

Nimr Reed Beds

Aim and introduction

The Nimr Reed Beds are human-made wetlands planted specifically to help with the treatment of water from oil extraction. This lesson is designed to help pupils understand how wetlands work and why the Nimr Reed Beds are so important.

This lesson will take between 45 and 60 minutes.

Curriculum links

Key Stage 2 Curriculum: physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle.

Learning goals

1. Know what wetlands are.
2. Describe the location of the Nimr Reed Beds.
3. Understand how wetlands like the Nimr Reed Beds help clean water.

Learning outcomes

Greater depth: Pupils will be able to describe and explain how wetlands can help to clean water using the Nimr Reed Beds as a supporting example. They will be able to carry out an experiment with little to no additional guidance. Pupils will be able to make clear connections between how wetlands can help people and the environment.

Expected level: Pupils will be able to describe how wetlands can help to clean water and begin to explain their ideas. They may use the Nimr Reed Bed as an example, but this will be limited. They will be able to carry out an experiment with some additional guidance. Pupils will be able to make some connections between how wetlands can help people and the environment, but one side will be stronger than the other.

Working towards: Pupils will be able to describe how wetlands can help to clean water. The Nimr Reed Beds will most likely not be referred to. They will be able to carry out an experiment but will most likely need additional guidance. Pupils will be able to make some connections between how wetlands can help people and/or the environment.

Support: Pupils will be able to describe, with support how wetlands can help to clean water. The Nimr Reed Beds will not be mentioned. They will be able to carry out an experiment but will need additional guidance. Pupils will be able to make some connections between how wetlands can help people and/or the environment, but these will be limited in detail.



Key terms

- Wetlands
- Reedbeds
- Purification
- Toxins
- Heavy metals
- Pollutants

Learning resources

- PPT – Nimr Reed Beds
-
- Wetlands fact recording sheet
- Mini wetlands experiment sheet

What you will need

- 2 litre clear plastic bottles cut approximately 7-10cm from the top of the bottle. Enough to divide between pairs / small groups in your class.
- A second container with a lid. Again, enough to have 1 of for each group containing water mixed with a small amount of dirt.
- Percolator paper coffee filter. Enough for one per group.

A combination of the following enough for each group:

- Sand – enough to share for each group.
- Small stones approximately 0.5 -1cm in size.
- Small pebbles approximately 2-4 cm in size.
- Mud or compost.
- Dead organic matter such as leaves, bark, twigs etc.
- Fresh leaves / grass cuttings (optional)

Challenge and support

Support: use the following [video](#) to explain how the Nimr Reed Beds work.

Challenge: Reflection on the similarities between the experiment and the animation.

Starter

Ask pupils to write down what they know about wetlands and how they help people and the environment. This can be shared as a class discussion to gather the general understanding in the class.

If pupils are unsure of what a wetland is, spend more time on slide 3 to explain what they are.



Main 1

Show the [YouTube video](#) explaining how wetlands help the environment. Pupils complete the flow diagram using the template within the wetlands fact recording sheet to summarise how wetlands work.

Focus on the Nimr Reed Beds to explain that these human-made beds have been created to help clean the water used in oil production.

Show on the map where the Nimr Reed Beds are (the StoryMap is good for this). Ask pupils to describe the location and add that as well as key facts about the Nimr Reed Bed site to the fact sheet. The text in bold are the key points to help guide pupils in what they could add.

Main 2

Pupils work in small groups / pairs to create their own mini wetland. They follow the instructions on the mini wetlands experiment sheet to see how dirty water is cleaned then summarise it in their wetlands fact sheet.

Plenary

Reflection exercise to add on what they now know about how wetlands can help people and the environment.