

DIAGNOSTIC PROPERTIES OF MINERALS

Each of these should be printed off as labels and placed in the appropriate tray.

Colour Minerals with distinctive colours

Write down the name and colour of each of these minerals.

This shows that minerals can be many different colours.

Colour All black minerals

Write down the name and colour of each of these minerals.

This shows that several different minerals can have the same colour.

Colour All white minerals

Write down the name and colour of each of these minerals.

This shows that several different minerals can have the same colour.

Colour Varieties of quartz

Write down the name and colour of each of these varieties of quartz.

This shows that an individual mineral can occur in a variety of colours often because of impurities. All minerals which are transparent can be white or other colours

Colour Varieties of fluorite

Write down the name and colour of each of these varieties of fluorite.

This shows that an individual mineral can occur in a variety of colours.

Streak magnetite and haematite

Streak is the colour of the powdered mineral. Rub the mineral against the streak plate to make a single line.

Write down the streaks made by magnetite and haematite. Streak is important in distinguishing these two minerals.

Streak Varieties of fluorite

Look at the streak obtained from these varieties of fluorite.

This shows that minerals which are normally transparent always give a white streak even if they are coloured by impurities.

Lustre

Lustre describes the character of the light reflected from the mineral's surface.

Examine samples 1 to 4 in which the lustre is given. Now try to work out the lustre of samples 5 to 8.

Hardness

Test the hardness of each of these minerals and write down its hardness on Mohs' scale.

Density

Which is the densest of these white minerals and which is the densest of the black minerals?

Acid reaction

Carbonate minerals fizz when a drop of dilute hydrochloric acid is applied to them. Which of the minerals is a carbonate?

Magnetism

Only one common mineral, magnetite is magnetic. Move each of the minerals in turn past the compass. Which one is magnetite?

Form

Examine carefully each of these samples and then draw one example of each form.

Then identify the form shown by each of the test samples.

Cleavage and fracture

Use the hammer to break a piece of calcite and note the cleavage rhombs produced.

Examine carefully and draw one example of each cleavage or fracture type.

Identify the type of cleavage or fracture shown by each of the test samples.