

## Grade 2

## Lesson 3

### Lesson plan

Lesson theme	Water pollution	Grade	2
Duration	30 minutes	Date/week	
Context			
<ul style="list-style-type: none"><li>• Benefits of drinking clean water</li><li>• Benefits of leading a healthy lifestyle.</li></ul>			
Linking with previous lesson		Linking with next lesson	
<ul style="list-style-type: none"><li>• Learners learn how to lead healthier lifestyles.</li></ul>		<ul style="list-style-type: none"><li>• Learners expand their knowledge of clean and unclean water.</li></ul>	
Core knowledge			
<ul style="list-style-type: none"><li>• Broaden understanding of water</li><li>• Clean and unclean water</li><li>• How water is made clean and safe to drink</li><li>• The availability of drinking water</li><li>• Fresh water.</li></ul>			
Learning activities and assessment			
<ul style="list-style-type: none"><li>• Learners identify bodies of water on a globe or world map and discuss where water can be found</li><li>• Learners are shown how to identify clean and unclean water by tasting different kinds of clear liquids</li><li>• Introduce learners to worksheet for lesson 3.</li></ul>			
Forms of assessment		Resources	
<ul style="list-style-type: none"><li>• Worksheet</li><li>• Observe learners as they investigate clean and unclean water.</li></ul>		<ul style="list-style-type: none"><li>• A globe or map of the world</li><li>• 5 glasses and 5 clear liquids with different tastes.</li><li>• Worksheets.</li></ul>	
Expanded opportunities		Teacher reflection	
<ul style="list-style-type: none"><li>• Learners can determine whether the water they drink at home and at school is clean and safe to drink</li><li>• Encourage them always to drink water that is clean and fresh.</li></ul>		<ul style="list-style-type: none"><li>• The activities help learners appreciate that clean drinking water is a precious natural resource, and that they must always drink water that is clean and unpolluted.</li></ul>	

## Grade 2

### Lesson 3: Water pollution (30 minutes)

#### 1 Outcomes

By the end of this lesson the learners should be able to:

- List 2 sources of clean and unclean water.

#### 2 Teacher's corner

Explain that not all water is clean and safe to drink. We cannot drink any water that we find – we must only drink clean water. Unclean water can make us sick because it contains harmful substances called pollutants. Water must be very carefully treated to remove all the pollutants before it is safe to drink.

Pollution is a change in the quality of the environment. For example, a substance (pollutant) can change the physical, chemical or biological properties of water and make it harmful to drink.

The water that humans use has been around since ancient times. It is recycled again and again through the water cycle. For example, the water used to brush your teeth this morning could have been part of a cloud floating over a city a few weeks ago!

#### The availability of drinking water

Water covers three-quarters of the earth's surface, so it may seem that there is plenty of it and that we will never run out of this valuable resource.

In reality, we have a limited amount of usable fresh water.

Some interesting facts:

- Over 97% of the earth's water is found in the ocean as salt water
- 2% of the earth's water is stored as fresh water in glaciers, ice caps and snowy mountain ranges
- Only 1% of the earth's water is available to us for our daily needs.

Only a small amount of water is suitable for humans to drink. Not all of the water in the ground and in lakes and rivers is easy to reach or is clean enough to drink. The fresh water in ice caps and glaciers is difficult for us to access and use. Scientists are trying to find ways to take the salt out of ocean water, but it is a very expensive process.

#### Fresh water

Our fresh water supplies are stored either in the soil (ground water) or in lakes, rivers and streams on the earth's surface (surface water). These are our main 2 sources of fresh water. The other main source of fresh water is the ice in the polar regions.

Surface water comes from the lakes, rivers, and streams that flow over the land. Streams flow into rivers, which join large rivers that eventually return surface water to the oceans, from which it may have originally evaporated.

Ground water is found beneath the earth's surface and fills the cracks, crevices and tiny pores between soil or rock particles.

We must take care of surface and ground water because it is very important for humans, plants/crops and animals. If we waste water or pollute it, we may find that there is less and less of it available for us to use.



## Grade 2

### 3 Activities

**For lesson 3, you'll need the following equipment:**

- A globe or map of the world
- 5 glasses and 5 clear liquids with different tastes, for example use sugar water, white vinegar, salt water, water mixed with citric acid or tap water.

#### **Activity 1: Water, water everywhere (10 minutes)**

Activity 1 requires the learners to identify bodies of water on a world map or globe.

- Look at the globe with the learners
- Ask them to point out lakes, rivers, and oceans. Explain that these are known as surface waters
- Ask the learners if they know what kinds of water bodies are salt water and which are fresh water. Ask them if they have ever tasted salt water.
- Ask the learners if they think there is more water or land on earth
- Ask them if there is water beneath the surface of the ground that we cannot see on the globe.

#### **Activity 2: Water investigators (15 minutes)**

Activity 2 will show how to identify clean and unclean water.

Explain that just because water looks clear, it doesn't mean that it is really clean.

This will help learners understand that clear water isn't necessarily free of pollutants.

- Place 5 clear liquids in glasses. For the clear liquids, use substances that have a definite taste, which learners would recognise. For example, you can use sugar water, white vinegar, salt water, water mixed with citric acid or tap water.
- Using cotton swabs, ask the learners to taste each liquid (throw away the swab after each taste) and record the taste after sampling each 1
- After the learners have had a chance to taste them all, explain that whereas they might have thought that all these liquids were clean water, they actually all contained other substances. Likewise, clear water might look clean, but may contain invisible pollutants.

### 4 Wrap up (5 minutes)

Remind the learners of the importance of drinking clean, safe water. Make sure the learners appreciate that clean drinking water is a precious resource and that they must always be careful to find out if water is clean – looks can be deceptive.

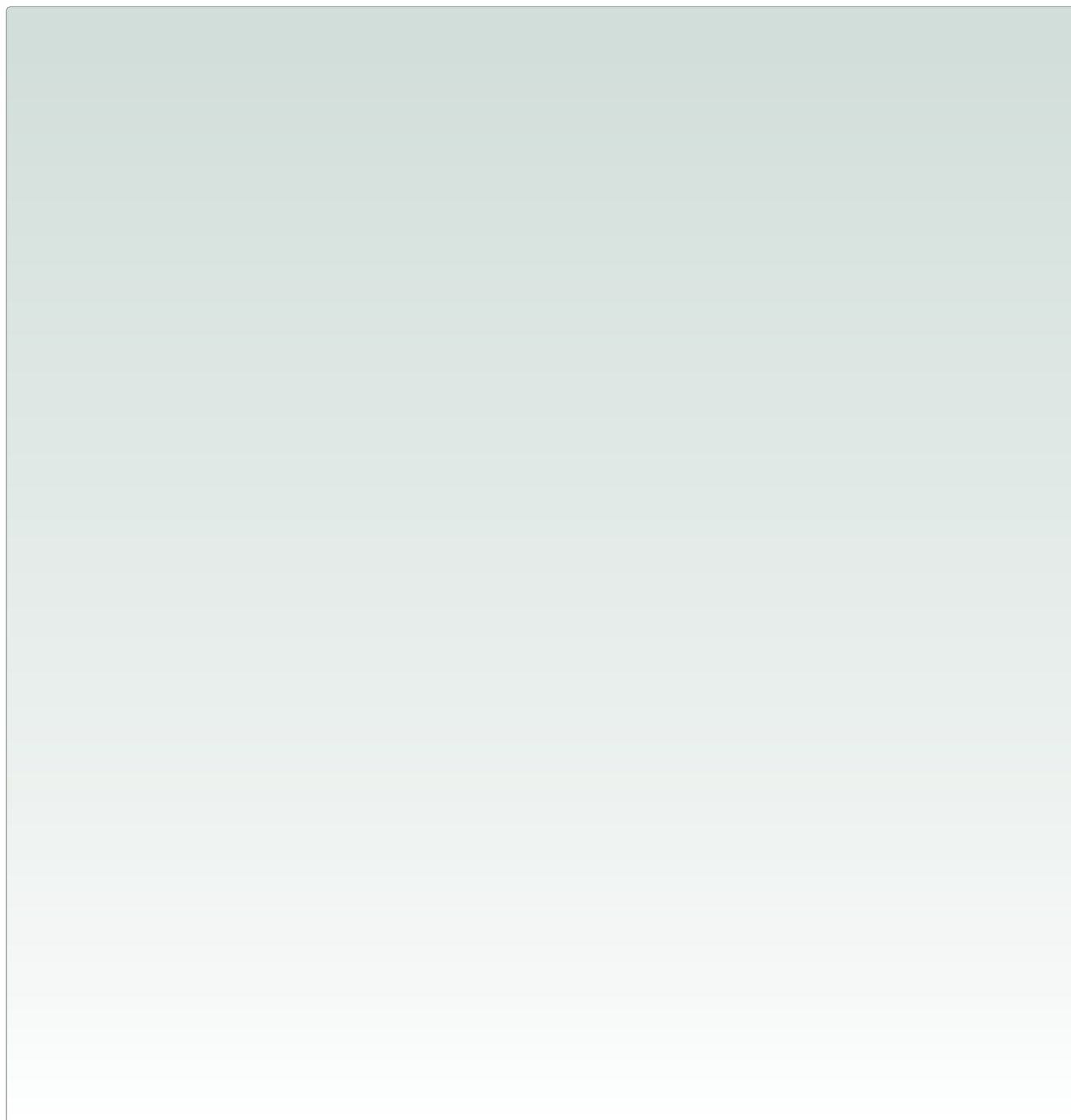
Grade 2

Name: \_\_\_\_\_

## Worksheet: Grade 2, lesson 3

### Task 1: Finding water

Find pictures of different types of water in magazines such as drinking water, rivers, the ocean and ice. Finally, paste them in the space below:



Grade 2

Name: \_\_\_\_\_

## Worksheet: Grade 2, lesson 3

### Task 2: Clean and dirty water

Draw pictures of 2 sources of clean water that are safe to drink – in the space below.

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Draw pictures of 2 sources of dirty water that are not safe to drink – in the space below.

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