

Unit Title: Unit 11 - Ecosystems, pollution and materials



What should I know?

- What the five major oceans in our world are.
- An ecosystem is a community which shows how all the living and non-living components are connected.
- Oil spills can cause a huge amount of pollution to the oceans.
- What a food chain is.
- What a habitat is.
- Beginning to understand some of the different materials that cause marine pollution.
- Some of the different species of marine creatures.
- The water cycle and understanding the different parts of it.

Key Knowledge

What is an ecosystem?

An ecosystem is made up of all the living and non-living things in an area. This includes all of the plants, animals and other living things that make up the communities of life in an area. An ecosystem can also include all non-living things, for example, water, rocks, sand and soil.

Causes of ocean pollution and its effect on marine life

There are many causes of ocean pollution such as sewage, nuclear waste, plastic and oil spillages. All types of ocean pollutions can have devastating consequences and wipe out entire species such as fish, birds, marine mammals, sea turtles etc.

What is the effect of plastic on the ocean ecosystems?

Plastic is a very hazardous material with respect to its effect on the environment. It does not degrade or decompose and can be very harmful for marine animals. Plastic can stay around for many years. Plastic bottles may sink to the ocean floor, whilst plastic bags that float on the surface of the ocean can be mistaken for food by birds. This can result in the bird choking.

What is oil and how do oil spills effect our oceans

Oil is a heavy liquid. There are many oil spills in the oceans from large tankers which transport the oil. Oil and water don't mix so it floats on top of the water. It can kill fish and vegetation because of long-term exposure to it. It can stick to birds' feathers which makes them heavy and difficult for birds to fly.

Key Vocabulary

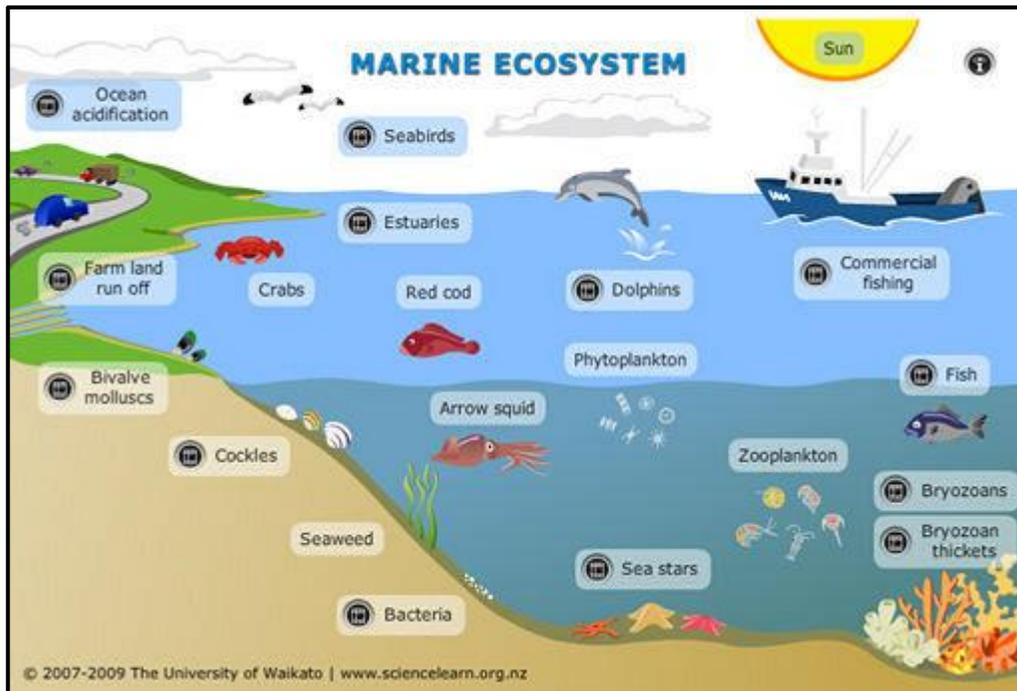
Ecosystem
Marine life
Plastic
Pollution
Oil
Oil Spills
Oil tankers
Hazardous material
Decompose
VLCC Mt Haven
Global Warming

What should I know by the end of the unit?

- The different causes of pollution to our oceans and what is being done to protect them.
- How plastic gets into the oceans and seas of the world.
- What the damage caused by plastic is to a marine ecosystem.
- Where the major oil spills have occurred in the world. What the effects of these are and how are they cleared up.
- How global warming can result in the melting of the polar ice caps, which causes sea levels to rise.
- What happens to the ocean eco-systems if the sea level rises.

Making Links - Remember when you....

- Studied the unit on World War 2. In this you focused on how sunken ships meant lots of oil spills in the oceans around the world.
- Focused on the water cycle in the science unit based on changing materials.



Marine Ecosystem



Example of an ocean oil spill



The dangers of plastic in the ocean



Five oceans of the world