



Learning Module

Water filtration

What happens to water when it is filtered through different media?

Target group: Learners aged 10+

Learning outcome & Acquisition of skills:

1. At the end of this learning modul, learners should understand that different media filters out numerous small particles including sediment, pebbles, charcoal.
2. Learners learn how to filter water.

Global Goal: With this learning module, they are contributing to the implementation of Global Goal 6 “Clean Water and Sanitation” and 14 “Life under water”.

Timeframe: One lesson (40-45 Minutes)

About Us

Suni e.V.
Ermannstraße 17
54516 Wittlich, Germany
www.suni-ev.de
kontakt@suni-ev.de

Authors

Elizabeth Reinert
Evita Leis
Jeannette Serogwe
Patricia Ndjavera
Reinhold Tsaraeb

Translation and editing

Lisa Niemann
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Lesson plan

Water filtration

Preparation for the educator:

- Copies of the experiment setting “How do I filter dirty water?”
- Material according to the experiment (depending on the number of working groups the class is divided into):
 - Scissors
 - Bowls
 - Rubber band
 - Plastic
 - Fabric
 - bottles
 - Different materials like pebbles, charcoal, and sand

Part 1: Introduction to the topic (approx. 10 minutes)

Tell/read the story of Max and the contaminated Dam:

Max and the contaminated Dam

Max was excited about going to the village to his Grandma. He liked to escort the cows to the nearby dam. He would swim in the dam and drink water from there. He could catch small fish and take them to Grandma to fry. There were different types of birds that flew by and he liked the sound of them singing all day long. He took a few fish with to Grandma because he liked how his Grandma cooked them. Grandma did what her favourite grandson asked her to do and prepared the fish like she used to. However, the fish tasted different and were different in size as well.

Late that evening Max had a stomach ache and diarrhoea.

After reading the story discuss the content. Speak with the learners about water contamination:

- a) The teacher asks learners what could be wrong with Max (background knowledge)?
- b) The teacher asks learners what could be wrong with the water?

Transition in your discussion to the topic of water contamination.

Part 2: Experiment (25 minutes)

- 1.) Hand out the instruction sheet in Annex 1 for the experiment “How do I filter dirty water” to the learners.
- 2.) Give learners a timeframe of 20 minutes.
- 3.) Assist if necessary.

Part 3: Discussion and conclusion (approx. 10 minutes)

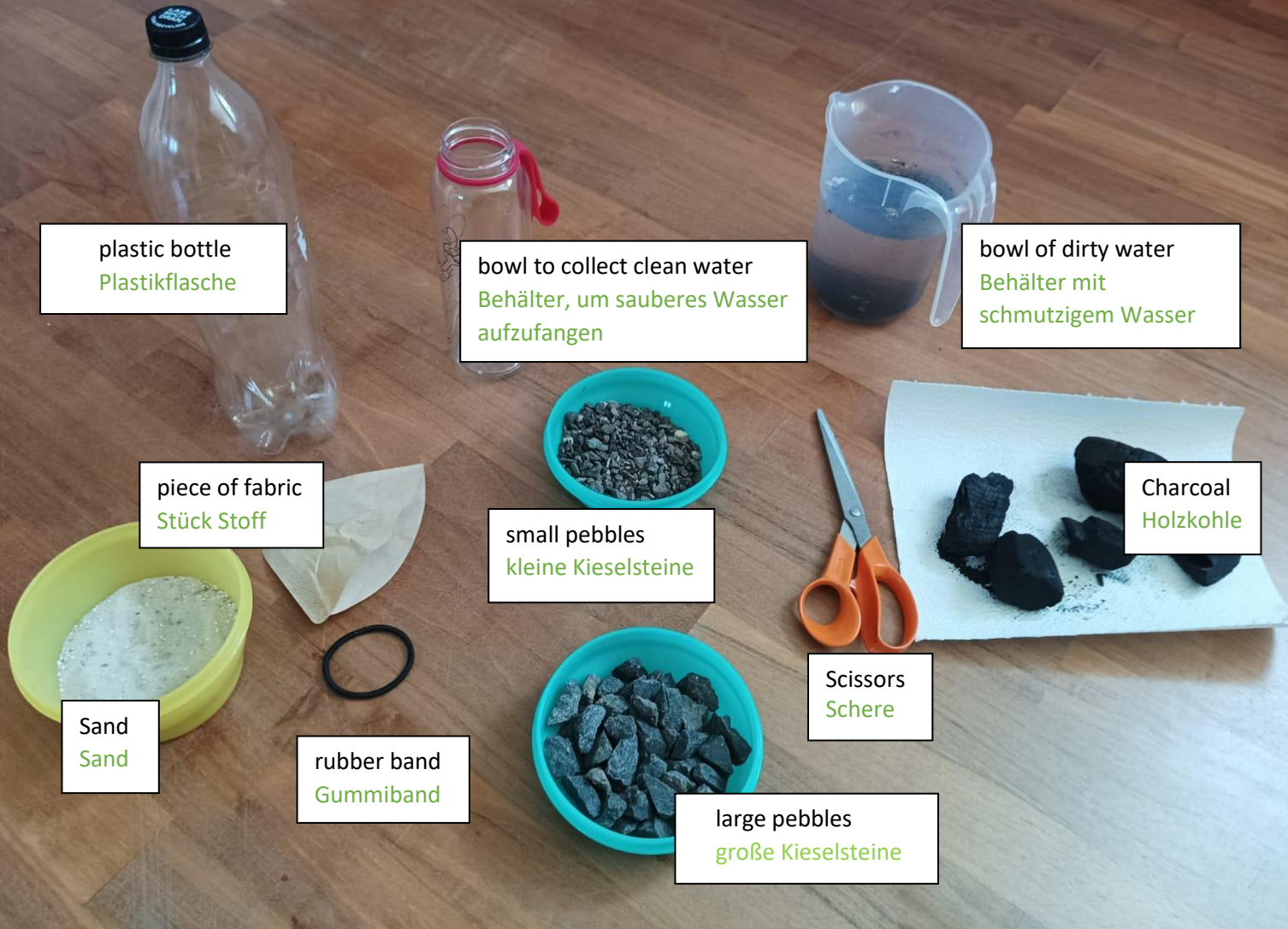
- Discuss the findings and what they observed
- Remind learners to always drink clean water so they don't become sick
- Remind learners to reduce water pollution
- Make learners aware that there are correct steps when filtering water.



How do I filter dirty water? Wie filtere ich schmutziges Wasser?

Materials

Material



Work steps

Arbeitsschritte

1. Use scissors or a knife to cut off the bottom of the plastic bottle.
Schneide mit einer Schere oder einem Messer den Boden der Plastikflasche ab.





- Attach a piece of fabric to the bottle opening using the rubber band.

Befestige ein Stück Stoff an der Flaschenöffnung (Flaschenhals) mithilfe eines Gummibands.



- Fill the bottle with the different materials, one after the other. First the sand, afterwards the charcoal, then the small pebbles and finally the large pebbles.

Fülle nacheinander die verschiedenen Materialien in die Flasche.

Zuerst den Sand, dann die Holzkohle, danach die kleinen Kieselsteine und zum Schluss die großen Kieselsteine.



- Now you can pour the dirty water through the open bottom into the bottle. Use a container underneath to catch the water that has passed through the bottle.

Jetzt kannst du das schmutzige Wasser durch den offenen Flaschenboden in die Flasche gießen. Fange mit einem Behälter darunter das Wasser auf, das durch die Flasche geleitet wurde.



Do you spot a difference?
Erkennst du einen Unterschied?





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