

Lesson 6



THE WORLD OF WATER

Lesson objective: To give a notion that water is an important natural resource, to actualize the role of water, as well as to create a careful attitude towards water resources.

Terms: An oceanographer, a bathyscaphe, a coral reef, the World Ocean, carbon dioxide, microplastics.

Materials required for the experiment:

1) 2 transparent glasses, 2 eggs or 2 shells, water, vinegar

2) A plastic bottle, scissors or a knife, a container with water, rocks, sand, cotton or a coffee filter, an activated charcoal can be used.



1. Interactive task – puzzle

5-10 min. 🕚

Learning objective:

To provide information about the World Ocean.

ACTIVITIES

Teacher: turns on screen and coordinates the activity. **Pupils:** put together a puzzle and listen to the information about World Ocean.

On the screen: the whole land can be seen – all the continents.

The World Ocean is the body of the Earth's oceans. All the world's oceans are connected and form a unified, enormous body of water. As a result, any other coastal point can be reached by water from any point of the World's ocean coast. The world ocean is divided into five oceans:

- Atlantic ocean
- Southern ocean
- Indian ocean
- Pacific ocean
- Arctic ocean

Seas are smaller saltwater areas, frequently they are a part of the ocean. Without oceans, seas, lakes and rivers there would be no life on earth. Water bodies are habitats for a lot of plants and animals.

2. Discussion with an interactive task

10 min. 🕚

Learning objective:

To interest pupils about the water topic with exciting facts and about the World ocean by showing the importance of water as well as an environment for different organisms.

ACTIVITIES

Teacher: leads the discussion and coordinates the activity. **Pupils:** answer the question "What do these images have in common?" and do the interactive task. After the discussion, pupils touch the images and listen to the facts about the World Ocean.

On the screen: 5 images and the question: "What do these images have in common?"

Notes:

Learning objective:

To give information about the unusual animals in the ocean.

5-10 min. 🕚

8 min. 🕚

ACTIVITIES

Teacher: coordinates the activity

Pupils: search the hidden animals and listen to the information about the unusual animals in the ocean.

On the screen: a water landscape with 5 aquatic animals hidden in it (clownfish, starfish, scallop, blue dragon snail, devilfish)

At the end of the task, when pupils have listened to the audio information about all animals: pupils vote for the most unusual animal, giving it a mark from 1 to 5.

4. Interactive task

Learning objective:

To give information about the biggest sea and ocean polluters.

ACTIVITIES

Teacher: coordinates the activity **Pupils:** moves the ship from station to station where there are different pictures. Listens to the information that is played as the ship arrives at each station

On the screen: a ship that can be moved. **Pupils:** move the ship to the first station with the image of a fish and a net. The image locks in and information is played back.

Notes:

5. Experiment

10 min. 🕚

Learning objective:

To observe how an acidic environment affects animal shells.

ACTIVITIES

Teacher: organizes the experiment, sets up materials necessary for work and explains the safety rules for working with vinegar.

Pupils: listen to the safety rules, read the instructions for the experiment. Do the experiment and write down the conclusions in the worksheet.

On the screen: ingredients and materials necessary for the experiment, instructions 1) Pour tap water in one glass and vinegar in the other glass.

2) Put one egg or shell in each glass.

3) The next day, look at was has happened to the hard shells.

Materials recquired for the experiment: 2 transparent glasses, 2 eggs or 2 shells, water, vinegar

6. Experiment

15-20 min. 🕚

Learning objective:

To actualize own experience with water purification.

ACTIVITIES

Teacher: coordinates the activity, organizes the experiment, sets up materials necessary for work

Pupils: propose a hypothesis, reads the instructions for the experiment and use the information to create a treatment plant

On the screen: accessories and ingredients necessary for the experiment, work process steps

Together the teacher and the pupils propose a hypothesis. The hypothesis is an assumption – what could the results of the experiment be like.

Hypothesis (assumption): I can build a water treatment plant, that:

1) Cleanses all types of contamination,

2) Cleanses only visible contamination,

3) Other option.

Materials recquired for the experiment: A plastic bottle, scissors or a knife, a container with water, rocks, sand, cotton or a coffee filter, an activated charcoal can be used.

Learning objective:

To actualize pupils' knowledge about the presence of salt water and fresh water in nature.

8 min. 🕚

? min. 🕚

ACTIVITIES

Teacher: Coordinates the activity **Pupils:** sort the images in two parts

On the screen: the words 'Fresh water' and 'Salt water' and 5 images (1.glacier, 2.pond, 3.ocean, 4.sea, 5.river).

Do you know that in nature there is both fresh water and salt water? To find out which bodies of water have salt water and which have fresh water, sort the pictures!

8. Information (Audio/text)

Learning objective:

To provide information about the amount of water on Earth.

ACTIVITIES

Teacher: coordinates the activity

Pupils: touch water droplets and listen to the information about water on Earth **On the screen:** 1 big water drop and 3 small water droplets

Listen to the information about the amount of water on Earth by touching any of the water drops.

- 1) 97% of the water on Earth is saltwater. The water of seas and oceans is salty because salt and different minerals have dissolved in it.
- 2) 3% of all the water on Earth is freshwater. The biggest part of freshwater are glaciers which contain water in a solid form. People can consume only a small part of all the existing water. It is necessary for drinking, cooking, cleaning, shower and brushing teeth and a lot more. Water is a very valuable natural resource, therefore it has to be saved.

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Learning objective:

To actualize experience with water consumption.

5 min. 🕚

10 min. 🕚

ACTIVITIES

Teacher: coordinates the activity **Pupils:** read statements and place them in the according column

On the screen: two columns where the correct and incorrect statements about water consumption have to be placed.

Correct:

- 1) The water tap has to be turned off while brushing teeth.
- 2) When doing dishes, the sink should be filled with water first.
- 3) A bucket and a sponge should be used when washing the car.
- 4) Using the dishwasher.
- 5) Run the washing machine when there is enough laundry to do.
- 6) Collect rainwater it can be useful for watering the garden.

Incorrect:

- 1) The garden should be watered in the middle of the day.
- 2) It is better to take a bath than a shower.
- 3) The water in the toilet can flow a long time after pressing the button.
- 4) Wash the greasiest dishes in the sink first, then the cleanest dishes.

10. Interactive task – test

Learning objective:

To strengthen the pupils' obtained knowledge about the importance of water.

ACTIVITIES

Teacher: coordinates acitivity, gives feedback to pupils. **Pupils:** connect the image with the correct answer.

On the screen: images and answers

- 1. The World Ocean
- 2. The largest animal in the world
- 3. Fresh water supplies in solid form
- 4. Salt water repository that is smaller than an ocean
- 5. Small sea animals that form an island
- 6. Ocean in danger

Learning objective:

To inform pupils about the need for water for animals living in different living environments.

ACTIVITIES

Teacher: coordinates activity

Pupils: Find animals that do not belong in the desert landscape by touching them

On the screen: a desert landscape with its inhabitants:

Unlike water inhabitants, some terrestrial plants and animals can easily endure water shortage.

There are two inhabitants hiding in the desert that do not belong here, find them! Why do you think so?

- Camel
- Organ pipe cactus
- Hare
- Corals
- Reindeer
- O Goliath birdeater

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