Water

Curriculum Links:

- **Science** — Living things; Environmental awareness and care
- **Geography** — Human environments
- **SPHE** — Myself and the wider world

Lesson objectives:

To understand that water moves in a cycle. To understand that water is needed on the farm and how the farmer protects and cares for waterways.

Teacher guidelines

It is suggested that teachers ensure that students are familiar with the vocabulary and concepts introduced in the previous modules before starting this lesson.

Keywords and concepts introduced in Module 1:

water **clouds** **raindrops** **water cycle** **live** **smell**

Fresh, clean water is very important on the farm because all the animals and crops need it to grow. The farm always has a fresh supply of water because of the constant movement of the water cycle.

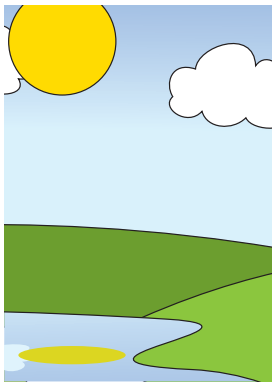
After revision of the above, teachers could discuss the more detailed information below.

Keywords for this lesson:

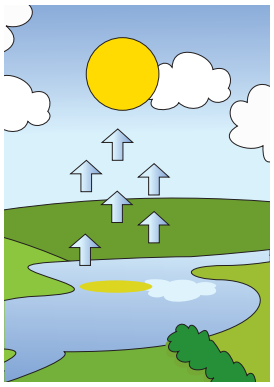
water vapour **fences** **manure** **food chains**

The movement of water on the farm

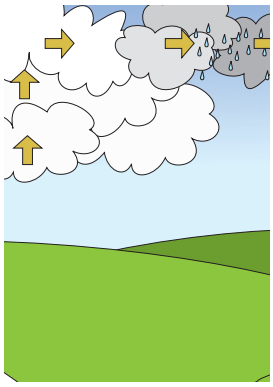
Water moves in a cycle. The sun heats water on the ground and changes it into **water vapour** or steam (just like heating water in a kettle). This water vapour rises into the sky and forms clouds. As the clouds float higher and higher, they get colder. Water vapour then changes back to water droplets. This falls back to earth in the next rainfall. This cycle goes on and on and on!



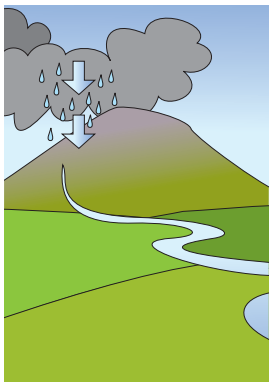
Sun heats the water on the ground



Water vapour rises and forms clouds



Water vapour changes into drops of water



Rain falls into rivers, lakes and streams

How does the farmer care for water?

The farmer works hard to have clean and safe water on the farm to help plants and animals to grow. He/she puts up **fences** around rivers, streams and wells so that animals and machines can't make the water dirty.

At certain times of the year, the farmer puts manure on crops. Manure is animal waste which is also food for the crops which helps them to grow. The farmer is very careful when he or she spreads manure, making sure it doesn't fall into nearby rivers or streams. Although it is very good for the soil, **manure** is dangerous if it gets into the water supply.

Food chains in the water

Just like in hedgerows, food chains also exist in water. The sun shines into the water so that water plants can grow. Water snails and other insects living in the water, eat water plants. Fish then eat the water snails and other insects to grow larger and swim faster. However, if the water in lakes and rivers gets dirty, it can be difficult for the sun to shine through and reach the plants. If they die, so will the water insects who eat them. The fish may also die. The farmer keeps the waterways clean so there are no breaks in the food chain.

Suggested activities

- Photocopy the activity sheet on page 55
- Divide the class into groups. Get each group to design a poster explaining the water cycle and allow each group 5 minutes to present it to the entire class
- Draw a food chain that exists in the lake
- Get the students to discuss why the sun is important in all food chains
- Observation diary: plant 4 cress seeds, water one and keep in the dark, the other three, keep on a windowsill with lots of light, water one really well, water one too much and don't water the last. Record your daily observations and discuss the farmers job in producing crops, fruits and vegetables and based on your observations, what might happen if plants are not minded correctly
- The farmer works hard to keep waterways clean. What can we all do individually to make sure that waterways do not get dirty?
- Discuss why water is important for life
- For extension material, see Modules 3 and 4

Learning outcomes:

At the end of this lesson, students should know how the farmer protects the water and what food chains exist in the water.

Additional resources:

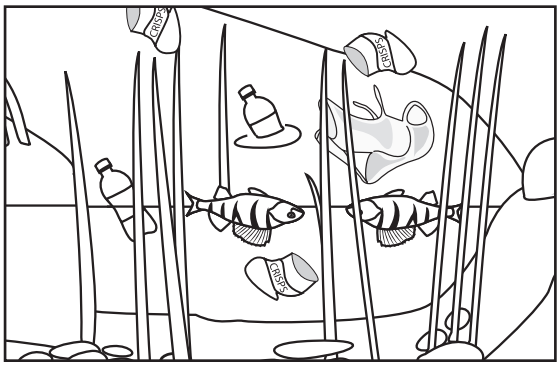
- www.agriaware.ie

Water

Name: _____

Date: _____

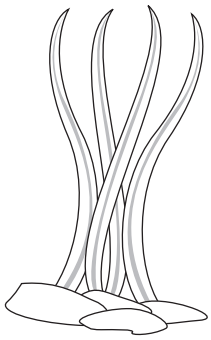
1 Draw a clean river and a dirty river. Compare both pictures and why the dirty river might harm the environment.

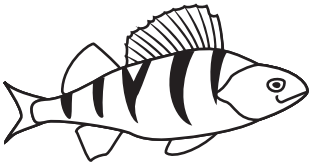


Name these differences

_____ _____ _____

2 Label and colour the food chain from the water





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*To be used with teacher guidelines, page 30