

Name: _____

Date: _____ Period: _____

Packet: Igneous Rocks

CLASS NOTES

- Igneous Rocks - _____

- Methods to classify igneous rocks:

1. Environment of Formation - _____

- Magma - _____

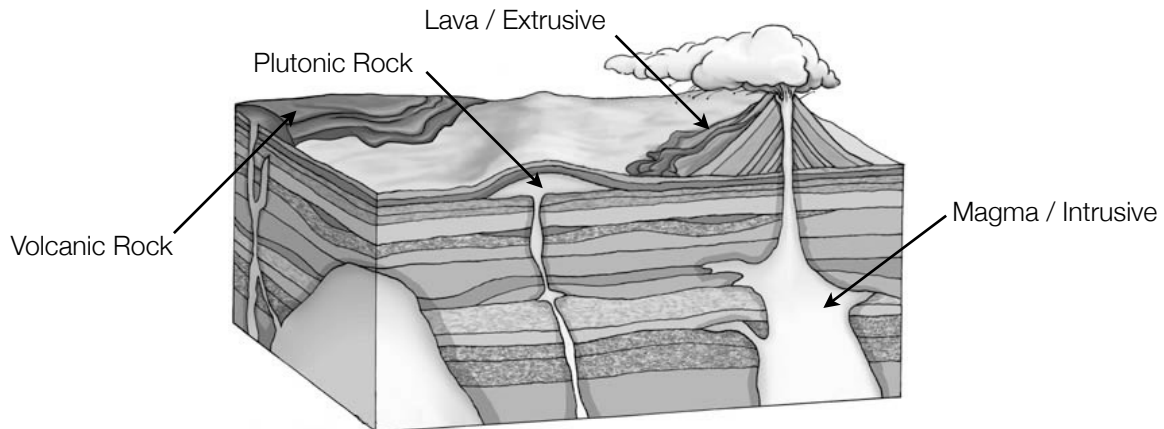
- Plutonic - rock that formed _____ within the Earth

- Intrusive - _____ Earth's crust

- Lava - _____

- Volcanic - rock that formed _____ Earth's surface

- Extrusive - _____ Earth's crust

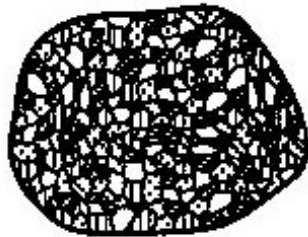


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- Methods used to classify igneous rocks [continued]:

2. Crystal Size - _____

- Crystal size is an important factor to determine the environment of formation
 - The _____ the cooling time the _____ the crystal size [coarse or very coarse]
 - The _____ the cooling time the _____ the crystal size [glassy or fine]
- Remember:



Fine Grained



Coarse Grained

3. Texture - _____

- Vesicular - _____
- Porphyritic - texture that contains large crystals in a fine grained matrix

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- Methods used to classify igneous rocks [continued]:

4. Color - the shade of the rock based on its composition

- Either: _____ or _____

5. Density - the ratio of mass to volume of the rock based on its composition

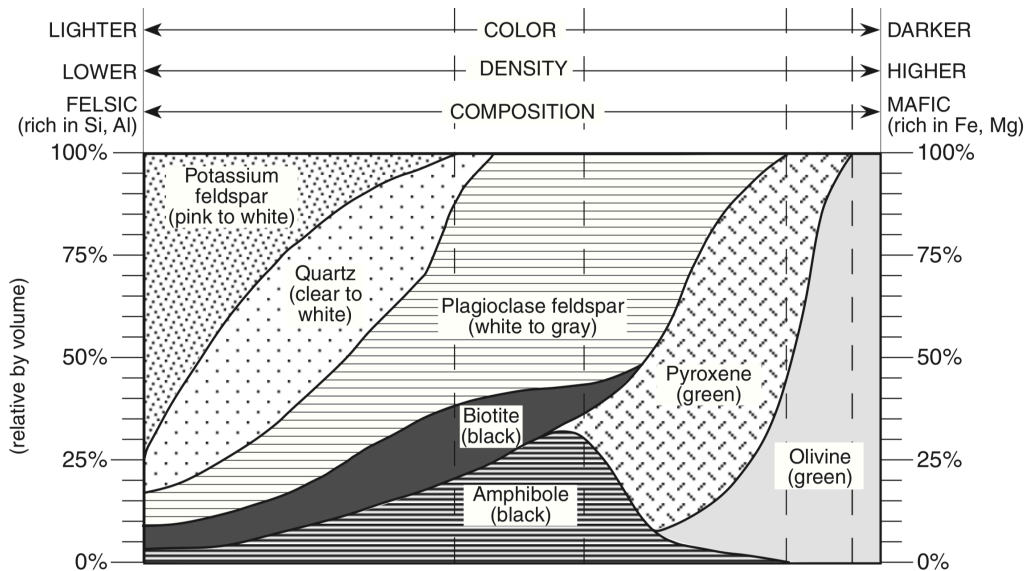
- Either: _____ or _____

6. Composition - a mixture of materials that make up an igneous rock

- Either: felsic or mafic
- Felsic - _____

- Mafic - _____

7. Mineral Composition - _____



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PART I QUESTIONS: MULTIPLE CHOICE

1. Which is a fine-grained igneous rock made up primarily of pyroxene and plagioclase feldspar?
 - a. granite
 - b. gabbro
 - c. basalt
 - d. rhyolite
2. The best evidence for determining the cooling rate of an igneous rock is provided by
 - a. the disintegration of radioactive substances
 - b. the crystal size of its minerals
 - c. index fossils
 - d. faults in the rock
3. Basalt contains the greatest quantity of which mineral?
 - a. mica
 - b. quartz
 - c. pyroxene
 - d. potassium feldspar
4. Which statement best describes the percentage of plagioclase feldspars in a sample of gabbro?
 - a. Gabbro always contains less plagioclase than pyroxene
 - b. Gabbro contains no plagioclase feldspars
 - c. Plagioclase feldspars always make up 25% of a gabbro sample
 - d. The percentage of plagioclase feldspar in gabbro can vary
5. Which property would be most useful for identifying igneous rocks?
 - a. types of fossils present
 - b. kind of cement
 - c. number of minerals present
 - d. mineral composition
6. A fine-grained igneous rock contains 11% plagioclase, 72% pyroxene, 15% olivine, and 2% amphibole. This rock would most likely be classified as
 - a. rhyolite
 - b. gabbro
 - c. basalt
 - d. granite
7. Which is the best description of the properties of basalt?
 - a. fine-grained and felsic
 - b. coarse-grained and mafic
 - c. coarse-grained and felsic
 - d. fine-grained and mafic

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8. Rhyolite and granite are alike in that they both are
 - a. felsic
 - b. fine-grained
 - c. dark-colored
 - d. mafic

9. Most igneous rocks form by which processes?
 - a. erosion and deposition
 - b. heat and pressure
 - c. melting and solidification
 - d. compaction and cementation

10. Rhyolite is an example of a
 - a. polymineralic sedimentary rock
 - b. polymineralic igneous rock
 - c. monomineralic sedimentary rock
 - d. monomineralic igneous rock

11. Which texture best describes an igneous rock that formed deep underground?
 - a. glassy
 - b. fine grained
 - c. vesicular
 - d. coarse grained

12. A nonvesicular rock is made entirely of green 2-millimeter-diameter crystals is most likely
 - a. granite
 - b. dunite
 - c. obsidian
 - d. pumice

13. Which igneous rock has a vesicular texture and a mafic composition?
 - a. pumice
 - b. basalt
 - c. granite
 - d. scoria

14. Which is the best description of the properties of granite?
 - a. fine-grained and felsic
 - b. coarse-grained and mafic
 - c. coarse-grained and felsic
 - d. fine-grained and mafic

15. Which is the best description of the properties of pumice?
 - a. vesicular and felsic
 - b. vesicular and mafic
 - c. non-vesicular and felsic
 - d. non-vesicular and mafic