

WHAT IS A ROCK

LEARNING OBJECTIVES

1. TYPES OF ROCK

ROCK

A ROCK IS A NATURALLY OCCURRING MATERIAL.

MOUNTAINS, CLIFFS, HILLS, STONES AND PEBBLES ARE ALL MADE OF ROCK.

PRECIOUS STONES, OR JEWELS, ARE ALSO MADE OF ROCK.

SAND AND SOIL ARE MADE OF TINY PIECES OF ROCK.

THERE ARE MANY DIFFERENT TYPES OF ROCK, SOME ARE HARD, SOME ARE SOFT, SMOOTH OR ROUGH.

A ROCK IS COMPOSED OF MINERALS OR FRAGMENTS OF OLDER ROCKS OR FOSSILS OR FROM A MIXTURE OF THESE.

ROCKS CAN BE SORTED INTO GROUPS BASED ON SEVERAL DIFFERENT CRITERIA.

MINERALS

A MINERAL IS A NATURALLY OCCURRING SUBSTANCE.

IT IS INORGANIC, WHICH MEANS IT DOES NOT COME FROM A LIVING THING.

A MINERAL HAS A DEFINITE CHEMICAL COMPOSITION, ATOMIC STRUCTURE AND KNOWN PHYSICAL CHARACTERISTICS.

MINERALS ARE MOSTLY COMPOUNDS (A SUBSTANCE THAT CONSISTS OF TWO OR MORE ELEMENTS).

ALTHOUGH ELEMENTS SUCH AS COPPER AND SILVER DO OCCUR AS MINERALS.

SOME ROCKS, E.G. GRANITES, CONSIST OF THREE OR MORE DIFFERENT MINERALS, I.E. QUARTZ, FELDSPARS AND MICAS.

MOST LIMESTONES ARE COMPOSED OF ONE PREDOMINANT MINERAL, I.E. CALCITE.

AS WELL AS IN ROCKS AND THE EARTH, MINERALS CAN BE FOUND IN FOOD AND DRINK.

ACTIVITY

START YOUR OWN ROCK COLLECTION,

THEN BEGIN TO SORT THEM INTO DIFFERENT CRITERIA. (REMEMBER TO ALWAYS ASK AN ADULT BEFORE TAKING ANY ROCKS FROM A BEACH OR PUBLIC PARK)

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GROUPING

EARTH SCIENTISTS GROUP ROCKS ACCORDING TO HOW THEY WERE FORMED.

SEDIMENTARY ROCKS ARE FORMED OF GRAINS, OF VARYING SIZES, WHICH HAVE BEEN COMPRESSED AND CEMENTED TOGETHER BY NATURAL CEMENT E.G. SILICA, CALCITE OR IRON MINERALS.

THE GRAINS OF ROCK HAVE USUALLY BEEN DEPOSITED BY WATER, ICE, OR WIND MOVEMENT.

IGNEOUS AND METAMORPHIC ROCKS ARE MADE FROM INTERLOCKING CRYSTALS.

IGNEOUS ROCKS ARE ROCKS THAT WERE ONCE SO HOT THAT THEY WERE LIQUID OR MOLTEN.

METAMORPHIC ROCKS ARE ROCKS THAT HAVE HAD THEIR ORIGINAL STRUCTURE CHANGED BY PRESSURE AND HEAT.

IGNEOUS

IGNITE

FIRE

FORMED UNDER HEAT

CRYSTALS

SEDIMENTARY

SEDIMENT

GRAINS

SAND

CEMENTED

METAMORPHIC

MORPH

METAMORPHOSIS

CATERPILLAR TO BUTTERFLY

CHANGE

HEAT & PRESSURE

CRYSTALS

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