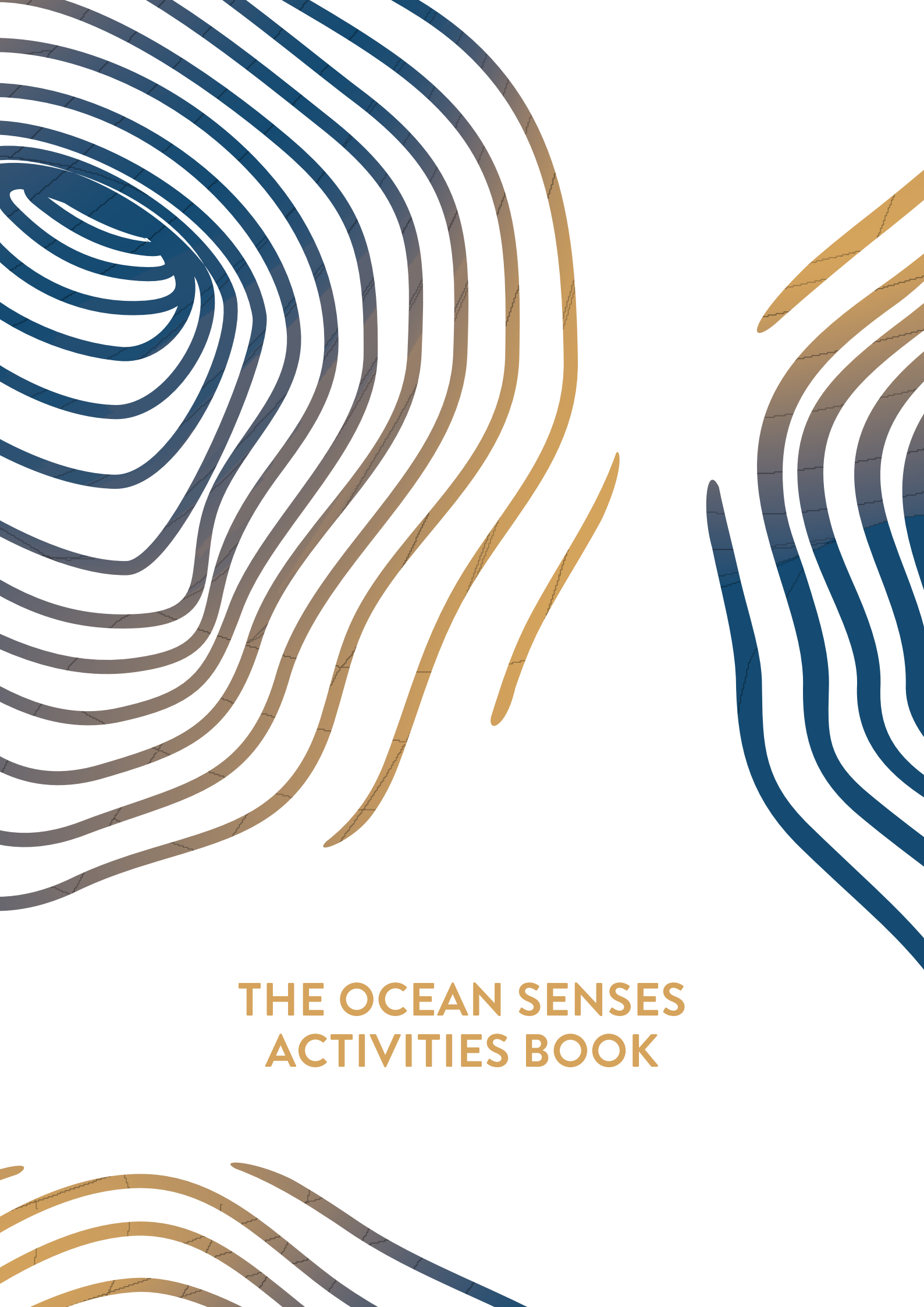

THE OCEAN SENSES ACTIVITIES BOOK

TOUCH

OCEAN SENSES
– TOUCH –

HOW DEEP IS THE OCEAN?

Focus:

To gain an appreciation of ocean depth using ideas of scale and physical education.

Learning objectives:

With these TWO activities, pupils will begin to understand (and feel) how deep the ocean can be in relation to their own size and height. They will get a feeling of the difference between height (above ground) and depth (in relation to water).

Key words:

Height, (ocean) depth.

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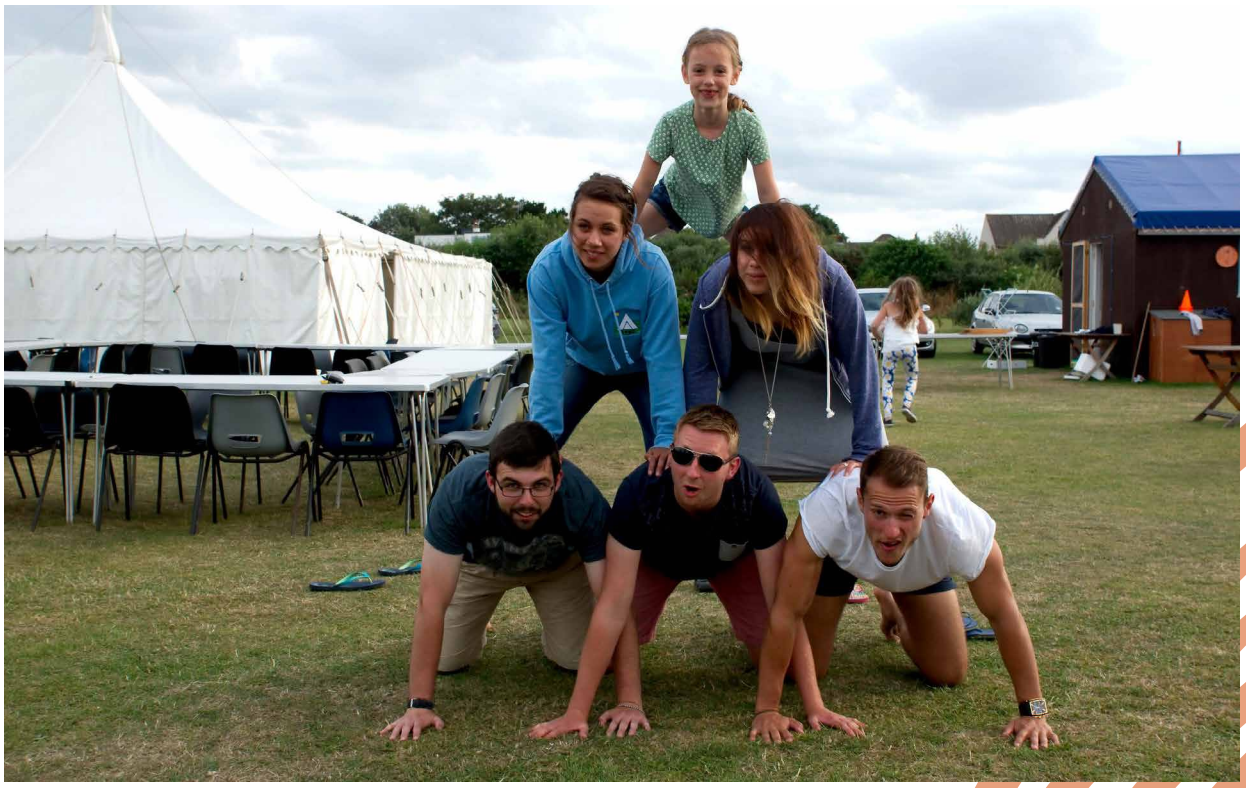
Maric, F., Poto, M.P., & Panieri, G. (2023). How deep is the ocean? In G. Panieri & M. Stiller-Reeve (Eds.), The Ocean Senses Activity Book (pp. 74-77). Septentrio Educational, 2023(1). https://doi.org/10.7557/8.7055

IN SHORT (FOR THE TEACHER):

These TWO lesson activities combine ideas of scale with physical education for the pupils to gain an understanding of how deep the ocean can be. Pupils will be asked to make human pyramids so please ensure appropriate safety precautions.

Materials:

- Open space
- Whiteboard, chalk
- A bucket ¾-full of water for your pupils to submerge their forearms in (vertically) to about elbow height.



Examples of a human pyramid the pupils could attempt to make (Image: Andy Rogers via Flickr)

More information:

https://oceanservice.noaa.gov/facts/oceandepth.htm

BACKGROUND STORY:

The highest mountain on Earth is about 8800m high. The deepest known point in the ocean is about 11000m deep. The average depth of the Arctic Ocean is about 1000m, and its deepest point is 5500m.

Appreciating the ocean's depth is essential for understanding a) the vastness of our world underwater, and b) how small we are in relation to our world and its oceans (an important insight for all humans to learn).

Activity 1:

HUMAN PYRAMID

Draw a one-meter vertical line on a whiteboard as a scale for 1000m. Write or draw a bit of ocean floor at the bottom, and a wavey ocean surface at the top.

Measure the height of one pupil standing, with their arms, stretched up above their head. Then have them draw a stick figure of themselves, to scale next to the water column on the whiteboard to compare.

In an open space, help pupils build a human pyramid, providing all necessary safety measures. Pupils could be on hands and knees for this purpose (tabletop position), maybe with 3-4-5 pupils in the bottom row, then 2-3-4 pupils in the next row, etc. Then measure the height of the pyramid and draw it next to the water column again for comparison.

Alternatively, or additionally, have one pupil stand on the shoulders of another (with all the necessary support for balance). Measure their combined height and draw next to the water column on the whiteboard for comparison.

All these practical activities could also be done before providing the ocean's depth as a comparison.

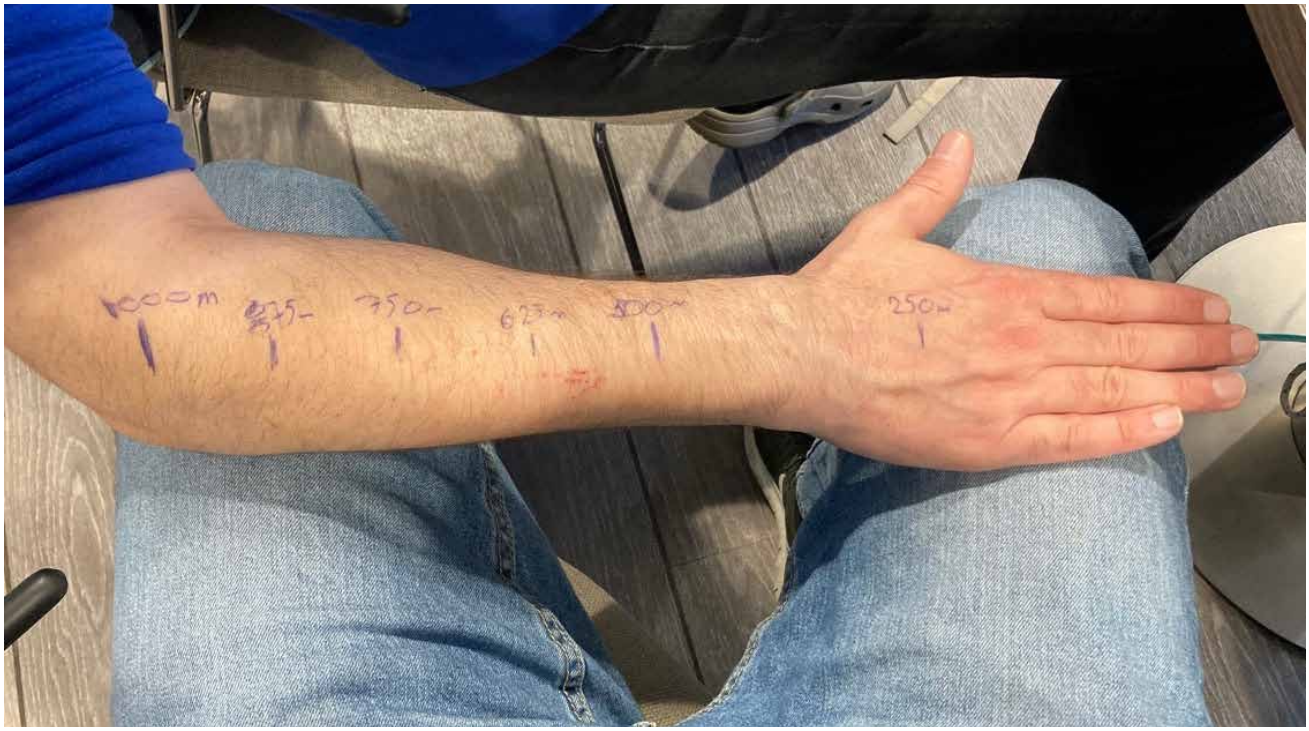
Activity 2:

BUCKET OF WATER

Draw a length scale on pupils' forearms with 0m at their longest fingertip and 1000m at their elbow. They can use the scale on their arm to compare their own height, or the height of the school, or home, or highest building on Earth, or in their city. Any of these could also be drawn on the pupils' arm, next to the scale.

Have the pupils submerge their arms in the bucket of water to measure the depth of the 'ocean in the bucket'.

Then have the pupils demonstrate the deepest point in the Arctic Ocean or Atlantic Ocean by putting their forearms next to each other in one long row.



How the depth scale might look drawn on someone's arm (Image: AKMA Project)