

KS 1/2 Science/Geography/Art+Design

One World, One Ocean

Key Learning Points:

Students will learn that:

- The Earth has one big ocean with many features
- The ocean and life in the ocean shape the features of Earth
- The ocean is a major influence on weather and climate
- The ocean makes Earth habitable
- The ocean supports a great diversity of life and ecosystems
- The ocean and humans are inextricably interconnected
- The ocean is largely unexplored

This session offers three different opportunities to explore the interconnectedness of all species within the world as a system, and the need for us to value, protect and respect the ocean as a vital part of that system. It encourages us to recognise our role as guardians of the world and its health and to see that we are not separate from nature, but part of it.

This is activated through recognising the moments where we intervene or impact upon these systems: The **Water Cycle**, the state of the world's **Icecaps**, and the **Habitats** of many species around us. To nourish and protect this world, we need to realise there are **NO NEW WORLDS**, but only this precious world, amazingly balanced with an atmosphere we can breathe in, temperatures we can withstand, and the capacity to support the habitats that provide our food and shelter. This world is home to the jewel that is the **One Ocean**, the vital organ that sustains our life, but which in turn needs caring for by us.

Resources included:

- Philosophy for Children Guidelines for Facilitators
- Warm-Up
- Orientation Questions
- Quick takeaway facts
- Questions opportunity
- Main Activity: three workshop options (see attached lesson plans)
- Plenary
- Recap
- Image sources (NMA)

- Video Links for activities
- Worksheets for Droplet Voyage
- Ocean Literacy Principles
- Matrix: National Marine Aquarium Generic Learning Outcomes

Below are offered Philosophy for Children Guidelines that might help to draw out deeper understandings during the course of this session

Philosophy for Children Guidelines for Facilitators

- Though they look very different, in both activities players follow the same deep structure. Think about a question that has competing reasonable answers.
- Thinking time is crucial – or the children may “sheep” instead of thinking for themselves.
- As the facilitator of the activity, commit publicly to an answer by moving yourself or giving your opinion. This is a very important step. It forces a choice – or perhaps a decision to be indecisive and gets everyone engaged. It enables you to bring shyer children into the dialogue.
- Once a child has committed to an opinion, it’s much less abrupt to ask, “So John, why did you think it could never be right to...” rather than, “So John, what do you think?”. If someone feels they can’t decide, they can decisively indicate their indecision by standing in between two options or arrange cards on top of each other.
- Try not to offer this option to begin with, as it’s better for participants to decide for themselves that their thinking doesn’t fit a pattern that’s been offered.
- Justify your answer with your best reasons – in response to facilitator or peer questions. As a facilitator, it’s easy to see differences of opinion, so that you can ask questions that are likely to lead to dialogue and disagreement. “Green group, you’ve rated that as much more popular than the yellows did. Why was that?”
- When you can see someone has thought differently to you, it’s natural to be curious as to why. If you can see they have agreed, you want to know if their reasons are the same as yours or different. There are more potential starting points for dialogue than with a single thread of speech.

- Reflect on what you have heard and show if you have changed your mind. Always give people the opportunity to show they have changed their minds. This stage is often omitted or underexploited.

Warm up:

Display a beautiful picture of the ocean on a screen, or show a video relating to the ocean. Ask students to complete the “**Think, Pair, Share**” activity asking the starter question “What can you do on, in, or under the ocean?” (This could be adapted for different age groups by making it a spoken, written, or physically acting out activity.)

Ask students to think of two activities they like doing in water, either the ocean, or even swimming pools, rivers or lakes if in an inland geographical location. They then pair up with another classmate and exchange their activities, then share to the class. This can be carried out as an interactive activity using water droplets for the students to write on, or as a charades game where pupils can act out their activity and the class must guess the water related activity.

This starter activity should generate an atmosphere of energy about the water and the scope of activities, jobs, and purposes that the water provides.

Orientation Questions

Look at the map of the Earth. How much is water? How much is land?

Can you find your home on the map?

Do you live near the ocean, or near a lake or river?

Quick takeaway facts

Did you know that the ocean covers 70% of our planet?

Did you know that your body is made of 70% water?

All this water is connected and connects us to one big Ocean. We are all connected to each other through our Ocean. This activity will help you see how you are connected to our Ocean, do you know how you're connected?

Main activity

Select one of the Ocean Conservation Trust workshop activities to carry out with the class or create a carousel of tasks to complete over the whole day by using all the workshops (see attached individual plans).

Workshop Options:

1) One Ocean – Droplet Voyage

Curriculum links

Science - Identify how water cycles around the environment.

Geography – Identify ocean basins and how coastal structures are affected by water movements.

Have you ever considered how the water in your bathtub is connected to the rain outside the window, or the crashing waves on the beach, even the little streams in the mountains? This activity will allow you to identify how every drop of water on our planet is connected! Your body is 70% water and the Earth is 70% water, all that water is connected and belongs to One Ocean. That ocean is essential for all life on earth and many processes on our planet. This activity will allow you to model the journey of a water droplet around our planet. Apply your English or art skills to write or draw a story of a water droplet's journey around the planet.

2) Investigating Ice

Curriculum Links

Science - Identify how the production of carbon dioxide by human activity impacts on climate.

Geography - identify the position and significance of the Northern Hemisphere, Southern Hemisphere, Arctic, and Antarctic Circle.

Ever wondered why our sea levels are rising? Where is all this melting ice, and what is causing it to melt! Time to set up your own investigation at home and collect some data of your own! This lesson is an excellent opportunity to learn about the effects of global warming on rising sea levels and how this might impact coastal regions. A simple science investigation that will take a little time but needs minimal equipment. All you'll need are a few simple kitchen and craft items and an inquisitive mind. An opportunity to test your geography knowledge and apply some knowledge to the wider global impact of our actions.

3) Habitat Hats

Curriculum links

Art and Design - use a range of materials creatively to design and make products.

Science - identify and name a variety of plants and animals in their habitats, including microhabitats.

Learn all about habitats in the Oceans. Think about what creatures live there, then make your own wearable hat complete with species you've researched about. This lesson is great if you already have a favourite creature and you wish to learn more about where it lives while improving motor skills and applying some creativity! Start by identifying your favourite marine creature, then make a habitat on a headband using a range of different texture boards and crayons. You will create animals to add onto the headband, choosing from a range of drawing techniques. Finally, you have the option of adding any extra decorations from recycled craft materials.

Plenary

Ask students to **Think/Pair/Share** again, this time stating one way they have learnt that they are connected to our ocean. Students can feedback to the group what "One Ocean" means to them following their activity, it might be that they already associated with water and felt like they belonged to the ocean and this has reinforced that connection in some way. For many they may never have felt connected to the ocean and this activity has shown them the many different ways that they are connected with the ocean.

Who can remember the quick takeaway facts:

Did you know that the ocean covers 70% of our planet?

Did you know that your body is made of 70% water?

Ocean Literacy Principles

The Ocean Literacy Principles are international standards of education. The following Principles are achieved through this workshop:

- 1) The Earth has one big ocean with many features
- 2) The ocean and life in the ocean shape the features of Earth
- 3) The ocean is a major influence on weather and climate
- 4) The ocean makes Earth habitable
- 5) The ocean supports a great diversity of life and ecosystems
- 6) The ocean and humans inextricably interconnected
- 7) The ocean is largely unexplored

To find out more, please visit this website: <http://www.national-aquarium.co.uk/education/lessonideas/>.

Matrix: National Marine Aquarium Generic Learning Outcomes

The Generic Learning Outcomes are a collection of conservation guiding principles that the NMA aim to achieve in all aspects of our work. The following GLOs are achieved through this workshop:

1). Knowledge & Understanding

- a) Broaden knowledge of the marine environment and associated species.
- b) Deeper understanding of the relationship between myself and the seas.
- c) Raise awareness of the role that science plays in understanding our seas.

2) Skills

- a) Develop observation skills.
- b) Formulate scientific questions based on observations.
- c) Develop communication (speaking and listening) and social (learning together, working together, meeting people) skills.

3) Attitudes & Values

- a) Appreciate the value of the marine environment and develop respect and empathy for its inhabitants.
- b) Promote a positive view of science and scientists.
- c) Recognise that learning can be a positive process.

4) Enjoyment, Inspiration, Creativity

- a) Have fun with the National Marine Aquarium.
- b) Be surprised by the variety of marine life.
- c) Be inspired by the experience.

5) Activity Behaviour and Progression

- a) Motivation to go out and explore the marine environment further.
- b) Take steps to further understanding of the relationship between myself, my actions and the sea.
- c) Take action to reduce my negative impacts & increase my positive impacts on the marine environment.
