**Unit 5 Vocabulary List KEY NAME\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

1. Banding- Foliation is common in metamorphic rocks. Banding means that the rock consists of alternating, thin layers (typically 1 mm to 1 cm) of two different mineral compositions.
2. Cementation- The processes through which dissolved substances in pore water precipitate between the grains of a sediment and bind it into a [sedimentary rock](https://geology.com/rocks/sedimentary-rocks.shtml).
3. Clastic sedimentary rock- A type of sedimentary rock (such as shale, siltstone, sandstone, or conglomerate) or sediment (such as mud, silt, sand, or pebbles). Clastic rocks are accumulations of transported weathering debris that have been lithified.
4. Cleavage- refers to a mineral if when it breaks it yields definite plane surfaces. Cleavage can be perfect as in micas or in some minerals, completely lacking. Cleavage is always parallel to crystal faces.
5. Color- is the easiest physical property to describe, however it can also be the most difficult property to make a mineral identification. Minerals have the same chemical composition but small variations of the quantity and distribution of some elements will give the same mineral different colors.
6. Compaction- A compression process that reduces the volume of a sediment as accumulating sediment above adds increasing weight. This volume loss occurs by: 1) repositioning the grains into a tighter packing; 2) deforming the grains into a tighter packing; and, 3) squeezing fluids out of the pore spaces. Compaction is one of the first steps in converting a sediment into a [sedimentary rock](https://geology.com/rocks/sedimentary-rocks.shtml). Normally, compaction preferentially occurs in fine-grained clay and silt layers of a sediment mass. Their grains are initially deposited in random orientations without grain support. These have the most potential for improved packing and deformation.
7. Conglomerate- A clastic [sedimentary rock](https://geology.com/rocks/sedimentary-rocks.shtml) that contains rounded pebble-size particles (greater than two millimeters in diameter). The space between the pebbles is generally filled with smaller particles and/or a chemical cement that binds the rock together.
8. Contact Metamorphism- Alteration of a rock, mainly by heat and reactive fluids, which occurs adjacent to a dike, sill, magma chamber, or other magma body. Rock in the area of contact [metamorphism](https://geology.com/rocks/metamorphic-rocks.shtml) might not display foliation because directed pressure is usually not involved. [Hornfels](https://geology.com/rocks/hornfels.shtml) is a common rock produced by contact metamorphism.
9. Crystallization- the process by which atoms are arranged to form a material with a crystal structure. One of the two ways minerals form is by: 1. crystallization of magma (cools inside the crust) or lava (cools & hardens on the surface) 2. crystallization of materials dissolved in water.
10. Extrusive Igneous Rock-I[gneous rocks](https://geology.com/rocks/igneous-rocks.shtml) that are erupted from a [volcano](https://geology.com/volcanoes/) and crystallize at Earth's surface. [Basalt](https://geology.com/rocks/basalt.shtml) is the most common.
11. Foliated- The planar or layered characteristics of metamorphic rocks that are evidence of the pressures and/or temperatures to which the rock was exposed. These can be structural such as cleavage, textural such as mineral grain flattening or elongation, or compositional such as mineral segregation banding.
12. Fracture-is the tendency of a mineral to break along curved surfaces without a definite shape. These minerals do not have planes of weakness and break irregularly. Minerals often have a highly distinctive fracture, making it a principal feature used in their identification.
13. Hardness- The resistance of a mineral to being scratched. Typically measured using the [Mohs Hardness Scale](https://geology.com/minerals/mohs-hardness-scale.shtml)
14. Igneous Rock- A rock formed by the crystallization or solidification of molten rock material. They can form underground, on the surface or as ejecta.
15. Intrusive Igneous Rock- Igneous rocks that crystallize below Earth's surface. They typically have mineral crystals that are large enough to easily see with the unaided eye.
16. Lava- Molten rock that has erupted onto Earth's surface. The word is also used for the solidified flows and fragments after they have cooled. Not to be confused with "magma," which is the same material while it is beneath Earth's surface.
17. Luster- The manner in which light reflects from the surface of a mineral. Metallic, submetallic and non-metallic are the basic types of luster. Other types of luster include: vitreous, dull, resinous, adamantine, earthy, pearly, greasy, silky, and waxy. The intensity of luster is often described in simple terms such as bright or dull.
18. Magma- Molten rock material that occurs below Earth's surface. When it erupts onto the surface, it is known as "lava."
19. Metamorphic Rocks- Metamorphic rocks started out as some other type of rock, but have been substantially changed from their original [igneous](http://geomaps.wr.usgs.gov/parks/rxmin/rock.html#igneous), [sedimentary](http://geomaps.wr.usgs.gov/parks/rxmin/rock2.html), or earlier metamorphic form. Metamorphic rocks form when rocks are subjected to high heat, high pressure, hot mineral-rich fluids or, more commonly, some combination of these factors. Conditions like these are found deep within the Earth or where tectonic plates meet.
20. Metamorphism- Alteration of the minerals, textures, and composition of a rock that is caused by exposure to severe heat, pressure, and chemical actions. Metamorphism occurs to rocks at convergent plate boundaries, rocks that have been deeply buried, and rocks that have been contacted by migrating magma or hydrothermal fluids.
21. Mineral- A naturally occurring, inorganic solid with a definite chemical composition and an ordered internal structure. If it isn't grown, it is probably a mineral that is produced from a mine.
22. Moh’s Scale- A collection of minerals ranging from very soft to very hard. Use as a comparison scale during mineral identification. From softest to hardest, the ten minerals are: [**talc**](https://geology.com/minerals/talc.shtml) 1, [**gypsum**](https://geology.com/minerals/gypsum.shtml) 2, [**calcite**](https://geology.com/minerals/calcite.shtml) 3, [**fluorite**](https://geology.com/minerals/fluorite.shtml) 4, [**apatite**](https://geology.com/minerals/apatite.shtml) 5, [**orthoclase**](https://geology.com/minerals/orthoclase.shtml) 6, [**quartz**](https://geology.com/minerals/quartz.shtml) 7, [**topaz**](https://geology.com/minerals/topaz.shtml) 8, [**corundum**](https://geology.com/minerals/corundum.shtml) 9, and [**diamond**](https://geology.com/minerals/diamond.shtml) 10. Developed by Friedrich Mohs, a German mineralogist, in the early 1800s.
23. Non-foliated- Non-foliated metamorphic rocks do not have a platy or sheet-like structure. There are several ways that non-foliated rocks can be produced. Some rocks, such as limestone are made of minerals that are not flat or elongate. No matter how much pressure you apply, the grains will not align! Another type of metamorphism, contact metamorphism, occurs when hot igneous rock intrudes into some pre-existing rock. The pre-existing rock is essentially baked by the heat, changing the mineral structure of the rock without addition of pressure.
24. Ore- A natural accumulation of a metal, gemstone or other valuable mineral substance, which is rich enough in concentration that it can be mined and processed at a profit.
25. Rock- Rocks are composed of grains of minerals, which are [homogeneous solids](https://en.wikipedia.org/wiki/Homogeneity_and_heterogeneity) formed from a [chemical compound](https://en.wikipedia.org/wiki/Chemical_compound) arranged in an orderly manner
26. Rock Cycle- All rock at or near Earth's surface is being modified by the processes of metamorphism, melting, crystallization, lithification and weathering. These processes move rock material through the states of metamorphic rock, igneous rock, sedimentary rock, melts and sediment. The natural and continuous cycling of rock materials through these states is known as the rock cycle.
27. Sedimentary Rock- A rock formed from the accumulation and consolidation of sediment, usually in layered deposits.
28. Silicate Mineral- Silicates refers to a group of minerals composed chiefly of silicon dioxide.
29. Streak- The color of a mineral in powdered form. Streak is normally determined by scraping a specimen across a surface of unglazed porcelain known as a "streak plate".
30. Texture- The visible characteristics of a rock which include its grain size, grain orientation, rounding, angularity, porosity, foliation, crystallinity, presence of vesicles, and other physical attributes of the mineral grains and matrix that make up the rock.