5 Rocks that soak up water

LIMESTONE rocks soak up water quickly. Most other rocks are waterproof.

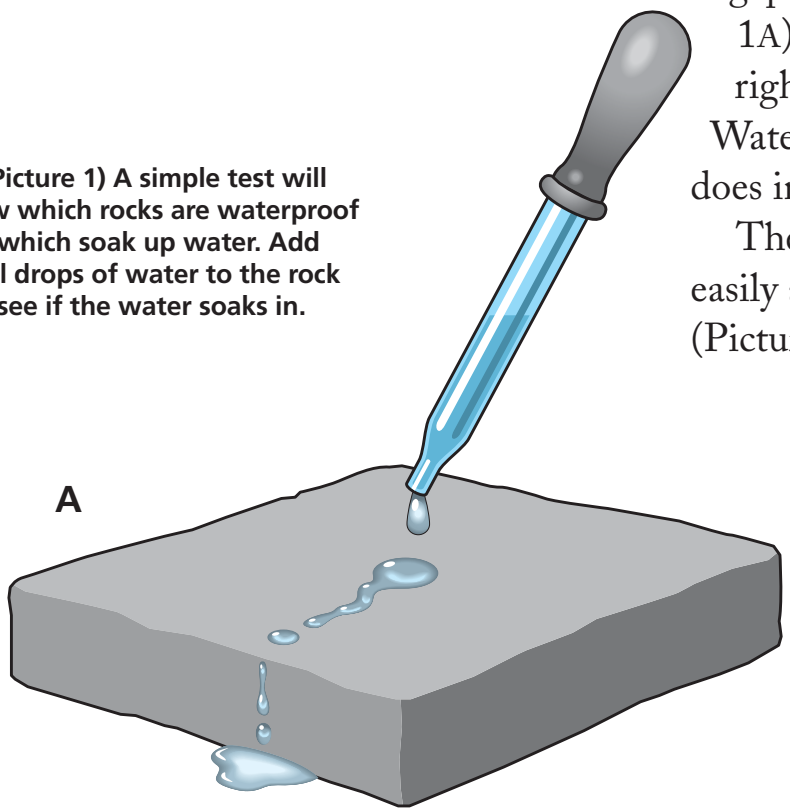
Over time, water destroys all rocks, turning them into soil. If water cannot get inside a rock, then the rock is destroyed very slowly. However, some rocks soak up or **ABSORB** water. When they do this they can be destroyed very quickly.

Why rocks soak up water

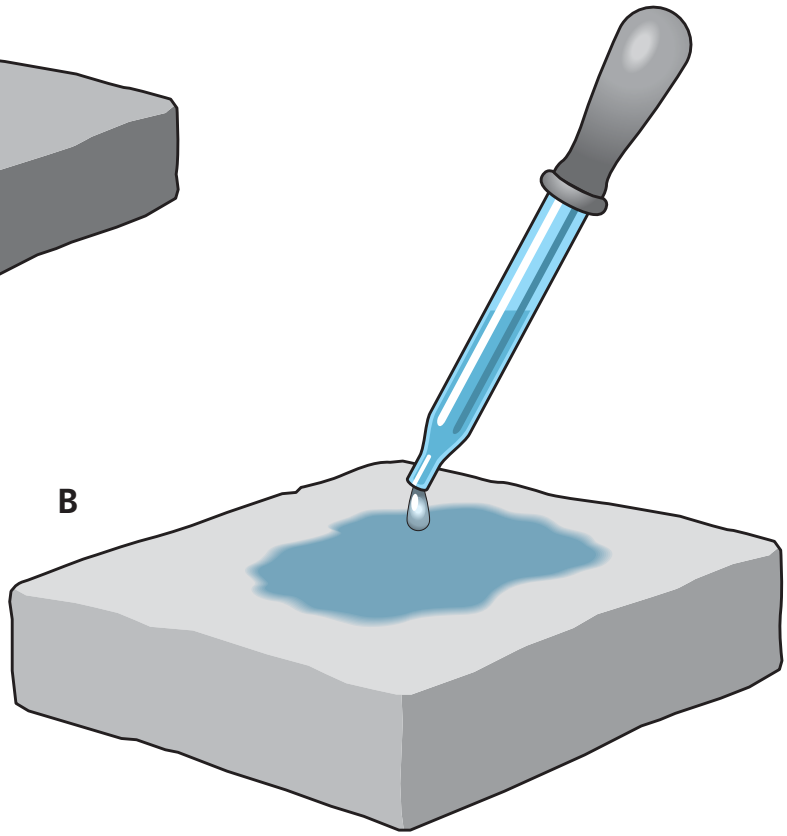
Water will flow into any small crack and hole in a rock. However, some rocks – volcanic rocks like granite and baked rocks like **SLATE** and marble – have no gaps and so are waterproof (Picture 1A). But other rocks have just the right-sized holes for water to flow into. Water soaks into these rocks just as it does in a sponge.

The rocks that soak up water most easily are **CHALK** and **SANDSTONE** (Picture 1B).

▼ (Picture 1) A simple test will show which rocks are waterproof and which soak up water. Add small drops of water to the rock and see if the water soaks in.



When water is slowly dripped onto a block of slate, the water runs off. This is why slate is used as a roofing stone.



When water is added a drop at a time to a block of chalk, it soaks in.

Weblink: www.science-at-school.com

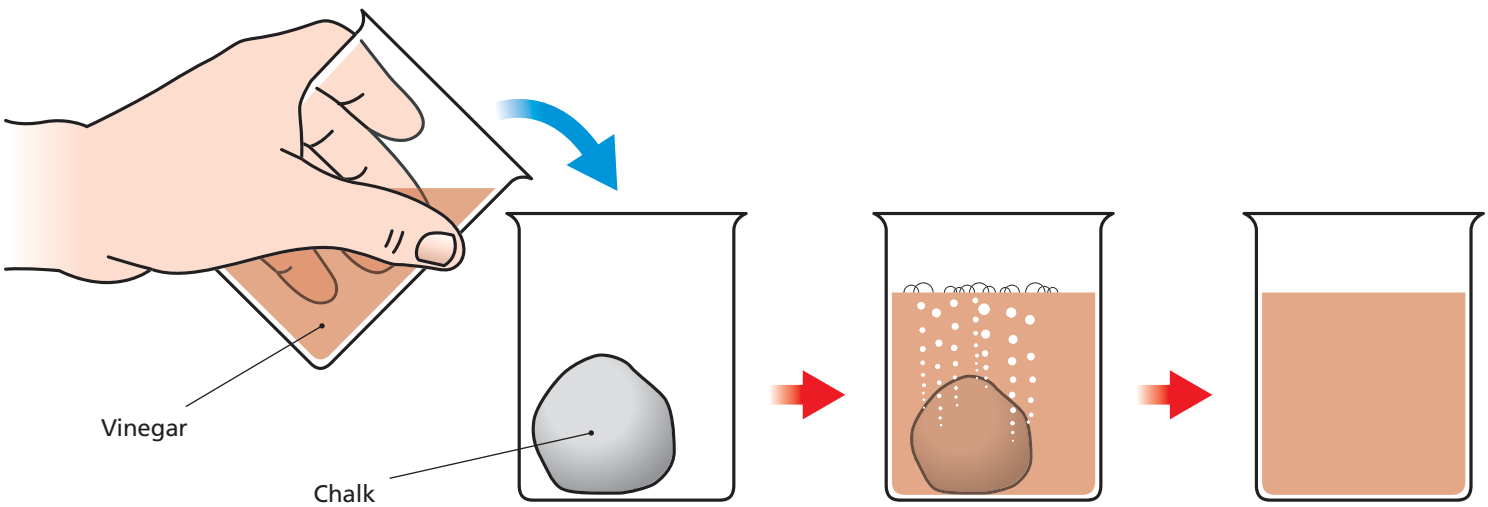
Why rocks crumble

When rocks soak up water and then freeze, they crumble easily. You can see why this happens by putting a bag of wetted chalk in a freezer and letting it freeze (Picture 2). The water expands as it freezes, breaking the chalk apart.

◀ **(Picture 2) Soak a small piece of chalk in water and then put it in a plastic bag in a freezer. Take the sample out of the bag and allow it to thaw. The freezing water cracks the rock apart. When the chalk is allowed to thaw the rock crumbles.**

Why rocks get eaten away

Rain contains chemicals (called **ACIDS**) that can slowly eat away some rocks. Acids work most quickly on soft rocks such as chalk and limestone. Some sandstones are also held together by a natural cement. When acid is added this cement is eaten away. Over time, limestone will completely disappear, while sandstone will fall apart. You can see this working by putting a block of chalk in some vinegar, which is also an acid (Picture 3).



▲ **(Picture 3) Take a small piece of chalk and put it in a glass with some vinegar. The vinegar is an acid so the chalk will slowly disappear.**

Summary

- **Chalks and sandstones can absorb water.**
- **Wet rocks that have soaked up water crumble if they freeze.**
- **Chalks and limestones can be eaten away by acids.**

Weblink: www.science-at-school.com