

SCIENCE FUN AT HOME



Have some fun at home with these science activities from **Science Sparks** and the **Primary Science Teaching Trust**



BEFORE YOU START! Please read through this with an adult:

- * Make sure you have read the 'IMPORTANT NOTICE' on the back of this page.
- * If you have a space outside that you can use safely, then you can do the 'Try this outdoors' activity outside. Don't worry if not as you could still do it indoors.
- * Talk to your adult about sharing the science you have done and if they want to share on social media, please tag **@ScienceSparks** and **@pstt_whyhow** and use **#ScienceFromHome**

SCIENCE FUN FOR WORLD OCEANS DAY

1 TRY THIS INDOORS ... Deeper and deeper

If you took a dive into the ocean, what animals would you find as you got deeper and deeper? Find or draw some pictures of ocean animals. Which zone in the ocean do they live in? How deep is each zone? Find out more [here](#) and try this [interactive 'Deep Sea' activity](#). Cut out your animals and stick them on the 'Deeper and deeper into the ocean' sheet (see end page) to show where they live.

WHAT DO YOU NOTICE?

Things to talk about ...

What is it like at the bottom of the ocean? What do animals in the ocean need to survive? What makes it harder to survive at the very bottom? What makes it easier? If you lived in the ocean, what kind of animal would you rather be? Why? How would you rate your chances of survival?!

I am hungry ...
What do I like to eat and where in the ocean will I find it?

You will need

- * Pictures of different ocean animals
- * Scissors and glue
- * Washing-up bowl or large container, filled with water
- * A selection of objects that float, e.g. apple, orange, candle, piece of wood, plastic toy
- * Plastic bottle
- * Ice cubes or an ice balloon (optional)



2

TRY THIS OUTDOORS ... Floating in the ocean

Fill your washing-up bowl with water. Put things you think will float into the water and observe carefully to see how much of the object is under the water and how much is above the water. Try an empty plastic bottle (with the lid on) and see how much of it is above the water and how much is below? Now try filling or half-filling the bottle with water – what difference does this make? You could try an ice cube, or an 'iceberg' (made of lots of icecubes, or water frozen in a balloon). How much of this is under the water and how much is above? Why do you think people in ships need to be careful near icebergs?

WHAT DO YOU NOTICE?

Things to talk about ...

What can you find that floats but most of it is under the water? What can you find that floats where hardly any of it is under the water? What makes the difference? What materials are your floating things made from?



3

WHAT IS THE SCIENCE?

Whether something floats or sinks depends on its density: how much mass it has for a given volume. If something has a lower density than water, it will float, and if it has a higher density than water it will sink. An object like a beach ball full of air has a much lower density than water, so it will float with most of it above the water. But if an object has a density only slightly lower than that of water, it will float with most of the object submerged. When water freezes, it expands a tiny bit. This means ice has a density that is close to, but slightly less than, water, so it just floats. This is why icebergs are dangerous to ships: most of the iceberg is actually below the waterline, so a ship could crash into it long before it reaches the part that can be seen.

4

MORE ACTIVITIES YOU COULD TRY

MAKE AN ICEBERG! www.science-sparks.com/titanic-science-make-an-iceberg

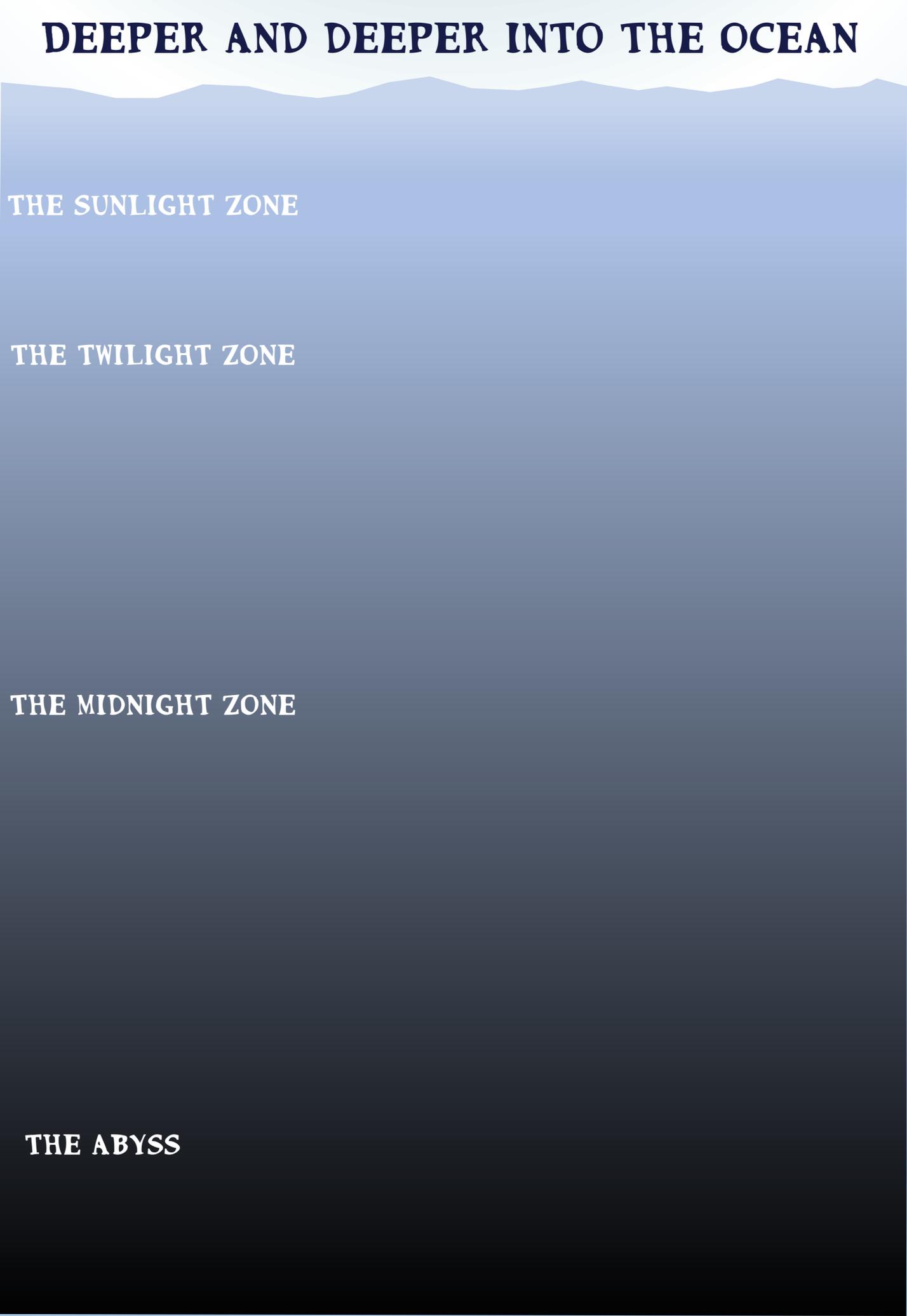
EXPLORE A CORAL REEF www.encounteredu.com/live-lessons

HOW MUCH DO YOU KNOW ABOUT SHARKS? www.wowscience.co.uk/resource/shark-quiz-2/

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These activities are designed to be carried out by children working with a parent, guardian or other appropriate adult. The adult involved is fully responsible for ensuring that the activities are carried out safely.

DEEPER AND DEEPER INTO THE OCEAN



THE SUNLIGHT ZONE

THE TWILIGHT ZONE

THE MIDNIGHT ZONE

THE ABYSS