Your teacher may watch to see if you can:
- make careful observations.

Introduction

If a rock has rounded grains, water can get into the gaps between the grains. Rocks like this are said to be porous. If the gaps are connected to each other, so that water can run through the rock, it is said to be permeable.

Aim

To find out how permeable different rocks are by finding how much water they will absorb.

Prediction

1 Which rock do you think will absorb the most water? Explain your prediction.

Method

A Make a table like the one below, and write the names of your rock samples in the first column.

B Examine the samples carefully using the hand lens. Predict which rock will absorb the most water and which will absorb the least. Write your predictions in your book.

C Find the mass of each rock sample. Write the masses in the 'dry mass' column in the table.

D Put the rock samples into a beaker of water. Leave them for 10 minutes.

E Take the rocks out of the water and dry them using paper towels. Find the masses again, and write them in the table.

F Work out how much water each rock has absorbed by subtracting the dry mass from the mass after soaking.

G Now divide the mass of water by the dry mass of the rock. This will give you the mass of water absorbed per gram of dry rock.

Apparatus
- rock samples
- hand lens
- beaker
- balance
- paper towels

Recording your results

2 Make a copy of this table for your results.

Rock name	Dry mass (g)	Mass after soaking (g)	Mass of water absorbed (g)	Mass of water absorbed per gram of dry rock (g)

3 **a** Which rock absorbs the most water?

  b Why does this rock absorb the most water?

4 Was your prediction correct?

Evaluation

5 Why did you have to divide the mass of water absorbed by the dry mass of the rock? Could you have just used readings for the mass of water absorbed?

I can…
- make a prediction
- draw a conclusion
- explain why certain rocks are permeable.