

WORKSHOPS FOR SCHOOLS

Marine Aliens (P1-7)

Find out about marine aliens and how they get to our shores in this interactive workshop. What impact do they have on native species and how can we stop them invading? Is there any difference between 'aliens' and 'invasives'? Play the 'Alien or Not' Game and Alien Top Trumps and take a look at marine alien samples in the classroom.

The Food Chain (P1-7)

The Food Chains workshop is a fun and active way of finding out who eats who! Pupils learn and contribute facts about all kinds of marine animals from the smallest bacteria to the blue whale. They do this by dressing up in food chain t-shirts!

The Marine Pollution Game (P3-7)

The Pollution workshop looks at the sources of marine pollution and the problems they cause. Pupils learn how pollution comes from rivers, clouds and the sea. They look at the 3 types of pollution: biological, chemical and physical. This is a very interactive, visual workshop which starts with a tank of clean water (our fake ocean) which the pupils turn into a dirty 'polluted' ocean by throwing in objects and coloured water to represent chemicals and other pollutants. This gives a very clear visual demonstration of the devastating effect of pollution and human impacts on the marine environment.

The Biology and Uses of Seaweed (Nursery-P7)

The seaweed workshop introduces pupils to the 3 main types of seaweed: red, brown and green, and introduces them to their different properties and features. Find out which of our everyday food, beauty and household products contain seaweed! Early years and level 1 pupils can enjoy a story especially written for this topic, featuring the 'Clever Little Princess' character.

For an additional outdoor activity, visit the beach next to the Ocean Explorer Centre for a seaweed discovery walk and create a piece of artwork from your finds.

Teeth, Tusks and all that Stuff! (P3-7)

Find out who eats what in the world of marine and coastal mammals! How are their teeth adapted to the food they eat? How do their teeth compare with our own teeth? Why do you think our teeth look like they do?

Take a look at some real animal skulls. See if you can guess what animals they are. Study their teeth and see if you can identify the kind of food they eat.

Seashore Safaris (Nursery – P7)

Come down on the beach and go on a treasure hunt! Discover seaweeds in situ and find out more about which seaweed lives where and why it is so important for many aspects of our lives. Find your own 'treasure on the beach', take a look at it carefully, find out what it is, why it lives there, then take it back to the OEC and draw it. Beach trawls available on request.

Renewable Energy from the Sea (P7-S3)

Take a look at renewable devices from waves and tides and discover biofuels. How are waves generated and where can we place devices? How are the tides formed and how do tidal devices work? This workshop is an interactive power-point with demonstrations the children can join in with. At the end they play the "Who wants to be a Marine Millionaire" game, which is a fun quiz based on the power-point.

The Biomara Teaching Materials on the topic of 'Energy from Marine Algae' are also available to schools. Specifically written for Scottish, Irish and Northern Irish schools, the main purpose of the resource is to create awareness of how energy can be produced from algae. There are 6 lessons focussing on a different aspect of algae with a content section, an activity section and learning outcomes.

Life as a Polar Scientist (P1-S2)

This workshop is led by Elaine Mitchell who has worked on many Polar scientific research cruises conducting experiments on board. Younger children can discover more about polar animals such as the Arctic Fox, and see pictures of the Polar bears Elaine watched from the ship. Find out how to protect yourself from these beautiful but very dangerous creatures, and (perhaps more importantly) learn what you get for dinner on board ship!! Try on the Arctic clothing like the huge thickly-soled welly boots and the ultra-warm suit for working out on the sea ice. Older pupils can find out in more depth about the history of Arctic exploration, the science experiments conducted on board, the Oceans 2025 Ice Chaser Cruise project, the results from the cruise and ask questions about careers in science.

The Deep Sea (P1-7)

This workshop introduces pupils to the strange, fascinating world of the Deep Sea. Find out: How deep is the deep sea? Who do the animals survive? What amazing features do they have? How do our scientists explore the deep sea? Explore our collection of incredible deep sea specimens. Make a deep sea model or draw a picture and watch it glow in the dark!

The Power of the small beasties: Plankton (P3-P7)

What is plankton? Find out more about the different types of algae, e.g. phytoplankton and zooplankton. How do they move? How can they protect themselves? What uses might they have? Take a look under the Ocean Explorer microscope to see six kinds of plankton including a sample taken at the pontoon as well as diatoms and dinoflagellates. Activities from the Biomara resource can be added on to this workshop.

The other CO₂ Problem: Ocean Acidification (P7-S4)

Discover more about global warming and how it is not only affecting our weather patterns and Arctic sea ice, but has a serious effect on the marine environment too. Secondary pupils can watch a 21 minute film called The Acid Test for secondary pupils introducing the issue of ocean acidification and younger pupils can see a 7-minute fun animation on this topic produced by schools around Plymouth. Pupils can study the animal skeletons that will be affected by this issue and do an experiment to show the effect of higher levels of CO₂ on seawater.

Mixing up the World – Ocean Currents (P7-S4)

Find out more about ocean currents by studying the animation in the OEC. This is followed by an experiment to show different layers of water in the oceans and sea lochs, with salty water underlying fresh water. In our second experiment find out how scientists measure different levels of salinity in Loch Etive with a refractometer.

Explore life in the abyss – deep sea biology (P7-S6)

How deep is the deep sea and how have people explored it? What are the environmental conditions for the animals that live there? Find out about the scientific cruise JC66 2011 to seamounts on the South West Indian Ocean Ridge. What did the scientists find on the seabed? Discover samples of deep sea marine life collected on the cruise.

Introduction to Microbiology (P5-S2)

What is microbiology and what is life like in a microbiology lab? How do we study microbiology in the lab and in the field, what is equipment we need. Meet two real microbiologists and have a go at becoming a microbiologist yourself! Look at cells through a microscope and extract DNA!

Marine Protected Areas (S2-3)

The intention of this workshop is to use practical group work which allows pupils to debate, discuss and compromise about a topical scientific issue. The workshop aim is to design a marine protected area. This requires pupils to use problem solving and investigative skills to come to a final decision about an applied scientific situation. Find out: What is a marine protected area? How do we protect the sea? Why are MPA's important? Pupils are given individual roles in a tropical community, they consider the needs of their role and use this to decide where to place an MPA on the map they have been given.

Making Maps of the Sea (P5-S3)

Workshop 1 – Mapping the deep: also adaptable for younger pupils

This workshop explains how land maps are made and why we need them.

Exercise: - make a map of the class room and a map of your route home. This is followed by an introduction to the sea. Find out how we make maps of the seabed, and why we need them

Exercise: - use children as sound beams to explain how sonar works

Examples of our maps

Workshop 2 – INIS Hydro careers workshop

An introduction to the INIS Hydro project and why we are doing it

An overview of all the careers involved in the project

Exercise: - we split the class into small groups, all with a member of INIS team, and the pupils work out the person's career using only questions that can be answered with a yes/no answer.

Finally, a discussion on what learned and Q&A.