Economic Minerals and Resources

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Economic minerals are those that have essential economic interest and can be extracted from the earth's crust. They can be classified into four categories: energy minerals, metals, construction minerals, and industrial minerals

What are the economic importance of minerals?

Economic minerals include: energy minerals, metals, construction minerals and industrial minerals. Energy minerals are **used to produce electricity, fuel for transportation, heating for homes and offices and in the manufacture of plastics**. Energy minerals include coal, oil, natural gas and uranium.

What are the most economically important minerals?

Within the metal group, the principal native minerals are **gold, silver, copper, and platinum**. These four minerals all contain weak metallic bonds. Gold, silver, and copper have further commonality in their chemical properties because they are in the same column of the periodic table.

What is the economic importance of minerals in Iraq?

Mining, likewise, contributes to the country’s foreign-exchange earnings through exports. Furthermore, the industry provides additional revenues for the government through taxes and fees paid on mining and other related activities.

Why are minerals important for society and the economy?

We need minerals to make cars, computers, appliances, concrete roads, houses, tractors, fertilizer, electrical transmission lines, and jewelry. Without mineral resources, industry would collapse and living standards would plummet.

What are the great economic advantages of minerals?

Along with stimulating economic growth, minerals mining provides the resources that make our cars, roads and bridges, computers, solar panels, medical technology, the equipment our national defense uses to keep us safe and so much more.

What is the economic importance of minerals as natural resource?

Minerals are important natural resources which are also economically important, because;

1) Minerals are used to produce different necessary chemical compounds and different metals which have great selling values.

2) Some rare minerals have direct resale values in the market.

What is the importance of minerals to human being?

Minerals are important for your body to stay healthy. Your body uses minerals for many different jobs, including keeping your bones, muscles, heart, and brain working properly. Minerals are also important for making enzymes and hormones.

What are the importance of minerals in our daily life?

Like vitamins, minerals help your body grow and stay healthy. The body uses minerals to many things; from building strong bones to sending nerve impulses. Some minerals are even used to make hormones or maintain a normal heartbeat.

Ore Deposits and Economic Minerals

Golden pyrite with silvery hematite from Elba Island, Italy. The specimen is 12 cm wide.

We mine many minerals from Earth.

Some ores are valued for their mineral properties, some for the elements they contain, and others because they contain valuable gems.

The best ore deposits *are those containing large amounts of ore minerals.*

The best metal ore minerals *are those that contain large amounts of metals of value.*

Most metallic ore minerals are native elements, sulfides, sulfosalts, oxides, or hydroxides.

Ore deposits are highly variable in nature and origin.

The most important kinds of ore deposits are magmatic, hydrothermal, and sedimentary.

Mineral Resources

Earth gives us many mineralogical resources, also called mineral commodities.

We mine some ores because they contain elements that have the metallic properties of conductivity, strength, or shiny appearance.

We mine industrial minerals such as halite, gypsum, clays, calcite, asbestos, micas, and zeolites to make salt, plaster, ceramics, construction materials, electronic components, chemical filters, and many other things.

We also quarry large quantities of limestone (to make cement) and building stone, and energy companies produce large amounts of coal, oil, gas, uranium and other energy resources.

Ore deposits and ore minerals fall into several main commodity groups: metallic and semi-metallic elements, nonmetallic elements, gems, construction and manufacturing materials, fertilizer and chemical minerals, and energy resources (see Table below).

Groups of Mineral Commodities

group	examples
metallic and semimetallic elements	gold, silver, copper, iron, manganese, aluminum
nonmetallic elements	potassium, sodium, phosphorous, sulfur
gems	diamond, sapphire, agate
industrial materials: construction and manufacturing	sand, clay, building stone, diatomite, talc, mica, zeolites
industrial materials: fertilizer and chemicals	limestone, phosphate, potash, salt, nitrate, fluorite
energy resources	coal, oil, gas, uranium

We take energy resources and construction materials from Earth in the greatest quantities. We also mine large amounts of salt and fertilizer components. Of the metals, only iron is removed from Earth at rates comparable to these components.

Economic mineral in Iraq

A brief description of the economic minerals and rocks in Iraq illustrated below:

Tens of mineral showings and occurrences were found from different parts of the northern Iraq (Kurdistan Region). Some of those showings grade into ore but not economic deposit, like, iron, copper, zinc and lead

Radioactive minerals (U and Th) showed high interesting anomalies at Qalat Diza vicinity.

The Iraqi Western Desert is rich in mineral deposits and artificial rocks, where important deposits of ores have been identified including phosphate, kaolin clays, montmorillonite clays, palygorskite, quartz sand, bauxite and clay minerals, porcelanite, uranium, iron, heavy metal sand, feldspar sand, limestone, dolomite and salt deposits (Halite).

Sulfur also is economically present in Mishraq Sulfur Mine