

Game of Oceans is a game that combines education with fun activity. Thanks to the division into open and "true/false" questions, players can demonstrate various skills, and the path to the finish introduces elements of ocean exploration, which makes learning about the environment more interesting and engaging.

contents

contents

- 4 What is Ocean Literacy
- 6 Game's aim
- 6 Game's preparation
- 7 How it goes
- 8 Special fields
- 13 Game's end

Game of Oceans.

The ocean is the basis of life on our planet: not only does it produce oxygen and support a variety of living things, but it also provides us with food, raw materials, energy, jobs, transport routes and space for recreation. Ocean plants, mainly algae, produce 70-80% of oxygen and provide us with the most fresh air. Principles of Ocean Literacy allow us to understand how the oceans influence us and how we influence the oceans.

Ocean Literacy, or understanding the mutual impact between the oceans and humans, plays a key role in sustainable development.

Here's why it is so important:

- Protection of Marine Ecosystems: Ocean Literacy helps us grasp the significance of marine ecosystems for the health of our planet. This awareness supports the conservation of coral reefs, mangrove forests, and other critical habitats.
- Less Pollution: Education about oceans helps people realize how their daily choices affect the seas. This knowledge can lead to reduction in plastic waste, chemicals, and other harmful substances polluting the waters.
- Climate Action: Oceans absorb carbon dioxide and regulate Earth's temperature. Understanding these processes can motivate actions to combat climate change and implement policies that reduce greenhouse gas emissions.
- Sustainable Fisheries: Ocean Literacy promotes responsible fishing practices, which translates into the protection of fish stocks and food security for billions of people worldwide.

- Supporting ocean-based economies: Knowledge about oceans is crucial for the sustainable development of coastal economies reliant on tourism, fishing, and other marine industries.

 Education fosters the responsible use of ocean resources.
- Raising Social Awareness: The more we know about the oceans' importance for our lives and health, the more likely we are to support policies and actions that protect the marine environment.
- Innovation and Research: Ocean Literacy inspires research and the development of new solutions that enable better management of ocean resources and marine conservation.

By enhancing our awareness and understanding of the oceans' importance, Ocean Literacy supports the achievement of sustainable development goals, such as Life Below Water (Goal 14) and Climate Action (Goal 13).



Game of Oceans is an educational board game whose aim is to increase players' awareness of the ocean, ecosystems and the impact of humans on the marine environment. Participants learn through playing the game.

aim & prep

Game's aim:

The goal of the game is to complete it as quickly as possible and score as many points as possible through correctly answering questions related to the oceans. Players move around a board presenting a map of the oceans, answering questions and learning important facts about seas and oceans. Players travel from Los Angeles to Shanghai.

Game's preparation:

- 1. Board: Lay out a board showing a map of the world with oceans and marked points that are special points.
- 2. Pawns: Each player chooses one pawn.
- **3.** Question cards: Prepare a deck of cards divided into two types of questions:
- *Open-ended questions*: Require players to fully answer ocean-related questions. Players get 2 points for a correct answer. or can move 2 spaces forward.
- *True/False*: Players must decide whether the given statement is true or false. Players get 1 point for a correct answer or you can move forward 1 space. One square back for a wrong answer.
- Each card has a link and a QR code with an extended answer to the question.
- 4. The game is intended for 2 to 5 players.
- **5.** Points: prepare a sheet of paper on which you will write down the points of all players.

how it goes

How it goes:

- 1. Starting the game: Each player places the pawn in the starting position on the board. Determine who starts e.g. by rolling the dice.
- 2. Movements on the board: Players roll the dice and move on the board according to the result of the roll. Each box can represent a different challenge or place to explore, which determines the type of question.
- 3. Answering questions: If a player lands on a space marked with "?" open questions or " / determining a true/false question, the person to the right must draw a card with a question from the appropriate deck and read it.

Open-ended questions: The player must answer the question using his or her own knowledge. Other players can guide you to the correct answer, but this decision is up to them.

True/False: The player must decide whether the statement is true or false. Players cannot make suggestions here.

4. Special fields: There are 7 special fields on the board that change the course of the game.

Special fields may require you to take specific actions, such as rolling the dice again, moving forward, or skipping a turn. Each unique spot features a QR code that, with a single scan, takes you directly to detailed information about its origin.

7 special fields



The Great Barrier Reef, located off the coast of Australia, is the largest coral reef system in the world. It stretches over 344,000 square kilometers and is visible from space. This amazing structure is home to thousands of species, including fish, turtles, dolphins and corals. Not only is the reef incredibly biodiverse, but it also plays a key role in the marine ecosystem, protecting coastlines from erosion. It is a popular tourist destination, attracting diving and snorkeling enthusiasts. Unfortunately, climate change, pollution and coral diseases pose a serious threat to its future. When you land on this field, enchanted by the beauty of the reef, you get a kick of positive energy and roll the dice twice and move forward.

https://tinyurl.com/3vfvp7xm





Humpback whales are extraordinary whales known for their spectacular leaps over the water and complex "songs" that can last up to 20 minutes and can be heard over many kilometers. These songs are unique to each pod and can change over time, suggesting that humpback whales learn them from each other. Interestingly, humpback whale migrations are among the longest in the animal world – they can cover up to 25,000 kilometers a year between feeding and breeding places.

When you encounter a pod of humpback whales, crossing this field you must roll a dice to follow the male's song. When throwing an even number, you go east, if you throw an odd number, you go north. The song can be listened to by scanning the QR code below.

https://tinyurl.com/yc3kdkcx





Listen to humpback songs: https://tinyurl.com/8ee9xhhr



The "Great Pacific Garbage Patch", a huge collection of plastic waste floating on the surface of the Pacific Ocean with an area of 1.6 million km², is three times the size of France. It consists mainly of microplastics, which are particularly dangerous to marine life because they can be mistaken for food by animals. The patch is created by a phenomenon called ocean gyres, which collect waste in one place.

When you land on this space, you loose one turn because you help to clean up.

https://tinyurl.com/2nsj6x7u





The Bermuda Triangle remains one of the most fascinating and mysterious areas in the world. It is an area in the Atlantic Ocean, the tops of which are Bermuda, Florida and Puerto Rico. It is famous for the mysterious disappearances of ships and planes, which have sparked numerous theories for years, from the effects of magnetic fields, through underwater volcanoes, to alien interference. In fact, many of the alleged disappearances have rational explanations, such as severe weather conditions or navigational errors.

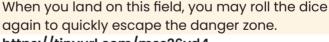
When you land on this field, you "disappear" and loose your turn.

https://tinyurl.com/bdfxknyv





Somali pirates became a global problem in the 21st century, mainly in the waters off the coast of Somalia and in the Gulf of Aden, one of the world's most important trade routes. They primarily originated from local fishermen who, due to civil war and poverty, sought alternative sources of income. Their targets were merchant ships, often involving kidnappings for ransom, which earned them millions of dollars. Over time, thanks to increased naval patrols and better security on ships, pirate activity began to decline. However, the issue of Somali piracy became a symbol of deeper problems such as poverty, political instability, and the external exploitation of Somalia's natural resources. Over the years, Somali pirates gained a reputation for ruthlessness but also sparked curiosity, particularly through films and books that explored their history and motivations. Although modern piracy has been partially contained, it remains a dark chapter in contemporary maritime history.



https://tinyurl.com/mss26vd4





The Mariana Trench is the deepest place on Earth, located in the western part of the Pacific Ocean. Its deepest point, the Challenger Deep, reaches a depth of approximately 11,034 meters. The trench is approximately 2,550 kilometers long and is surrounded by steep walls. It is an extremely mysterious place with extreme conditions, such as enormous pressure and low temperature. Despite this, various forms of life have been discovered there, including unique organisms that can survive in these difficult conditions.

The Mariana Trench is the subject of intense scientific research aimed at understanding both deep-sea ecosystems and the Earth's geological processes.

When you land on this space using a bathyscaphe, you must go to the bottom of the Mariana Trench and this leads to a missing of 2 turns.

https://tinyurl.com/v3znmfz7

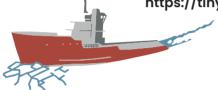




The icebreaker has a specially designed hull with a reinforced structure and a rounded shape that allows it to slide onto the ice rather than trying to break through it. The ship«s weight and pressure cause the ice to crack beneath it, allowing it to forge a path through the frozen waters.

When you land on this space, you move two spaces forward.

https://tinyurl.com/ye57bcry



game's end

Game's end:

The game ends when all players reach the finish line.

The player who crossed the finish line first earns an additional 5 points.

The second player to cross the finish line receives 3 additional points and the third player receives an additional 1 point.

Players count the points accumulated during the game. The player with the most points wins and becomes the "Master of Ocean Knowledge".

EARTHgames4EyoUth project is financed by the European Union, under the Erasmus+ programme.

"The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects the views only of the authors, and the National Agency and Commission cannot be held responsible for any use which may be made of the information contained therein".





Funded by the European Union

More information about the project can be found at: todaywehave.com/project-earthgames4eyouth/game-of-oceans/



The printable version of the game can be downloaded after completing and submitting the form available on the website.





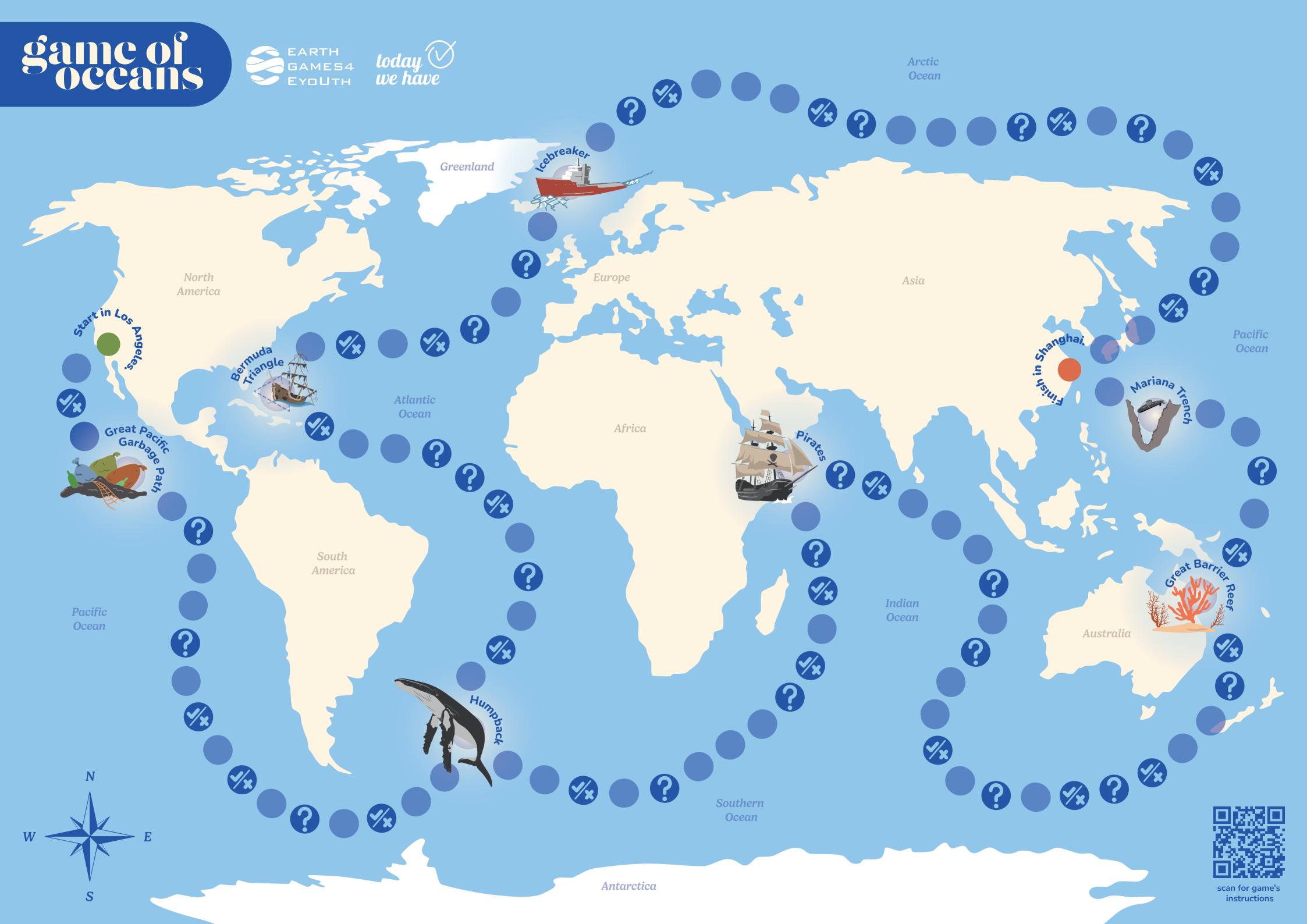


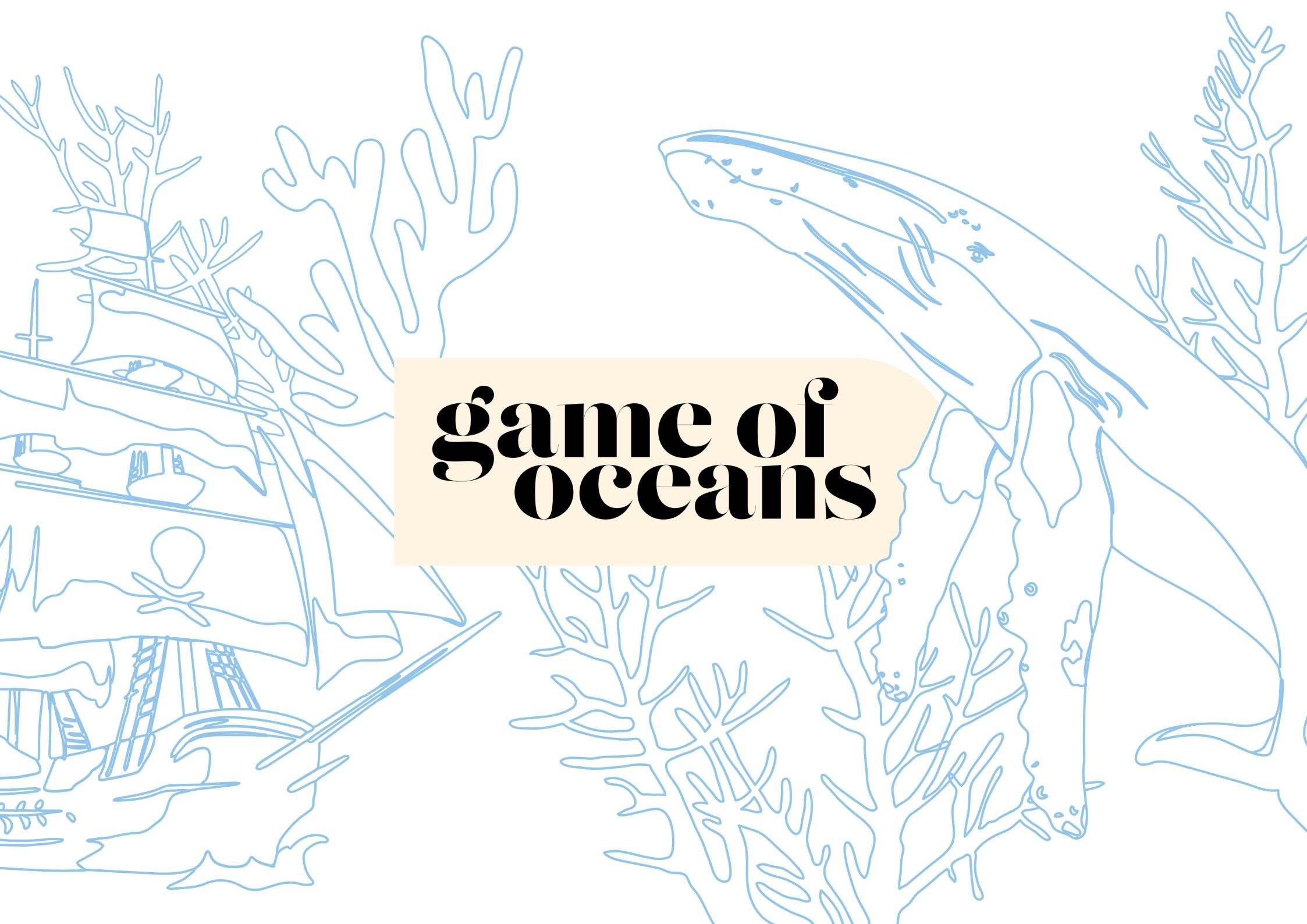


Game concept and content creators: Izabela Kotyńska-Zielińska – Today We Have Tymon Zieliński – Today We Have Game's graphic design: Martyna Basalska

Game of Oceans was created as part of the EARTHgames4Eyouth project supported by the European Union Erasmus+ program.







The mysterious Bermuda Triangle, also known as the Devil's Triangle, is said to have "swallowed" many ships, planes, and helicopters into its depths. In which ocean

is this regional anomaly located?





In "Finding Nemo", what is the circus-related name of the type of fish that Nemo is?

Clownfish



https://tinyurl.com/yc24vmcm

In contrast to bony fish, sharks and rays, have skeletons made of which material?

Cartilage



https://tinyurl.com/4spezt2y

What species of seal, gets its catlike name from the spotted pattern along its back?

reobata seal



https://tinyurl.com/3xah4cuz

What oceanic animal has the scientific name monodon monoceros, Greek for "one-tooth one-horn?"

Narwhal



https://tinyurl.com/5n8ttp2z

The largest living species of tortoise in the world is native to what island archipelago in the Pacific Ocean?

ızlands Galabağos



https://tinyurl.com/y63xcacv

Solar-powered desalination plants use the sun's energy to take which mineral from your kitchen out of ocean water, to make it safe to drink?



https://tinyurl.com/3t2543sf

Mostly found shifting around under its water, what ocean is the namesake of Earth's largest tectonic plate?

Pacific Ocean



https://tinyurl.com/m59cxpmv

Which birds have the largest wingspan in the world?

Albatross

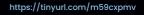


https://tinyurl.com/2ndv6hfr

Measuring about 163 million square kilometers, which one of the world's oceans is the biggest and deepest?

Pacific Ocean





What's the better known name for the body part known scientifically as vibrissae, found on seals, walruses, and sea lions, and house cats?

MPISKers



https://tinyurl.com/5bfjsyyf

Located about 222 kilometers east of the namesake islands in the Western Pacific Ocean, what famous trench is best known as the Earth's deepest oceanic trench?

Mariana Trench



https://tinyurl.com/v3znmfz7

Although Christopher Columbus was an Italian citizen, he sailed across the Atlantic Ocean in 1492 with sponsorship from the monarchs of what other country?



https://tinyurl.com/4h9haaky

The Sargasso Sea of the Atlantic Ocean, the only sea without a land boundary, is named after a genus of which type of organism that is also called macroalgae?

zaıdazənw



https://tinyurl.com/5n7uv57h

What cephalopod has the highest brain-to-body ratio of any invertebrate, with some 500 million neurons scattered across its body?

octobus



https://tinyurl.com/muzz4wfr

What small, common forage fish can be found in marine and fresh water? They are an acquired taste as far as food fish go, sometimes eaten out of a can,

γνοποπΑ

or served on a pizza.





Ocean currents are essential to the propagation of what kind of tree, defined as one of many species that grow in brackish or saline coastal waters?

waudroves



https://tinyurl.com/4zxy4ta5

What species of whale, reaching a length of about 19 meters, is considered the primary predator of the giant squid?

zberm whales



https://tinyurl.com/3njszhhu

What small, oily fish, also known as a "pilchard," probably gets its common English name from an Italian island where it was once said to be abundant?

galqine



https://tinyurl.com/3pkj3jbm

What French explorer and oceanographer co-invented the Aqualung, the first self-contained underwater breathing apparatus (SCUBA),

in the early 1940s?

Constean racdnes



https://tinyurl.com/ef3nuspj

"Branchia" is the zoologists' name for what common structure found in aquatic organisms including fish, mollusks, crustaceans, and tadpoles?





https://tinyurl.com/5xuy3x78

What green-skinned salad ingredient features in the name of a toxic echinoderm, capable of both sexual and asexual reproduction, that lives on the sea floor?

zea Crcrwper



https://tinyurl.com/b8meu969

Which type of ray gets its name from the Portuguese word for "blanket," has triangular fins, and is known for its big brain (it's one of the only sea critters that has passed the "mirror test" for self-awareness!)?

> manta ray Glant oceanic



https://tinyurl.com/4zny6trv

Certain species of red algae seaweed are used to make what dried Japanese seaweed, which is probably most widely known for being wrapped around sushi?



https://tinyurl.com/48dkvck4

The global intersection of zero degrees latitude and zero degrees longitude is found in which ocean?

Atlantic



https://tinyurl.com/2s4b7ppm

Texas tends to get a lot of hurricanes because it's close to which basin of the Atlantic Ocean/Caribbean Sea?

Gulf of Mexico



https://tinyurl.com/5ewytyjn

Which "E-term" refers to the place where a body of freshwater (like a stream) meets the ocean?

Fειααιλ



https://tinyurl.com/49n6u63c

Wind, the Coriolis effect, breaking waves, and salinity differences are all different forces that create what continuous movement of ocean waters?





Sharing its name with a type of firearm is which species of shrimp, capable of using its claws to make a noise of up to 210 decibels?

Pistol shrimp





Its source is located in the Peruvian Andes, though its exact location remains a topic of debate. Which river is this, ending its course in the Atlantic Ocean?



https://tinyurl.com/mr3p835j

During some feeding frenzies, blue whales can eat a daily total of more than 8 tons of what tiny crustaceans, whose name in Norwegian means "small fry of fish"?



https://tinyurl.com/jhk77j7w

Captain Ahab chased the monstrous white whale known as Moby Dick, but what whale is the only real world cetacean that is regularly white in color?

Reinda vaie





Which group of typically colorful tropical fish species is named for their bird-like beak formed by the fused teeth of the jaws? Their feeding activity is important for the production of sand.

Раготпы



https://tinyurl.com/3v2radtn

Which type of plankton is self-feeding in the sense that it gets nourishment through photosynthesis?

ьуλгоblankton



https://tinyurl.com/35xzdnuy

What Italian-derived word is defined as an area of calm sea water separated from the ocean by a line of rock or sand?



https://tinyurl.com/3ht255v7

The largest fish (sharks and rays) have skeletons made of cartilage. What is the largest fish with a skeleton made of bone?

Ocean sunfish



https://tinyurl.com/yw8hhb5t

Rising sea temperatures around the world put many of the globe's corals at risk of what process, by which coral expel the colorful algae that live inside their tissue?

пеасиид



https://tinyurl.com/45b76a2z

The European species of what fish has the longest migration of any fish, being born in the Sargasso Sea before swimming up to freshwater rivers, and then at the end of their lives swimming back to the Sargasso Sea to spawn and then die?



https://tinyurl.com/znbnsbhj

Facing critical alterations as the planet experiences climate change, what ocean is warming faster than anywhere else on Earth?

Arctic Ocean



https://tinyurl.com/3ejmc9hu

What is the loudest animal on Earth? Talking about the loudest noise it can generate, not its proportion of time spend making noise.

sberm Whale



https://tinyurl.com/3njszhhu

Which ocean animal produces its own sunscreen?

Coral polyps



https://tinyurl.com/2nb6dry5

What word refers to small organisms, including both plants and animals, that are unable to move themselves against ocean currents?



https://tinyurl.com/8wmyv892

What "T" eight-legged segmented micro-animals can actually survive in the vacuum of space or 100 years without water?



https://tinyurl.com/mrx62z4y

How do seals, such as the grey seal, harp seal, and common seal, differ anatomically from sea lions and fur seals?

Ears (Auricle)



https://tinyurl.com/365f6zr7

Sepia is the name given to the ink secreted by which marine creature? This marine creature can change its skin color to communicate and for camouflage.





Which marine-dwelling bacteria is named for its blue hue and can produce toxins that are dangerous for humans and animals (who can easily stumble upon it in a lake)?

Cyanobacteria



https://tinyurl.com/3r7a4est

Usually, you watch them break against a sandy beach but the largest of which ocean-wind phenomenon actually occurs below the water's surface?

(And no, you can't surf them).

Maves



https://tinyurl.com/vzn5d7e5

What internationally award-winning preschool program, shown in the U.S. on Disney Junior, includes a polar bear named Captain Barnacles, and teaches children about ocean life?

Octonants



https://tinyurl.com/2pexy63v

Norwegian explorer Thor Heyerdahl led a famous 1947 expedition across the Pacific Ocean from South America to the Polynesian Islands aboard what raft with a hyphenated name?

KON-TIKI



https://tinyurl.com/mr2mjdrc

What deep-sea fish, named for its use of bioluminescence, is thought to be so numerous that it makes up two-thirds of the total biomass of all deep-sea fish?



https://tinyurl.com/4sy2n2bv

What family of marine mammals includes whales, dolphins, and porpoises? This order of completely aquatic animals is made up of nearly eighty living species.



https://tinyurl.com/484szhw8

What "A" penguin is one of the most prominent penguin species on the Antarctic continent? It comes from a French word meaning "noble in nature."



https://tinyurl.com/39cj828w

Kelp forests are susceptible to predation by what two-word animal of the ocean bottom? Excessive damage by these creatures can result in areas barren of kelp.

zea niculus



https://tinyurl.com/38ky6pcj

You might assume that the deepest parts of the ocean are also the coldest, but they can actually get pretty warm thanks to which geological phenomenon where

magma meets water on the ocean floor?

леиfг ндакогиекшаг



https://tinyurl.com/2m45ejb2

This is the name of a meteorological phenomenon characteristic to seas and oceans in the form of strong, gusty, sudden wind with a force not exceeding 10° on the Beaufort scale.

RIOLE



https://tinyurl.com/4n7bspsr

The Pacific Ocean is the largest ocean on Earth.

True. It occupies 1/3 of the Earth's surface.







The Atlantic Ocean is the saltiest ocean.

False. Dead Sea average salinity is 260%.







Dolphins are fish.

False. They are mammals.







The Arctic Ocean is the smallest ocean.

True. It has an area of approximately 14 million $\text{km}^2.$







Sharks are mammals.

False. Cartilaginous fish.







Squid have ten tentacles.

True. Ten, including two longer ones with hooked suction cups.







The Sargasso Sea is defined by ocean currents, not land boundaries.

True.







The Pacific Ocean covers more area than all the landmasses combined.

True. It covers 30% of the entire Earth's surface.







The Amazon River empties into the Pacific Ocean.

False. Atlantic Ocean.







The Baltic Sea is the least salty major sea.

True. Average salinity is approximately 7‰.







The Titanic sank in 1912 in the Pacific Ocean.

Atlantic Ocean.







Bioluminescence is the emission of light by living organisms.

True.







The ocean sunfish are the largest fish in the ocean.

False. Whale shark the largest one







An octopus has three hearts.

True.







The Black Sea is not connected to the Mediterranean Sea by the Bosphorus Strait only.

False. It is connected through the Bosphorus Strait and the Sea of Marmara.



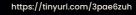




The Indian Ocean is the only ocean named after a country.

True. It is named after India.







The Mediterranean Sea is the world's largest inland sea.

True. It has an area of approximately $2.5\ \mbox{million}\ \mbox{km}^2.$







There are underground rivers.

True.







Starfish do not have the ability to regenerate lost arms.

False. The regeneration process takes only a few weeks.







The Caspian Sea is the world's largest lake.

True. Largest saltwater lake by volume (374,000 km2), surface area (374,000 km2)







Tides are caused by the wind.

False. They are caused by the influence of the moon on the Earth and to a lesser extent, the sun.







The Arctic Ocean is the youngest of the major oceans.

False. Indian Ocean is the youngest.







The Great Barrier Reef is visible from space.

True. It covers an area of 348,000 square kilometers, which makes it visible even from space!







Sea anemones are plants.

False. They are animals.



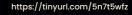




Tsunamis are caused, among other things, by underwater earthquakes.

True, and also due to underwater volcanic eruptions or meteorite impacts.







The climate is determined based on one year of weather observations for a given region.

False. You need many years of observations (c. 40 years).







Mangroves can survive in salty water.

True. Thanks to reverse osmosis, they prevent large amounts of salt from being drawn in with the water.







The Dead Sea is one of the saltiest bodies of water on Earth.

True. Approx. 231‰, i.e. 6.6 times more than the average ocean salinity.







Dolphins live in seas and rivers. and Yangtze.

Amazon, La Plata, Ganges, Brahmaputra of fresh tropical rivers: Orinoco, Irue. Dolphins also occur in the basins







Coral reefs are found in both warm and cold ocean waters.

False. Coral reefs are formed in seas and oceans where the water temperature remains above 18°C.







Coral bleaching is caused by rising sea temperatures.

True. Bleaching is considered the greatest threat to coral reefs around the world







Sea otters eat sea urchins, which limit the growth of kelp forests

I rue. I ney are a keystone species, would otherwise cause enormous damage to kelp forest ecosystems.







The skin of a polar bear is black.

True. Thanks to this, it absorbs solar radiation that heats the body.







Hydrothermal vents are found on the ocean floor.

True. These are cracks in the planet's surface through which water escapes.







Antarctica is the largest island in the Southern Ocean.

False. Earth«s southernmost continent, where the geographic South Pole is located.







The volume of sea catches is still growing thanks to modernized technology.

False. With overfishing, catch volumes have declined.







Water acidification is a process most often caused by human activity.

Irue. It is most often caused by suituric and nitric acid of industrial origin, mainly from exhaust gases and technological processes.







There may be up to 10 million viruses in a teaspoon of seawater.

True. There are more viruses in seawater than on land.







The aurora borealis only occurs at the Earth's poles.

False. During periods of high solar activity, aurora can appear in lower latitudes, even near temperate latitudes.



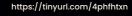




Amber is a type of gemstone.

False. In fact, it is fossilized tree resin, mainly coniferous trees, which is even millions of years old.







Most marine pollution comes directly from ship activities?

False. About 80% of marine pollution comes from land.







Microplastics only come from the breakdown of larger plastic waste?

False. It is also added directly to products such as cosmetic scrubs, toothpastes and synthetic clothes, which release microplastics when washed.







All shells on the beach come from living organisms.

False. Some of them may be hundreds or even thousands of years old because they can survive in geological sediments for long periods of time before being washed ashore.







Pearls can only form in marine oysters.

False. Pearls are produced by clams or, more rarely, snails.







The Axolotl can regenerate lost limbs, but cannot regenerate a damaged heart.

False. It is able to regenerate lost limbs, heart, and even fragments of the brain and spine.







The Arctic Ocean is the smallest and shallowest ocean on Earth.

True. It was formerly considered part of the Atlantic Ocean.







Salty ocean water constitutes approximately 70% of all water on Earth.

False. Sea water constitutes over 9/% of all water resources on Earth.







Oceans cover about 50% of the Earth's surface.

False. Oceans cover approximately 71% of the Earth«s surface.







Tsunami waves can reach heights of up to 80 meters.

False. The largest (30m) one was recorded on Alaska in 1958.







Coral reefs are home to over 25% of all marine species.

Irue. Even though coral reets cover less







Coral reefs cover 20% of the ocean's Surface.

False. Cover less than 1% of the ocean surface.







The oceans contain the largest mountains in the world.

True. The Mid-Atlantic Ridge is over 16,000 km long.







Most marine life lives in the depths of the ocean

False. The coastal zone of the oceans is richest in marine life due to access to light and nutrients.







Aquaculture is one of the slowest-growing food production sectors in the world.

False. It is growing at a rapid pace, meeting the growing demand for protein.







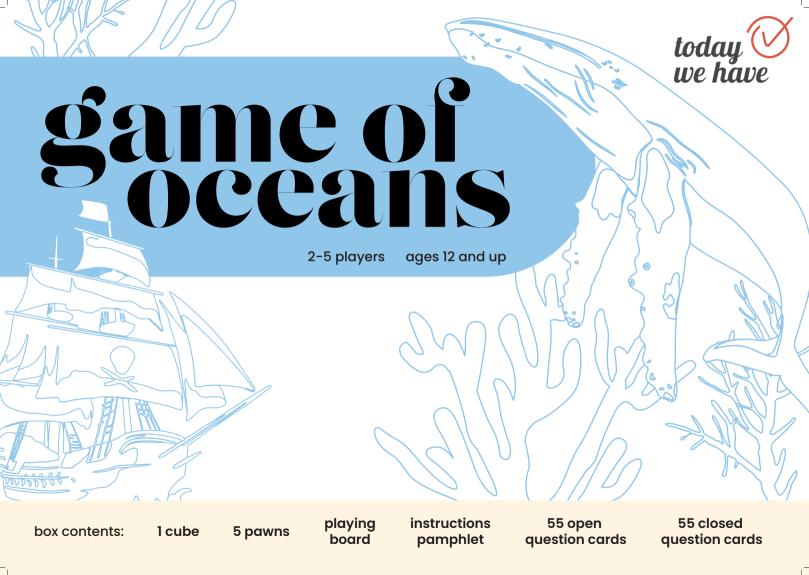
The compass rose contains eight cardinal directions.

False. It may contain intermediate directions, giving 32 or more indications.









EARTHgames4EyoUth project is financed by the European Union, under the Erasmus+ programme.





Funded by the European Union

The European Commission support for the production of this publication does not constitute an endorsement of the contents which reflects theviews only of the authors, and the National Agency and Commission cannot be held responsible for any use which may be made of the information contained therein.







