



## WEEK 8: ROCKS



### Science in the News



It may not look like much, but this is the home of the largest volcano on Earth!

Photo credit: Andy Collins, NOAA Northwestern Hawaiian Islands Coral Reef Ecosystem Reserve



### Try it at home - Testing rock hardness

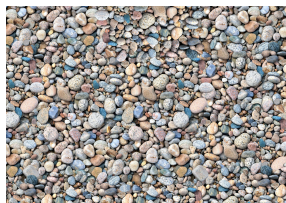
#### What do you need?

- Between 4 - 10 different types of rock
- Pen and paper
- An adult to help you

#### What am I learning?

This experiment is all about testing your skills as a scientist. You will ask a question, make a hypothesis (theory) and then test that theory.

The question you are trying to answer is : 'Which rock is the hardest?'. So, go out collect some rocks from outside, and before doing the experiment, guess which one will be the hardest and which one the softest. Then at the end you can see if you got it right. If you want to learn more about the science behind rocks, check out our lesson on our website - [Science Creates Outreach](#)



#### Parents:

For primary learners, work through our full 'Rocks' lesson plan with your child. It is based around the national curriculum learning objectives found in the year 3 'Rocks' topic. Download here - [Science Creates Outreach](#)

For secondary learners, the contents can be discussed in more depth using the [original online article](#). \*\*

#### HOT ROCKS!

Until now, a volcano in Hawaii held the title of largest volcano on earth. But, by studying the rocks in and around the mountains in the picture and the rocks on the ocean floor, scientists have realised that actually the Pūhāhonu is the largest **and** hottest volcano on Earth.

Pūhāhonu is also in Hawaii, it's a Hawaiian word that means 'turtle rising for breath'.

A lot of the rock is underwater so it doesn't look so big in the picture, but it is made up of two **really large** rocky structures. The highest peak is 52m and the total area is 2,400 km<sup>2</sup>. That's the size of 33,000 football pitches, or, 20 times the size of Bristol!

#### Instructions:

1. Count how many rocks you collected. Give each rock a letter (a - j, depending on how many rocks you collected).



2. Draw a table that has the same number of rows and column as the number of rocks you collected.

3. The heading of both the rows and columns should be the letters you gave to your rocks. (see our lesson for an example if you're stuck).

4. Now take a rock and try and scratch each of the other rocks with it. Can it scratch the rock and leave a mark? Go down the column of that rock and mark a tick for yes or a cross for no.

5. Repeat this for all the rocks, filling in each column as you go.

6. Now, count how many of the boxes in each column have ticks for each rock.

7. Compare how many ticks each rock got. And you can now put them in order of hardness. Did you guess correctly?



# WEEK 8: ROCKS



Garnet



Amethyst



Pearl



Diamond



Peridot



Lapis lazuli

- A. This rare gem can be formed in molten rock.
- B. The most common colour for this mineral is red. It is a very hard mineral and is often used in jewellery.
- C. A semi-precious stone. It has commonly been used in very expensive dyes because of it's deep blue color.
- D. This isn't a rock itself, but it is made up of lots of different minerals. They are produced by oysters in response to stress.
- E. This rock is violet in color and a type of quartz crystal.
- F. The solid form of carbon. Often considered the most expensive stone in the world.

Answers: A - Peridot, B - Garnet, C - Lapis lazuli, D - Pearl, E - Amethyst, F - Diamond.



## Competition Time

This week we are holding a rock painting competition! Find a pebble or rock from your garden or outside. It can be smooth or bumpy, big or small, however you like. Paint the rock with an imaginative pattern or picture. We are looking forward to seeing what you come up with!

### Your competition entry should:

- include your first name and age e.g. Patrick, 12 years old.

Finally, send your photo to [info@sciencecreates-outreach.co.uk](mailto:info@sciencecreates-outreach.co.uk)

The deadline for this issues competition is Friday 19th June 2020 at midday.

COMPETITION NOW CLOSED!

## Read, Watch, Ask



Have a read of our [lesson](#) to learn more about plants.



What is soil made from? Watch [here](#) to find out.\*



Got any questions about today's topic? Email us at [info@sciencecreates-outreach.co.uk](mailto:info@sciencecreates-outreach.co.uk) and we'll answer them!

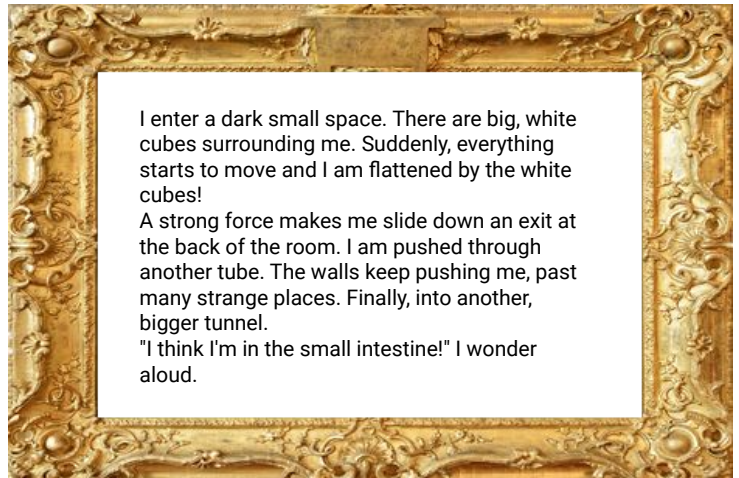


### Did you know?

Lava is molten rock. It is rock that comes from the *center of the Earth* and is so hot that it turns glowing red hot and moves along surfaces like a liquid! When it cools it forms into solid rock again.

### Last week's winner!

We got some very weird and wonderful entries from last week's competition describing your journey through the digestive system! Thank you to everyone who entered. Our winner this week is Noah, aged 10, thank you for your entry!



I enter a dark small space. There are big, white cubes surrounding me. Suddenly, everything starts to move and I am flattened by the white cubes!

A strong force makes me slide down an exit at the back of the room. I am pushed through another tube. The walls keep pushing me, past many strange places. Finally, into another, bigger tunnel.

"I think I'm in the small intestine!" I wonder aloud.