

Name: _____ Date: _____

UNIT SIX

Product of Earth's Interior Fire

*Dedicated to: _____

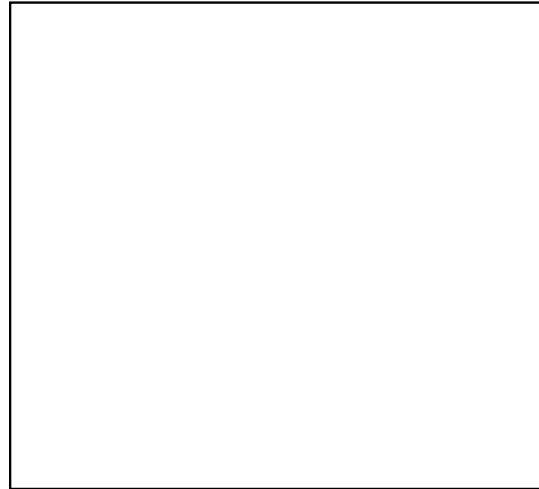
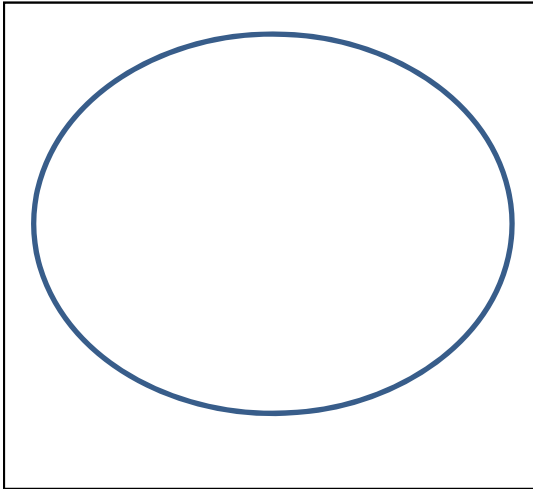
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For each of the statements, circle **R** for Rock only, **M** for Mineral only, **both** if it applies to both Rocks and Minerals, **N** if neither rock of mineral are appropriate:

1. It is natural part of the earth's crust..... R M N
2. It can have an organic composition..... R M N
3. It is homogeneous (for the most part)..... R M N
4. Ice..... R M N
5. Coal..... R M N
6. They are classified by their chemical composition..... R M N
7. Belongs to families (oxides, halides, carbonates)..... R M N
8. Can be formed by cooling magma, evaporating sea water, or extreme heat and pressure..... R M N
9. They can be in liquid form..... R M N
10. Show metallic luster, cleavage, can be identified by hardness test..... R M N

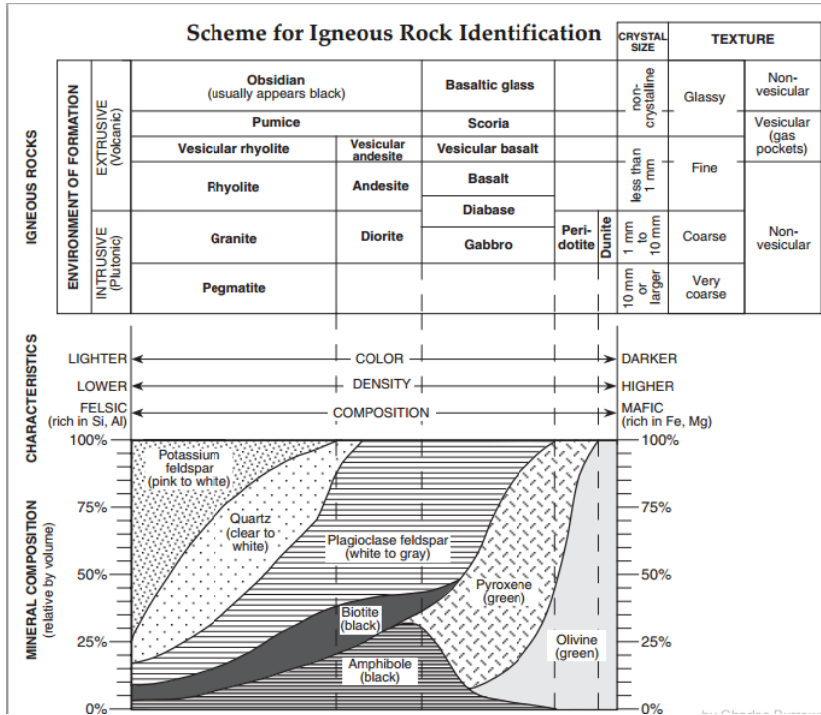
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Draw a Picture of the two environment of igneous rock formation. Label the process of cooling (Fast, Slow)
Explain the how the process cooling result in the texture.

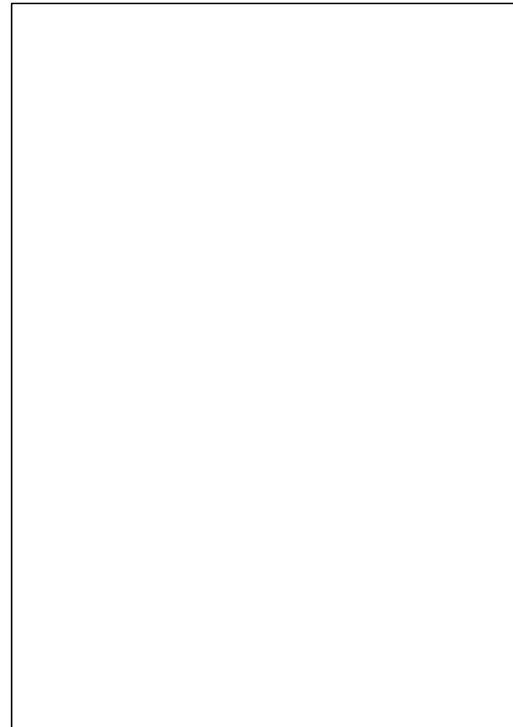


Predict the factors that would affect the observed textures?

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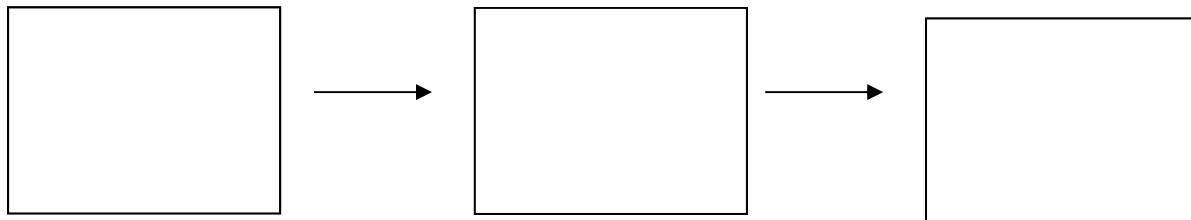
Texture



Environment#1



Environment#2



What characteristics provide evidence about the environment? _____

Anticipation Guideline (Igneous Rock)

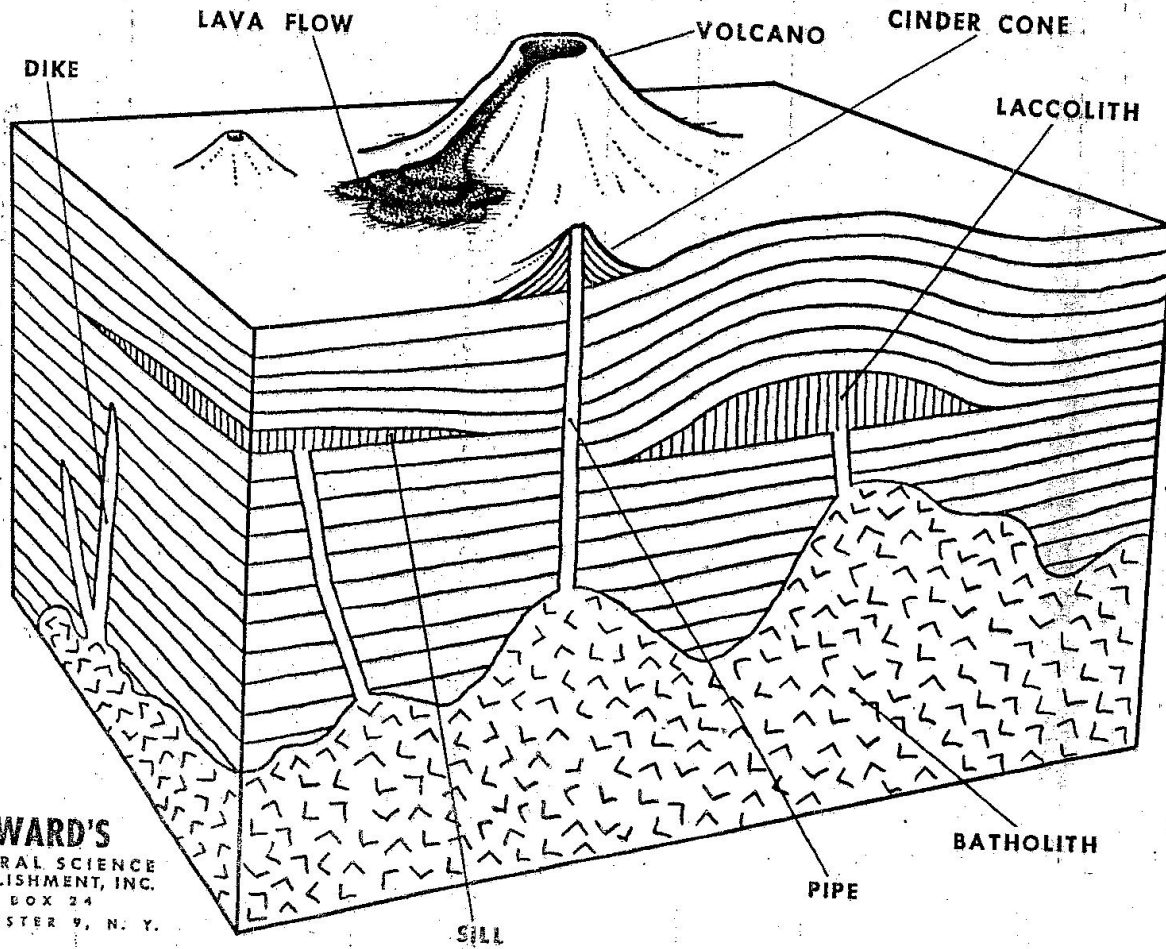
Read page#121-125 in your Earth Science Textbook. Base on the reading; **decide** whether or not each statement below is true (yes) or False (no). If the statement is no, please **indicate** the page# and line# where the correct answer is located in the text. In addition, be sure to **correct** the wrong word in the statement with the correct vocabulary. You may only fill out yes or no on one side of the table. The other side of the table will be done by you after hurricane topics.

Your hypothesis

correct answer after reading

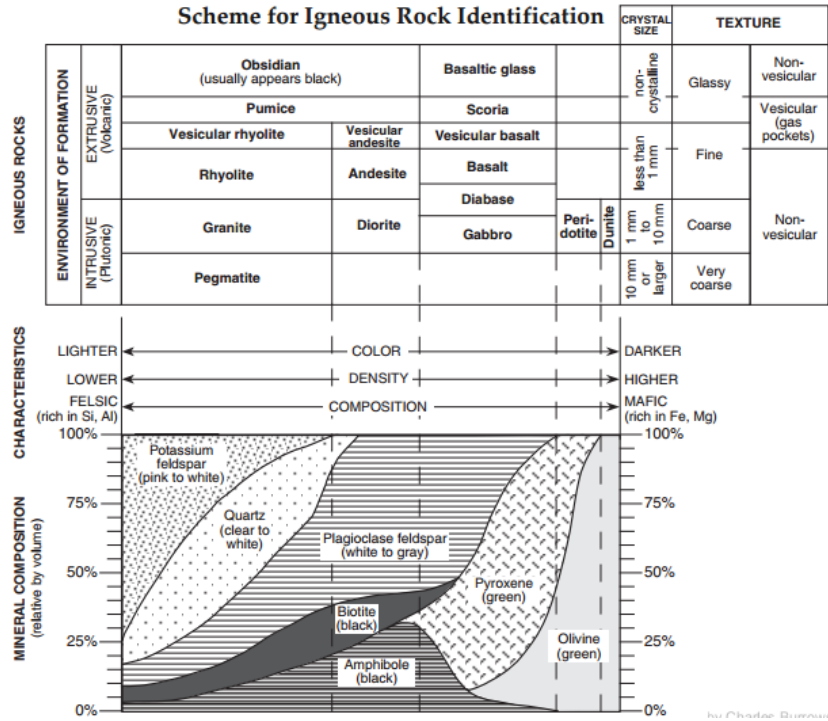
Yes	No	Statements	Yes	No	Page# Line#
		Igneous rock are classified by fragment size and shape			
		Felsic magma is dark colored			
		Felsic magma is rich in iron and magnesium			
		Mafic magma is light colored			
		Underground magma hardens faster			
		When magma pour into Earth's surface it is known as volcanic rocks			
		Extrusive rocks hardens rapidly			
		Igneous rocks are grouped into families according to mineral composition			
		When lava is squeezed between rock layers, it is called an igneous intrusion			
		A dyke is an example of an igneous intrusion			

DIAGRAM SHOWING FORMS OF IGNEOUS ROCKS



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Homework: Use the image below (ESRT) to answer the following questions



1. Name one intrusive environment
2. Name one type of intrusive rock
3. Which type of igneous rock has a grain size of 1mm to 10mm? What is the name of that texture?
4. Basalt and gabbro contain which four minerals?
5. Rhyolite, granite, and pegmatite contain which five minerals? Are these rocks felsic or mafic?
6. What does felsic and mafic suggest about the igneous rock?
7. Which type of extrusive igneous rock has a composition that is neither felsic nor mafic?
8. Which is the texture of pumice?
9. Which mineral is found almost exclusively in felsic igneous rock?
10. Which type of rock is mostly olivine?

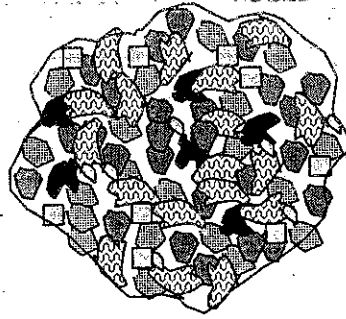
Name _____


Using the ruler in your ESRT, identify the igneous rock based on texture and mineral composition


Texture- _____

Minerals Present- _____

Name Of Rock- _____




 Pyroxene

 Olivine

 Quartz

 Potassium Feldspar

 Plagioclase Feldspar

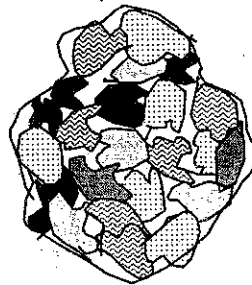
 Biotite Mica

 Amphibole

Texture- _____

Minerals Present- _____

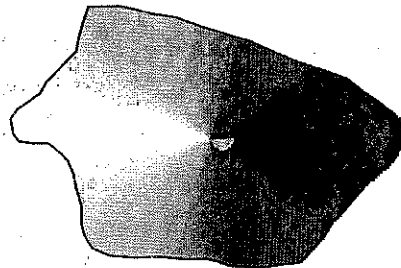
Name Of Rock- _____



Texture- _____

Minerals Present- Quartz,
Potassium Feldspar, Biotite
Mica, Plagioclase, Amphibole

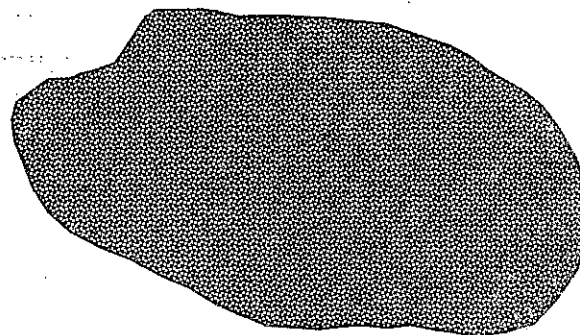
Name Of Rock- _____



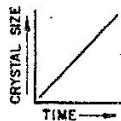
Texture- _____

Minerals Present- Biotite
Mica, Amphibole, Plagioclase

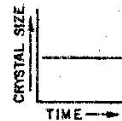
Name Of Rock- _____



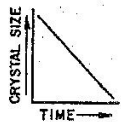
- Which statement best describes a general property of rocks?
 - Most rocks have a number of minerals in common
 - Most rocks are composed of a single mineral
 - All rocks contain fossils
 - All rocks contain minerals formed by compression and cementation
- A coarse grained igneous rock contains plagioclase feldspar and pyroxenes, but no quartz. This rock is most likely
 - basalt
 - rhyolite
 - granite
 - gabbro
- Which is usually a characteristic of igneous rocks with a high density?
 - They are light in color
 - They are felsic
 - They have a high aluminum content
 - They contain iron
- Which graph best shows the relationship between the size of the crystals in an igneous rock and the length of time it has taken the rock to solidify?



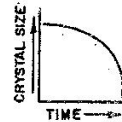
(1)



(3)



(2)

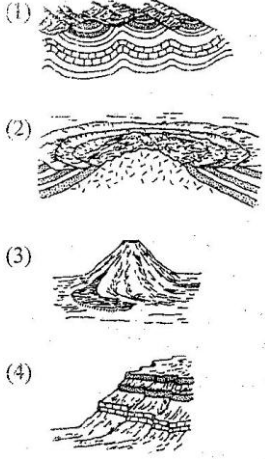


(4)

- Which rock is of felsic composition, low in density, light in color and coarse grained?
 - rhyolite
 - basalt
 - granite
 - gabbro
- Gabbro is composed mainly of
 - Plagioclase feldspar and pyroxene
 - Hornblende and quartz
 - Biotite and olivine
 - Potassium feldspar and quartz
- Most igneous rocks form by which process?
 - melting and solidification
 - heat and pressure
 - erosion and deposition
 - compaction and cementation

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15. Which diagram below shows an area in which fined grained igneous rocks are mostly likely to be found?



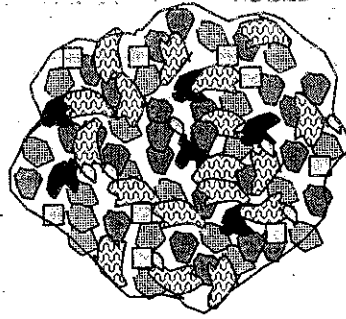
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Minerals Present- _____

Name Of Rock- _____




 Pyroxene

 Olivine

 Quartz

 Potassium Feldspar

 Plagioclase Feldspar

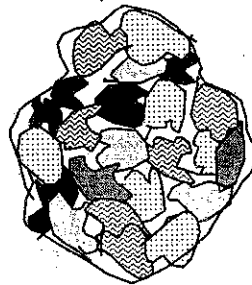
 Biotite Mica

 Amphibole

Texture- _____

Minerals Present- _____

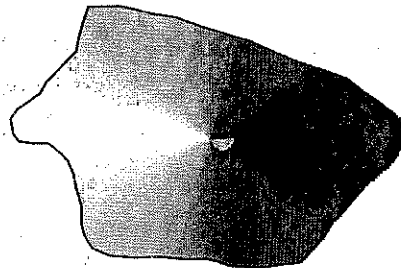
Name Of Rock- _____



Texture- _____

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Potassium Feldspar, Biotite
Mica, Plagioclase, Amphibole

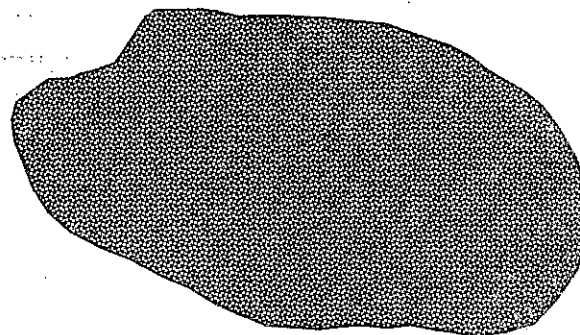
Name Of Rock- _____



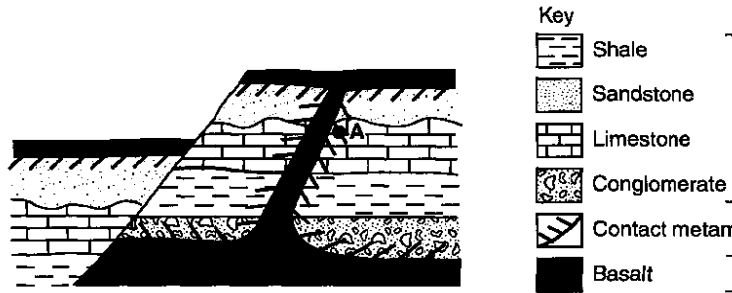
Texture- _____

Minerals Present- Biotite
Mica, Amphibole, Plagioclase

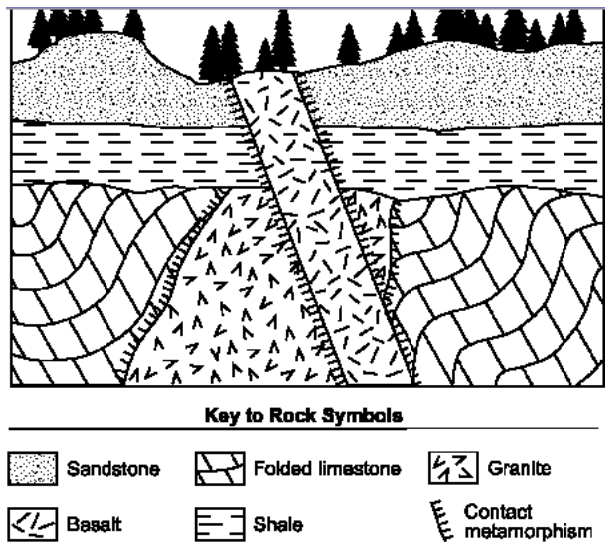
Name Of Rock- _____



The diagram below shows magma rising from the ground through layers of rocks to the surface



1. As magma cools, what process changes into basalt?
2. If the hot magma contacts the other layer of the rock, what do you predict will happen to the other rocks?
3. Base your answer to the following question on the information and diagram below. The diagram represents a cliff of exposed bedrock that was investigated by an Earth Science class.



Students compared samples of the granite and basalt. State one observable characteristic other than crystal size that makes granite different from basalt.