Welcome to Super Gnomatic Rock Cycler!

We’ll be learning about rocks, and how they are formed.

(show diagram)

Rocks are made up of minerals.

(hide diagram)

(show diagram)

Depending on the minerals and how it was formed, a rock can have distinct characteristics.

We’ll go on to more details later on how different types of rocks are formed.

(hide diagram)

(spawn gnome)

For now, let’s go ahead and gather some minerals!

(spawn mushroom)

(show overlay guide with move control)

Press the left or right arrow key to move the gnome.

Now that you have some minerals, it’s time to melt them down into magma.

(show magma chamber illust)

Head over to the Magma Chamber to do so.

(hide magma chamber illust)

+Magma Chamber+

(show illust)

On Earth, rocks are continuously pushed upward or downward due to physical activities such as an earthquake.

When rocks are pushed deep enough into the Earth, where temperature can reach its melting point, it will become magma.

(show illust)

Here in the magma chamber, we can simulate the process of melting rocks to magma.

Go ahead and process the minerals by holding the Spacebar (you can also click and hold the minerals).

+Magma Chamber Exit+

Now that we have magma available, it’s time to form some rocks!

If you notice at the very top, we need to form at least three different types of igneous rock.

(show magma cooler illust)

In order to form igneous rocks, head over to the Magma Cooler.

(hide magma cooler illust.)

+Magma Cooler+

There are two ways for igneous rocks to form: intrusive or extrusive.

For now, we will form intrusive igneous rocks.

Intrusive rocks are formed when magma cools off below the Earth’s surface.

Remember to form at least three types of igneous rocks as indicated at the top.

Go ahead and select Intrusive by pressing the Spacebar (you can also click the icon).

# instruction #

Press the Spacebar (or click STOP) to end the cooling process.

Now that you have formed the necessary rocks, it’s time to drop them off.

Head over to the indicated star and submit the rocks!

Excellent work! Now that the rocks have been submitted, we can gather more minerals to form new rocks.

+ Level 2 +

Just like before, we need to form three different types of rocks.

Remember to head over the Magma Chamber to melt the minerals, and then to the Magma Cooler to form rocks.

Remember to melt the minerals in the Magma Chamber, and then form the rocks in the Magma Cooler.

+Magma Cooler+

This time around, we’ll be forming extrusive igneous rocks.

These rocks are formed when magma cools off above the Earth’s surface.

Since these rocks cool off quicker, they don’t form as much crystals as intrusive igneous rocks.

+Sedimentary+

For sedimentary rocks to be formed, we must first have other rocks available to erode.

Go ahead and create some igneous rocks before heading over to the Sedimentary Pit.

+Sedimentary Pit+

(show illust)

Sedimentary rocks form when sediments cement together after a long period of time.

These sediments come from any type of rocks or certain organics that have been broken down by weathering and erosion.

(hide illust)

Here in the Sedimentary Pit, we will be simulating the process of breaking down rocks into sediments, and then cementing it to form a new rock.

The result of the sedimentary rock will be based on the grain size of the sediments. So, make sure to try out different sizes!

You need at least three rocks to form a sedimentary rock. Head over to Magma Cooler to form some.

+Sedimentary Pit+ Organic

This time around, we will be making sedimentary rocks with organic materials.

Head directly to the Sedimentary Pit to proceed.

Sedimentary rocks can be formed from the remains of certain life-forms.

For example, plants and trees that were buried for millions of years will petrify, and can turn into coal.

If you’re lucky, you can find a fossil or two from these kinds of rocks.

+Metamorphic+

For our final rock type, we’re going to first need to form other rocks.

Once you have a bunch of rocks available, head over to the Metamorphic Pit.

+Metamorphic Pit+

(show illust)

When a rock is subjected to enough heat and/or pressure, its form will change drastically, morphing into a whole different rock.

(hide illust)

Depending on the type of rock you choose, the result will be different.

Try to morph a previously morphed rock to get another type of rock.

Congratulations! You have gathered all the rocks that we need!

This concludes Super Gnomatic Rock Cycler!

+Minerals+

Olivine

A mineral that is usually green in color. Can usually be found in igneous and metamorphic rocks.

Quartz

A mineral that is usually colorless or light in color. Can commonly be found at the surface of the Earth.

Feldspar

One of the common minerals found in the Earth’s crust. Most rocks are composed of this mineral.

Pyroxene

This mineral tends to be present in volcanic lavas. Its color is usually black, sometimes with a hint of green.

Amphibole

This mineral is mostly found in igneous and metamorphic rocks. Amphiboles come in a variety of colors: green, black, colorless, white, yellow, blue, or brown.

Biotite

This mineral is commonly found in igneous and metamorphic rocks. Its color is usually black, dark brown, or dark green.

Shell

Sea Shells

These materials are the key ingredient for making limestone through compaction and cementation.

Wood

Dead plants and wood buried deep into the Earth can slowly turn into coal, a type of sedimentary rock.

+Rocks+

Peridotite

A coarse-grained, dark-colored igneous rock. Usually contains the mineral olivine.

Diorite

A coarse-grained igneous rock known for its salt and pepper appearance.

Granite

A light-colored igneous rock that is mainly composed of quartz and feldspar.

Pumice

A light-colored igneous rock that forms during a volcanic eruption. It’s got a porous texture.

Scoria

A dark-colored igneous rock that forms during a volcanic eruption. Its texture is composed of bubble-like cavities.

Rhyolite

An extrusive igneous rock that is usually pink or gray in color.

Basalt

A fine-grained igneous rock that is usually black in color. These are commonly found in ocean floor.

Obsidian

An igneous rock that forms when lava is cooled rapidly, resulting in its black glassy feature.

Breccia

A sedimentary rock that is composed of large angular shaped fragments glued together.

Shale

A fine-grained sedimentary rock formed from the compaction of silt sediments.

Siltstone

Bituminous coal

A soft coal that is formed from plant debris that is deoxygenated and buried deep in sediments for a long time.

Limestone

A sedimentary rock composed primarily of calcite. These calcites form from the accumulation of shells and skeletons compacted together.

Amphibolite

A coarse-grained metamorphic rock that tends to be formed from igneous rocks due to high pressure.

Anthracite Coal

A type of coal that has undergone heat and pressure. This results in a bright, lustrous appearance.

Metaconglomerate

A morphed version of a conglomerate rock, such as breccia, that has undergone heat and pressure.

Phyllite

A rock with a sheet-like surface that gleams from its tiny grain of crystals.

Schist

A rock made up of platy crystals formed from clay that has undergone heat and pressure.

Slate

A low-grade metamorphism of shale. It features a sheet-like surface, and dull in color.