



# Classroom Activity

## 10 Big Question: How does the Earth work?

### Sponge Porosity

A sponge is able to carry liquid because it has lots of small spaces or pores in which to store the liquid, much like the rocks mentioned in this article do. In this experiment we will look at a number of different sponges and calculate their porosity.

#### Materials

- Several different types of sponges (natural, synthetic etc.), roughly of the same size and preferably with straight sides
- Water
- Scales
- Measuring cylinder or small jug
- Container to hold your sponges on the scales

#### Procedure

Calculate the volume of each sponge (height x length x breadth). Record these values in the record sheet below.

Weigh each dry sponge on the scales and record each value.

Place the shallow container with a dry sponge inside onto the scales and zero or tare the scales.

Using the measuring cylinder, pour water onto the sponge until it can't hold any more. The water will start to seep out the bottom when the sponge is full. Record the full sponge weight.

Repeat for remaining sponges being careful to zero out the scales each time.

#### Analysis

Assuming 1 ml of water equals 1 g, calculate the volume of water absorbed for each sponge. Calculate this as a percentage of the sponge volume. Which sponge was best at absorbing liquid?

---

**Record sheet – Sponge Porosity**

<b>Sponge</b>	<b>Height</b>	<b>Width</b>	<b>Length</b>	<b>Volume</b>	<b>Dry weight</b>	<b>Wet weight</b>	<b>Water volume</b>	<b>Percentage</b>
<b>1</b>								
<b>2</b>								
<b>3</b>								
<b>4</b>								