

Hastings Cave and Thermal Springs



Activity Sheet - Is That Rock Dolomite/Limestone?

- **Curriculum Strands:** HE, BK – Matter, Living Things, Earth and Space
- **Stages:** 5–15

Sometimes it is very difficult to tell the difference between different types of rock as many of them look very much alike. One way geologists test the rocks is by performing the acid or 'fizz' test.

Equipment

You will need:

- About 1 tablespoon of household acid such as lemon juice or vinegar (lemon juice works best)
- eye dropper or straws
- hand magnifier
- notebook and pencil
- a piece of limestone and/or dolomite
- pieces of other local rocks if you can collect them
- some seashells if you can get them

Method

Add a drop or two of acid, using a straw or dropper, onto the shells and look through your hand magnifier right away to see if there are any bubbles. The bubbles may be small so look closely.

Observe and document:

1. Do you see the bubbles? The fizz means your acid is reacting with the substance that makes up the shell, named calcium carbonate.
2. Repeat the test but add the acid to the sample of limestone or dolomite rock this time. Do you see any bubbles this time?
3. Try the test again on other rocks.

What do you think?

- Are the limestone and shells made of the same type of rock?
- Why didn't other rocks fizz?
- Can you find out what the gas in the fizz is made of?

