IGNEOUS ROCK TEXTURES

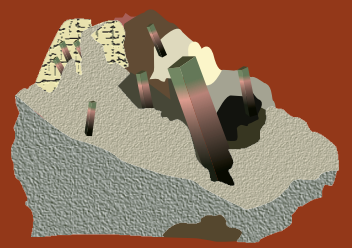
FIELD GUIDE

Pegamite

Igneous Rock Texture

Description: Igneous rocks with this texture usually occur during the cooling of magma when some minerals may grow so large that they become massive. The ranges of these crystals can range from a few centimeters to several meters in giant caves of crystals.

More info: Many of the largest crystals in the world were found in these igneous textures of rock. Collective of different crystals can be found in each pegamite. These minerals are slowly formed in magama over thousands of years deep within earth. Some of these minerals are grown in openings through which superheated water circulates depositing layers of molecules to build crystals.



Identifying Characteristics

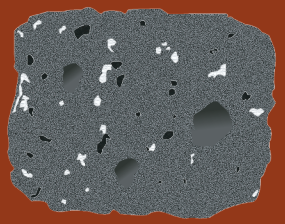
- Forms large pegmatite crystals
- Crystals of quartz, feldspar and mica form in igneous rock
- Size of crystals can range from centimeters to several meters

Aphanatic

Igneous Rock Texture

Description: Igneous rocks with this texture usually occur from the rapid crystallization of lava. The extrustive rocks cool very quickly, therefore their minerals form fine crystals which cannot be seen and distinguished by the naked eye

More info: This type spawns from lava that cools rapidly on the earth's surface, usually near volcanoes. This type of rock is mostly groundmass. Exhibited by some volcanic rocks. Cools too quickly for large crystals to grow in the material. an easily be found in the lava tubes of old volcanoes in the form of basalt. A variety of other rocks that are part of this igneous texture include andesite & rhyolite.



Identifying Characteristics

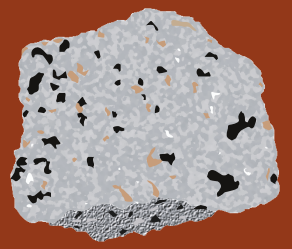
- Small Crystals
- Smooth texture
- Small holes from air trying to escape the rock when cooling

Phaneritic

Igneous Rock Texture

Description: Typical of intrusive igneous rocks, that crystallized slowly below the earths surface. Minerals have time to grow and form large crystals. These crystals form underneath the earth's surface for years in magma. These crystals are often described as coarse grained.

More info: Phaneraites are often described as coarse grained or macroscopically crystalline. Interlocking crystals of several minerals that are randomly distrusted and not alleged in any consistent direction. Some examples of this type of rock texture is gabbro, diorite and granite. This type is also used in a lot of daily household items.



Identifying Characteristics

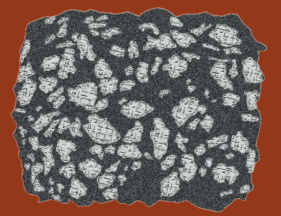
- Large crystals that can be seen with the naked eye
- A large of variety different crystals can form in one rock
- A vatiety of different everyday uses.

Porphyritic

Igneous Rock Texture

Description: Aphanitic rock with some larger crystals otherwise known as phenocrysts imbedded within the matrix. Devlops when conditions during cooling of a magma change relatively quickly.W

More info: Can occur when magma crystallizes below a volcano but is erupted before completing crystallization forcing the remaing magma to crystallize more rapidly which causes the smaller crystals. If the crystal in a porphyritic is smaller then 0.5 millimeters in diameter it is considered a micro phenocryst, while very large phenocrysts in these rocks are called mega phenocrysts. In metamorphic rocks, crystals like phenocrysts are called porphyroblasts.



Identifying Characteristics

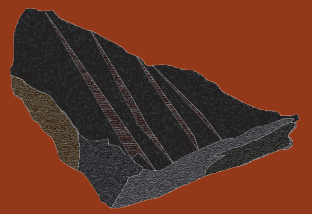
- Can have small and large crystals.
- The crystals size varies depending on the cooling stage of the magma.
- Can be found in Felsites and Andesites

Glassy

Igneous Rock Texture

Description: This texture forms when lava from a volcanic eruption cools very rapidly. Due to the speed of the cooling magma crystals don't have enough time to form so these igneous rocks don't have any type of crystalization. Instead it forms into a glassy object hence the name Glassy Rock Texture.

More info: Once again this igneous rock texture is located in the magma chambers located beneath volcanoe. Along with any other place where magama is exposed to air or water quickly which causes the abscnse of crystals. One of the main examples of this type of rock texture is obsidion which is similar to glass. It was used by many civilizations to create tools to cut with and hunt due to the sharpness of these types of rocks.



Identifying Characteristics

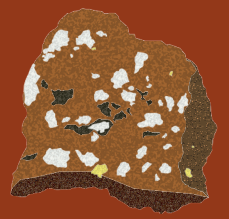
- Form into something akin to glass which is how it got it's texture name.
- Most commin type is obsidian.
- Smooth texture with no visiable crystals. Sharp like amorphous glass.

Pyroclastic

Igneous Rock Texture

Description: Occur when explosive eruptions, usually of Plinian or Krakatoa eruption styles, blast the lava into the air resulting in fragmental, typically glassy material which fall as volcanic ash and other materials.

More info: Pyroclastic rocks may be a range of clast sizes, from the largest agglomerates, to very fine ashes and tugs. Ash is pyroclastic because it is a fine dust made up of volcanic rock. Can be found in a wide area around volcanoes usually during and after they have erupted. pyroclastic deposits are commonly formed from airborne ash, lapilli and bombs or blocks ejected from the volcano itself, mixed in with shattered country rock. Creating a large variety of different types of pyroclastic rocks, some with crystals some without.



Identifying Characteristics

- Made of volcanic material from eruptions.
- Can have small and large crystals.
- Volcanic ash, lapilli and other material ejected from volcanoes are conisder pyroclastic.