

## Topic: Rock Identification

### Learning to Describe Rocks

Here is some advice on what to look for and what to focus on when describing rocks:

#### Fresh or weathered?

- *ignore rock surfaces with a weathered crust and look only at fresh surfaces*

Any rock that sits out in the sun and rain gradually develops a 'crust' of altered material, which makes it difficult to see what the rock is really made of. Geologists carry hammers to break open rocks so that they can look at freshly exposed surfaces. The specimens provided are nearly all freshly broken. Be very careful when looking at other rocks, however, since weathered surfaces are common and prevent you from seeing inside the rock.

#### Rough or smooth?

- *does the rock feel smooth or rough when you handle it?*

When a piece of rock breaks away from its original outcrop, it is likely to be rough and sharp-edged. It may be very jagged and irregular in shape. If it gets carried along by a river or washed around by the sea, the roughness gradually gets smoothed off. River gravel and beach pebbles tend to feel smooth and rounded when they are handled.

#### Colours

- *the colours you see in a rock will depend on how far away it is*

The closer you get, the more likely you are to make out details of several different colours. Common patterns of different colours are listed separately below.

- *shades of colour are important*

For instance, few rocks are pure white. There are lots of rocks, however, that are very pale in shades of grey, brown, pink and green. Be sure to indicate whether colours are pale, or very pale or dark etc.

#### Layers

- *many rocks have obvious layered or banded patterns*

You really need to look at all the surfaces of a rock before deciding whether or not it is layered. Layers may be flat and regular or they may be crumpled or curved. The layers may be close together (thin layers) or far apart. They may be irregular or streaky. They may also be vague or very prominent. It is important to describe as much as you can about the colours and appearance of layers.

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### Crystals

- *rocks made of crystals tend to sparkle and reflect light from crystal faces*

It is obvious that a rock is made of crystals (crystalline) when there are lots of large shiny crystal faces. It may be less obvious if the crystals are very small or if the surface of the rock has been weathered. If you see any obvious crystals, be sure to describe their size and colour in your description.

- *sometimes, you will be able to see the regular shapes of well-formed crystals*

The simplest way to describe crystal shapes is to make an outline sketch of the shape.

### Grains, fragments and pebbles

- *many rocks are made of bits of other rocks*

The sizes of these 'bits' are very important. The sand grains in a sandstone are very small fragments of older rocks that have been recycled to make a new rock. Larger fragments can be called pebbles if they have a smooth or rounded outline or simply 'fragments' if they are irregularly shaped or have sharp corners.