

Y3 Comparing Rocks

KS2 Science · Follows the national curriculum

Name _____ Class _____ Date _____

1. Worked example

How can you test which of two rocks is harder?

Step 1 · Choose the scratching tools in order

Fingernail, then a copper coin, then a steel nail

Step 2 · Scratch each rock gently with the same tool

Look for a mark or powder

Step 3 · Record which tool first made a mark

The rock that needs a harder tool to scratch it is the harder rock

Answer: Do a scratch test with the same tools on each rock. The rock that is harder to scratch is harder.

Check: Use the same pressure each time to make it fair.

2. Now try one with the steps

What does 'permeable' mean, and how do you test it?

Step 1 · Meaning

Step 2 · The test

Step 3 · Observe

Answer:

3. Practice

Have a go at each one. There is space underneath to work it out.

1. Name ONE way you can describe how a rock looks.

2. What does 'permeable' mean?

3. Which rock floats in water?

4. Which rock can you scratch with your fingernail: chalk or granite?

5. Which rock splits into thin, flat sheets?

6. Granite has speckled crystals. Is it hard or soft?

7. Is sandstone permeable or not permeable?

8. Sort these rocks into permeable and not permeable: chalk, slate, granite, sandstone.

9. Why is chalk a bad material for making steps?

10. Use the key: your rock sinks, water does not soak in, it does not split into sheets, and it has large speckled crystals. What is it?

11. In a scratch test, a fingernail scratched chalk but not slate. Which rock is harder?

12. Results: water drops soaked up — sandstone 12, chalk 17, slate 0. Which rock soaked up the most?

13. How many drops did chalk soak up compared with sandstone? (chalk 17, sandstone 12) How many more?

14. Why do gravestones made of sandstone wear away faster than ones made of granite?

4. Before you hand it in

Heavier-looking rocks are always harder.

Do a scratch test to find out how hard it is.

Permeable means the rock dissolves in water.

Permeable means water can soak in; the rock is still there.

All rocks sink.

Most rocks sink, but test it — pumice floats!

Using different amounts of water on each rock.

Use the same number of drops on every rock.