Name **Period** **Date**

UNIT	HANDOUT
3	_____

Rock Classification Notes

Objectives: Describe and identify different rock textures; use rock textures and other rock characteristics to classify rocks.

Scientists classify rocks

Geologists observe the rock's _____, _____, and determine its _____to classify a rock. This helps a scientist learn the rock's _____, or how and where it formed.

As with minerals, color is not the best way to classify a rock. Many rocks _____the same color and many samples of the same rock come in a variety of colors. Some rocks, like _____and _____, are always black. The texture of a rock is the _____and _____of the rock's surface. The texture comes from what the rock is made of and how it formed. Most rocks are made of particles of minerals and other rocks. These particles are called _____.

Rocks are classified by texture

How do you describe the texture of a rock? Scientists observe the _____, _____, and _____of the rock's grain.

Grain Size describes how big or small the grains are.

- _____: the grains of the rock are large and easy to see with the naked eye.
- _____: the grains of the rock are small and not easy to see. You may need a hand lens or microscope to see the grains.

Grain Shape describes the shape of the grains.

- _____: the grains of the rock (not the rock itself) are rounded, smooth, and have soft edges. Usually found in _____ and _____ rocks.
- _____: the edges of the grains are rough and jagged. Found in all rock types.

Grain pattern describes how the grains are arranged.

- If the rock is igneous or sedimentary:
  - _____: the grains are in layers (usually of different colors)
  - _____: the grains are randomly arranged
- If the rock is metamorphic:
  - _____: the grains are in layers
  - _____: the grains are randomly arranged

There is one last category of grain and that is no _____grain. A rock with no visible grain (NVG) is a rock that lacks any grain because it is not made of minerals or other rocks. Examples include _____and _____. Rocks with NVG appear very _____and _____. They have the appearance of dark _____, although it can be lighter in color. This is the result of crystallization, which doesn't have a chance to occur.

Rocks are classified by mineral composition

Scientists can also observe a rock's mineral composition to classify it. Most rocks are made of certain _____of minerals. If a scientist can identify which minerals are in the rock, they are better able to identify it. To do this, scientists will observe the _____and _____of the crystals. For example, a rock with large crystals indicated that it formed _____and most likely _____earth. This means it is an intrusive igneous rock.

Scientists can also perform the mineral property tests. For example, if a rock reacts to _____, it probably contains _____.