

SILICATES

The silicate mineral class is considered to be the most important of all the mineral classes. About 25% of the known minerals and nearly 40% of the common ones are silicates. Nearly 90% of the igneous rock-forming minerals are silicates; which means that they make up over 90% of the Earth's crust (oxides are the other dominant mineral group).

Each assemblage of silicate minerals tells us something of the environment in which it was formed. The soil, in which we grow our food, is made up largely of silicates. Bricks, stones, concrete, and glass are either silicates or derived from silicates. The time in our computers and clocks is kept by a silicate mineral.

Example of silicates :

Olivine

A common rock-forming mineral, olivine is found in mafic igneous rocks. The rock, dunite, is made

up almost wholly of olivine. The transparent gem variety is known as peridot. It derives its name from the usual olive-green color.

Topaz

The vitreous luster of this gem mineral is what distinguishes it from quartz. In the 1940s, a 596-pound crystal was found in Minas Gerais, Brazil. The name is derived from Topazion, an island in the Red Sea.

Zircon

Zircon's name comes from the Arabic "car", gold, plus "gun" colored, referring to one of the many colors that the mineral may display. It is found in most igneous rocks as small crystals and as alluvial grains due to its high hardness. When crystals are large enough, it is used as a gemstone.

Jadeite

Also known as "jade," this mineral was first discovered in 1863. It occurs in large masses formed by metamorphism. It has long been highly prized in the Far East where it is worked into ornaments and utensils of great variety and beauty.

Biotite

The splendid luster and dark sheets of this mineral from the mica group distinguish it from the others in the group. It is one of the rock-forming minerals and is widely distributed in igneous rocks.

Muscovite

The perfect cleavage of this mineral allows it to be split into very thin flexible sheets. It is the most common of the mica group minerals and is typically found occurring as "books."

Kaolinite

Kaolinite is a common mineral, formed by weathering or hydrothermal alteration of feldspar.

Many and varied products are made from this mineral which includes common brick, drain tile, and in high-grade form, china and pottery. Its largest use is as filler in paper

Talc

A "1" on Mohs hardness scale, this mineral can be identified by its softness and greasy feel.. It is used for laboratory table tops, electric switchboards, and as soapstone. The name comes from the Arabic word for "pure," probably alluding to the color of its powder.

Task 1

Find these words in a dictionary :

igneous

vitreous

distinguish

alluvial

greasy

drain tile

utensil

mica

china

feldspar.