

# Investigating rocks.

## Investigating the properties of rock types

Children compare and contrast rock types by investigating texture, appearance, colour, strength and hardness.

### Texture and appearance

Specific vocabulary to describe texture; rough, smooth, gritty etc. may need to be taught in advance. Examining the rock carefully using a magnifier, children could look for:

- a grainy rough texture (possibly sandstone)
- pebbles or larger fragments (a conglomerate)
- wavy stripes or banding (often a sedimentary or a metamorphic rock)
- crystals (often visible in an igneous rock such as granite)
- fossils (an indication of chalk or limestone)
- spots or holes (pumice stone contains bubbles caused by trapped gases).

### Colour

When examining for colour, ensure that the rock is cleaned of any soil. The true colour is best seen on freshly broken surfaces. However this is potentially a dangerous activity and should only be carried out by the teacher. Most rock types have distinctive colours that are easily viewed without breaking the surface. The effect that the colour of the local stone has on the appearance of buildings can be examined in conjunction with this activity.

### *Procedure*

- Children work in pairs or small groups
- Distribute rock samples without their names
- Teacher models the skills involved in examining one sample

- Children work together to examine the remaining samples and to record their findings on the task card below
- At the end of the investigations distribute the rock descriptions and invite the children to name the samples

Rock sample	Colour	Texture and appearance	Shiny or dull	Contains crystals yes/no	Visible layers yes/no	Name of rock
1						
2						
3						
4						

### **Hardness**

A scratch test determines the hardness of each rock. Using the same rock samples as above children test the extent to which the surface of each can be marked with a range of tools. Consideration can be given to the implications this has for the use of this rock in the environment.

### *Procedure*

- Distribute rock samples without their names and the tools to scratch
- Discuss the importance of carrying out a fair test (number of scratching attempts, strength applied)

- Teacher models the scratch test with one sample
- Children try to scratch each sample with the items listed below and to record their findings on the task card.
- Distribute the rock descriptions and invite the children to name the samples

Put a tick in the box if you can scratch the rocks with				
Rock sample	your fingernail	plastic biro top	a paperclip	a coin
1				
2				
3				
4				
The hardest rock sample is				
The softest rock sample is				
Have you seen any of these rocks in your local area? Where?				
Have they used to create man-made features (buildings, walls, bridges etc)?				