

MINERALS

DEFINITION

What is a mineral?

Building Blocks of Earth's Crust

Not All Rocks are Minerals
Minerals might be rocks

Rocks
Vitamins
Toys
Gems
Crystals
Streak elements
Fracture
Hardness

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Mineral Checklist

Is it inorganic?

Is it natural?

Is it a crystalline solid?

Is the chemical composition consistent?

All 4 Q's
Yes
↓
Mineral

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Organic vs. Inorganic

<p>Alive or once living</p> <p>Contains Carbon (C)</p>	<p>Not alive</p> <p>Never was Alive</p> <p>Contains No Carbon (C)</p> <p>Minerals</p>
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Natural vs. Synthetic

<p>Occurs Naturally</p> <p>Minerals</p>	<p>Man made</p>
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Crystalline vs. Non-Crystalline

<p>Regular pattern to Atoms</p> <p>"Geometric shape"</p> <p>Minerals</p>	<p>No pattern to Atoms</p>
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Consistent vs. Inconsistent Chemical Composition

<p>Same chemical Elements Everywhere</p> <p>Proportional</p> <p>Minerals</p>	<p>Many different chemical elements</p> <p>unproportional</p>
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20 common rock forming minerals

We know over 4000

10 of them make up 90% of Earth's crust

quartz
orthoclase
plagioclase
muscovite
biotite
calcite
dolomite
halite
gypsum
ferromagnesian

Silicate Minerals
Combine Si (silicon) and O (oxygen)
(96% of Earth's Crust)

quartz only Si and O
feldspar
plagioclase Na and/or Ca with Si and O
orthoclase K with Si and O
(combined make 50% of Earth's Crust)

HOMEWORK

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