

SCIENCE INVESTIGATORS

Teacher's Resource sheet Episode 7



**Curriculum Strand – Living Things
Strand Unit – Plant and Animal Life**

Aims and Objectives:

To help pupils learn about eco-systems.

Class plan

Suggestions:

- ✓ Ask warm up questions with the class
- ✓ Watch the video
- ✓ Fill out the first two questions of the investigator's sheet (see resources below)
- ✓ This episode is a little different - there are no experiments, but the class could go on a field trip, or even explore the eco-system in the school grounds
- ✓ Complete the investigator's sheet

Resources contained in this print out:

- ✓ Curriculum questions explaining eco-systems
- ✓ Some warm up question suggestions
- ✓ The Science Investigators Rock Pools episode can be accessed here:
<https://scienceinvestigators.wordpress.com/about/episodes-and-resource-sheets/>
- ✓ An investigator's sheet for pupils to discuss and fill out for each experiment

Curriculum Question Suggestions with answers (also addressed in the episode):

Explaining: Eco-systems

Question 1

What is an ecosystem?

Answer

“Eco” is short for ecological. An ecological system, or ecosystem, is an area where different types of animals live together. It is where they interact with each other in the *biotic* environment. The biotic environment refers to the living things within that environment, the animals and the plants. They also interact with the *abiotic* environment, which refers to the non-living things, like the rocks, the sun and water within the eco-system.

Question 2:

Why should we care about eco-systems?

Answer

Eco systems are really important. They are our life support system.

The water we drink, the air we breathe, the food we eat, it all comes from our ecosystems.

If they were to collapse, that would reduce the food available to us, impacting on our own existence.

Ecosystems are interdependent. The ecosystem in the rock pools featured in this episode is affected by another one further out at sea and vice versa. It is our job to protect the ecosystem, and keep it litter free. The fish we eat from the sea is affected by the ecosystem on the shoreline so it's important to keep it pollution free.

Biodiversity is the biological diversity within the system. It refers to all the different types of living things that live on Earth: germs, whales, humans, animals... How many more can you think of?

Question 3

What kinds of different species live in a rock pool ecosystem?

Answer

Hermit crabs

Hermit crabs don't make their own shells, they live in ones they find. They are known to sometimes fight other crabs for shells. As they grow their shells get too small, and they have to find bigger ones to live in. They have to move house!

Their claws are adapted so they can defend themselves from within their shell.

Starfish

Starfish are known for their unusual shape and the fact that they can regenerate their limbs. A starfish's mouth is in the middle of its body.

Sea anemone

A sea anemone looks like a flower (and is named after one), but it's actually an animal. Sea anemones mostly live attached to rocks. They have stinging tentacles to protect themselves and to catch small fish and other prey that swim past.

Shore crab

A shore crab's shell has a serrated edge which makes it easy to identify. It has two claws at the front. One claw is bigger than the other and this is used for fighting. Their back legs are used for swimming and their two front claws are used for finding food and for protection.

INVESTIGATORS SHEET

What are we going to do?

What do you think we will learn?

What did we learn?

Will you see your eco-system differently now?
