

We clean the water of the North Sea



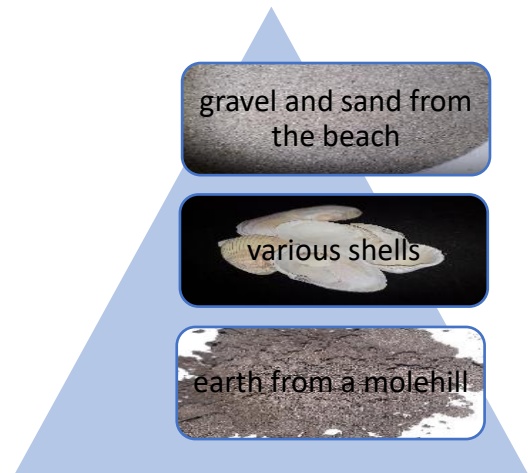
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We clean the water of the North Sea

List of Materials

- 4 flower pots of the same size with holes
- various shells
- gravel and sand from the beach (washed)
- Earth from a molehill
- 1 coffee filter
- 1 medium-sized stone
- 2 large jars
- 1 bucket of polluted sea water
- Hand towel
- Bucket and cleaning rag



Why did we chose this offer?

During a walk on the beach with our kindergarten group, the children asked a lot of questions. Among other things, there is one question: "Why is the water in the North Sea dirty and unclean?"

Due to the children's interest in their home and our environment near the North Sea, we would like to find out together with the children how this alledged pollution happens and whether the water is really unclean.

We are planning an experiment on this topic in which the children can explore the water with the help of a self-made filter system. So, we took up the children's question and answered it together.

Short description of the process

We brought the materials we needed for this experiment from our last walk on the beach. Coffee filters, large jars and flower pots are in the kindergarten pantry. In the morning circle we talk about our trip to the beach and take up the children's questions. We tell the children that we want to begin an experiment together on this question. The children are divided into small groups so that each child has the opportunity to participate.

We go into the next room that is our lab with the first five children and stand around the prepared table with the utensils. Now the children get to know the materials. They touch them and explore the different materials. We explain the unknown.

Step by step, we explain the course of the experiment and make sure that everyone actively helps by working in sequences.

First of all, we ask the first child to distribute several mussels on the bottoms of three flower pots. Now the second child is to fill the first pot to the half with gravel. The other children will fill pots 3 and 4 half full with sand or with soil. Another child puts the coffee filter into the fourth flower pot and places the medium-sized stone in it as a spacer. Then, the other child, if necessary by the help of the other children, carefully places all the pots on top of each other. Next they, put the tower of pots on a large jar. The pot with the coffee filter is at the lower bottom of the glass, on top of it there is the sand. After that the pot is filled with soil and finally the pot filled with gravel.



Before starting the experiment, the children are asked to share their thoughts and expectations. We encourage them to hypothesize.

Then, we ask a child to slowly pour the dirty water from the bucket into the higher flower pot. In this way, the water is first filtered more properly from top to bottom and then more and more finely filtered. Together we wait until it has seeped through all the pots.

We reflect on the result and ask the children to describe their observations. Your hypotheses will be confirmed or not confirmed.

To conclude the offer, we put some dirty water into the second large jar. Now we ask a child to shake the glass powerfully. This makes the experiment even more understandable for the children by comparing the whirled-up water (flood) with the clear (calm) water. This observation answers the children's question why the water in the North Sea looks so dirty.

We clean up the required materials and finalize the offer.

We thank the children for their help and bring them back to their group. We say goodbye and call the next five children together for the experiment.

Competency enhancement

1. The children are encouraged to express their thoughts and create a hypothesis.
2. The children are encouraged in their social skills by working together and supporting one another.
3. The children are encouraged in their linguistic competence by speaking to one another during the whole time.
4. The children develop their cognitive skills by drawing logical conclusions.
5. The children are encouraged in their natural and environmental skills by expanding their knowledge of the North Sea.

Why are experiments important for children?

Experiments are fun for all children and they expand their knowledge. Through active research, they reach information about animate and inanimate nature. Experimentation teaches a variety of areas of competence. The children are not only encouraged in their language and cognitive abilities, but also in their fine motor skills and in dealing with problems. This makes a complete possible self-education process to be become true.

Bibliography

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Image sources

- Own pictures

Sources of dictionary

- <http://www.dict.cc>; Version 10.8.8; Paul Hemetsberger 2002-2020

Explanation

We assure, that we worked out the elaboration together.

Jana Neu

Christa Schmoll