), 55% of plastic packaging waste should be recycled by 2030. Do you think this is achievable or not? Debate with the others.</p> <p>Each player active in the debate receives 2 points.</p> <p>*Information source: European Parliament</p>	<p>Plastics are everywhere in our daily life: they are used in packaging, buildings, cars, electronics, agriculture and other sectors. Plastics production is 20 times higher than in the 1960s, and is forecast to almost quadruple by 2050. Together with the other players find solutions that people can apply in their daily lives to avoid this from happening.*</p> <p>Each player active in this task receives 3 points.</p> <p>*Information source: European Parliament</p>	<p>Cheap, durable and versatile, plastics bring us multiple benefits. But these very qualities can also pose problems when plastics end up in the environment, with impacts on nature, the climate and human health. It is estimated that 2 to 5 % of plastics produced end up in oceans. Debate with the others how this issue can affect your daily life.*</p> <p>Each player active in the debate receives 2 points.</p> <p>*Information source: European Parliament</p>

In the 1950s, global production of plastic was about two million tons. In 2020, only 70 years later, it was around 450 million tons. What do you think will be the global production of plastic in 2090? Debate with the others.*

Each player active in the debate receives 2 points.

*Information source: European Parliament

85% of marine litter from land-based sources is plastic. This is a big problem because of plastic's impact on marine life and human health via the food chain. What prevention measures are the most efficient, in your opinion? Debate with the others.*

Each player active in the debate receives 2 points.

*Information source:
European Environment Agency

About 8% of European microplastics released to oceans are from synthetic textiles — globally, this figure is estimated at 16-35%. Between 200,000 and 500,000 tonnes of microplastics from textiles enter the global marine environment each year. How do you think this affects you and your family? Debate with the others.*

Each player active in the debate receives 2 points.

*Information source: European Parliament

EU's Zero Pollution Action Plan (the zero pollution vision for 2050) includes, as one of its main targets, reducing plastic litter at sea (by 50%) and microplastics released into the environment (by 30%). How can people help in reaching these targets? Debate with the others.*

Each player active in the debate receives 2 points.

*Information source: European Parliament

EU's plastic strategy aims to transform the way plastic products are designed, produced, used and recycled in the EU. If you had a business in plastic production, how would this impact you? Debate with the others.*

Each player active in the debate receives 2 points.

*Information source: European Parliament

PLASTIC FACTS



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