
Session type: Workshop

Duration: 60 minutes

Key Stage: KS2

Main Curriculum Link:

- Science: Working Scientifically

Secondary Curriculum Links:

- Science: Animals, including humans
- Science: Living things and their habitats
- Geography: Geographical skills and fieldwork
- Geography: Human and physical geography
- English Years 1-6: Spoken language

Session Overview

Pupils begin Coral Calamity by using magnifying glasses to examine a range of coral colony skeletons at their work stations. Through this activity corals are recognized as colonial animals, and colonies as being made of hundreds of individual coral polyps, each of which lives symbiotically with its internal algae.

Pupils are given a range of map resources plotting temperature, depth and salinity of the oceans and are tasked with combining these sources to map suitable conditions for coral reefs across the world. Once completed, pupils are then given access to materials for the Coral Build-athon activity, in which they build their own model corals out of interlocking plastic discs and simulate responses to various environmental conditions.

The final activity is a practical investigation on the impact of carbon dioxide on ocean acidity, using a range of pH solutions and coral fragments to see how this affects coral growth.

This hands-on scientific workshop allows the students to get fully immersed in coral reefs, their function and structure, using a variety of different investigation methods.

National Curriculum Links

Key Stage 2 Science: Working Scientifically

- Asking relevant questions and using different types of scientific enquiries to answer them
- Setting up simple practical enquiries, comparative and fair tests
- Gathering, recording, classifying and presenting data in a variety of ways to help in answering questions
- Reporting on findings from enquiries, including oral and written explanations, displays or presentations of results and conclusions
- Using results to draw simple conclusions, make predictions for new values, suggest improvements and raise further questions
- Using straightforward scientific evidence to answer questions or to support their findings

Key Stage 2 Science: Animals, including humans

- Identify that humans and some other animals have skeletons and muscles for support, protection and movement [Y3]

Key Stage 2 Science: Living things and their habitats

- Recognise that environments can change and that this can sometimes pose dangers to living things [Y4]

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- Describe the life process of reproduction in some plants and animals [Y5]
- Describe how living things are classified into broad groups according to common observable characteristics & based on similarities and differences, including micro-organisms, plants & animals [Y6]
- Give reasons for classifying plants and animals based on specific characteristics [Y6]

Key Stage 2 Geography: Geographical skills and fieldwork

- Use maps, atlases, globes and digital/computer mapping to locate countries and describe features studied

Key Stage 2 Geography: Human and physical geography

- Physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle

English Years 1-6: Spoken language

- Listen and respond appropriately to adults and their peers
- Ask relevant questions to extend their understanding and knowledge
- Articulate and justify answers, arguments and opinions
- Maintain attention and participate actively in collaborative conversations, staying on topic and initiating and responding to comments
- Use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas

Learning Outcomes

After this session the groups should be able to:

- Describe what a coral is, including its constituent parts.
- Explain what type of animal it is and name one other animal it is related to
- Talk about why coral only grows in specific geographical areas of the oceans, state where those areas are and what is special about them.
- State one problem facing coral and how this is linked to human activity

Pre-Visit Suggestions

- Choose and research one coral reef in the world as a case study, build a fact file about it
- Watch the BBC series Blue Planet, episode 6 (Coral Seas)

Post-Visit Suggestions

- Write a newspaper report about a coral reef you have researched: what is it and is it important?
- Make and decorate your own coral reef display at school using clay, or other craft materials
- Have a look in newspapers to see if there is any recent news on climate change and how it affecting the environment
- Think about the impact that humans have on other habitats around the world, both on the land or in the ocean. Is there anything you can do to help?

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