Peak District Mining Museum - groups of rocks

Read the information below and use it to answer the questions:

There are three different groups of rock:

Sedimentary - these are formed from layers of sediment (small bits of broken up rock, soil and sand) are pressed together over millions of years to form rock.

Igneous - these are formed when magma (molten rock) under the earth or lava on the surface cools.

Metamorphic - these are rocks that have been changed by the heat and pressure deep in the earth.

Sedimentary rocks:

Fossils are found in this type of rock.

Limestone is a fairly hard sedimentary rock.

Chalk is a softer sedimentary rock.

Flint was used to make sharp blades before we had metals.

Igneous rocks:

Granite is a hard rock that forms from magma underground.

When magma reaches the surface it is called lava.

Obsidian is formed when lava flows into the sea.

When lava cools it can also make basalt rock.

Metamorphic rocks:

These were old rocks that were changed by heat and pressure deep in the Earth.

Marble can be used for sculptures.

Slate is impervious (will not let water through) so is ideal for using on a roof.

Use the information above to find the answers:

1) Name one sedimentary rock.
2) Which rock is formed when lave flows into the sea?
3) What is sediment?
4) Before humans had metal what was flint used for?
5) Why is slate a good material to use on your roof?
6) How are metamorphic rocks formed?
7) Name one igneous rock.
8) Which group of rocks would you find fossils in?

9) This is granite which group of rocks is it in?

10) High Tor is made of limestone which group of rocks is it in?

PEAK DISTRICT LEAD MINING MUSEUM

Peak District Mining Museum - Recognising rocks & minerals.

Limestone with fossils (sedimentary)

Slate (metamorphic)

There are some photo cards with larger images of these rocks.

You do not need to print them out but take a look at them to see these rocks more clearly.

Sandstone (sedimentary)

Pink Granite (igneous)

Obsidian (igneous)

Conglomerate (sedimentary)

PEAK DISTRICT LEAD MINING MUSEUM

Match these descriptions to the types of rocks in the photographs:

1) I sometimes look pink. _____

2) I sometimes contain fossils. _____

3) I am usually black (or nearly black) in colour and look a bit like glass. _____

4) I am a flat rock with a smooth surface. _____

5) I am a mix of pebbles and shells of different sizes. _____

6) I am formed from different layers of sand and sediment. Sometimes you can see different coloured layers in me. _____

Peak District Mining Museum - Uses of rocks

Most rocks are made up of several different minerals.

Did you know that your house is full of rocks and minerals?

These minerals can be used in things humans make.

Treasure Hunt!

See how many of these uses of rocks and minerals you can find in your house.

1) **Fluoride in toothpaste comes from the fluorspar (also known as fluorite).**
2) **Breakfast cereals often contain these elements from rocks and minerals - iron, potassium, calcium.**
3) **Tiles on your bathroom wall are made from clay.**
4) **Many paints contain baryte (also spelt barite).**
5) **Drinking glasses are made from sand.**
6) **Your house might be made of stone (probably sandstone or gritstone) or bricks which are made of clay.**
7) **Cement between the stones or bricks is made of limestone, clay or shale.**
8) **Computer chips are engraved with an acid made from fluorspar. Without the chips they would not work.**
9) **The roof of your house might be made of slate which is a rock, or tiles made from clay.**

When you next go outside see how many uses of rocks and minerals you can spot.

Draw pictures of the ones that you can find in your home.

Did you know that the colours in fireworks are made by different chemicals extracted (taken from) rocks and minerals?

Barium for the green, copper for the blue, sodium for yellow.

Peak District Mining Museum - Rocks and their uses

Can you match the words with the images?

Quartz sand is used to make the glasses we drink from.

Marble is used to make statues.

Limestone is used to make cement.

Barytes is used to make non-stick frying pans.

Fluorspar is used to make toothpaste.

Clay is used to make plates, bowls and pottery.

Peak District Mining Museum Rocks Wordsearch!

M	E	T	A	M	O	R	P	H	I	C
T	G	A	V	A	L	M	R	Y	F	A
B	U	P	T	N	I	G	E	O	L	L
A	V	U	S	E	M	A	T	T	U	C
S	F	M	U	L	E	L	Y	I	O	I
A	H	I	O	A	S	E	R	L	R	T
L	O	C	E	G	T	T	A	B	S	E
T	O	E	N	K	O	N	B	V	P	U
E	B	A	G	F	N	R	E	V	A	L
S	E	D	I	M	E	N	T	A	R	Y

Words To Find:

1. Galena
2. Fluorspar
3. Calcite
4. Pumice
5. Limestone
6. Lava
7. Basalt
8. Baryte
9. Tufa
10. Sedimentary
11. Metamorphic
12. Igneous

PEAK DISTRICT LEAD MINING MUSEUM

Peak District Mining Museum Rock Wordsearch!
Word Meanings

1. **Galena -** Galena is the proper name for lead ore. It is very heavy.
2. **Fluorspar -** Fluorspar crystals can be any colour from clear through to almost black.
3. **Calcite -** Calcite crystals glitter in the torch light – you can see them in Temple Mine.
4. **Pumice -** This is an igneous rock – it is so light that it can float in water!
5. **Limestone -** High Tor in Matlock Bath is made of limestone.
6. **Lava -** This is rock that has got so hot that it melts and pours out of a volcano.
7. **Basalt -** In Derbyshire basalt is often called Toad Stone because of the dark mottled colour that looks like the back of a toad.
8. **Baryte -** This is used in pans so that food does not stick to them (Teflon).
9. **Tufa -** The minerals from the spring water form a rock called Tufa, when you next visit Matlock Bath look at the rock around the fish pond – it is tufa.
10. **Sedimentary -** This is rock made from grit and sand settling in a shallow sea. Over millions of years it is pushed together and forms rock.
11. **Metamorphic -** These are rocks that were sedimentary or igneous but they have been heated and pressed together so much that they change to a new rock.
12. **Igneous -** These come from volcanoes as lava which then cools and creates new rock.

PEAK DISTRICT LEAD MINING MUSEUM

Peak District Mining Museum - Can you Spot...

Can you spot the

Canary

Explosive

Fossil

Shovel

Helmet

Lamp

Bat

Crystal

Coal

Mouse

Peak District Mining Museum - Identify the rock or mineral

Conglomerate

Large image to go with worksheet - you do not need to print this out.

Peak District Mining Museum - Identify the rock or mineral

Granite

Large image to go with worksheet - you do not need to print this out.

Peak District Mining Museum - Identify the rock or mineral

Limestone with fossils

Large image to go with worksheet - you do not need to print this out.

Peak District Mining Museum - Identify the rock or mineral

Obsidian

Large image to go with worksheet - you do not need to print this out.

Peak District Mining Museum - Identify the rock or mineral

Sandstone

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Peak District Mining Museum - Identify the rock or mineral

Slate

Large image to go with worksheet - you do not need to print this out.