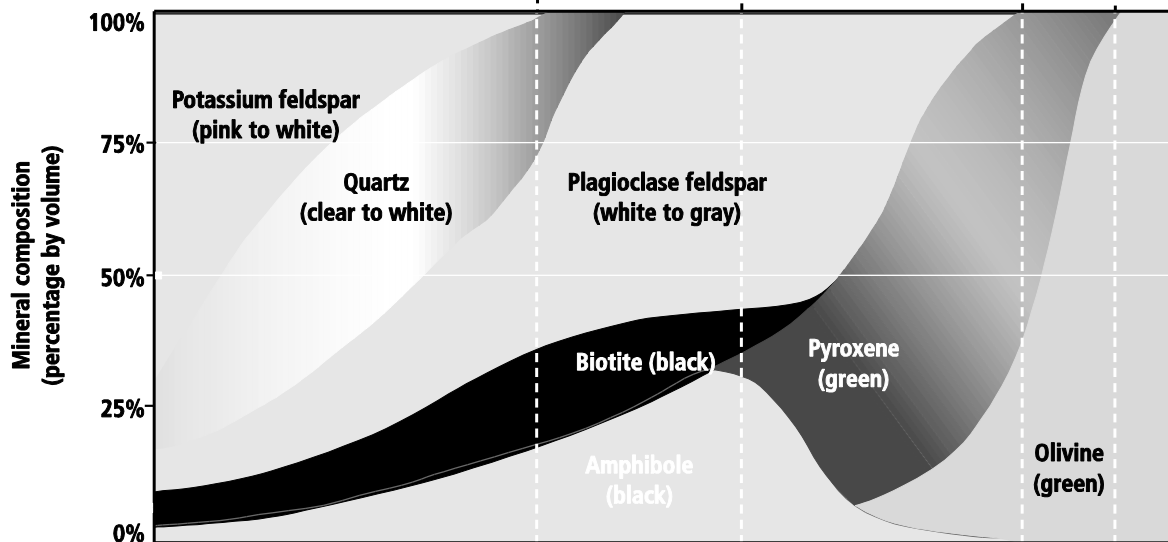


CLASSIFICATION OF IGNEOUS ROCKS

Classification of Igneous Rocks						
Extrusive	Felsic	Intermediate	Mafic	Ultramafic	Texture	
	Obsidian			Basaltic glass		Glassy (non-crystalline)
	Rhyolite	Andesite	Basalt		Fine-grained	
Intrusive	Granite	Diorite	Gabbro	Peridotite	Dunite	Coarse-grained
	Pegmatite					Very coarse-grained



NAME: _____

1. What four types of igneous rocks are represented in the table and graph?

2. Use the table to compare the textures of the extrusive rocks and intrusive rocks.

Intrusive: _____

Extrusive: _____

3. How do basaltic glass and gabbro differ? How are they similar?

Differ: _____

Similar: _____

4. Which types of igneous rocks are composed of at least 50 percent olivine?

5. Use the graph to explain why felsic rocks are usually light-colored and mafic rocks are usually dark-colored.

6. How would you classify a fine-grained, igneous rock that contains approximately 25 percent amphibole, 15 percent biotite, and 60 percent plagioclase feldspar?

7. Approximately how much biotite is a sample of gabbro likely to contain?

8. Which contains a greater percentage of quartz—granite or diorite?

Teacher Guide and Answers

Teaching Transparency 12 – Classification of Igneous Rocks

1. felsic, intermediate, mafic, and ultramafic
2. Extrusive rocks are glassy (non-crystalline) or fine-grained, while intrusive rocks are coarse-grained to very coarse-grained.
3. Basaltic glass is glassy in texture, while gabbro is coarse-grained. Their mineral compositions are similar.
4. the ultramafic rocks peridotite and dunite
5. Felsic rocks are made up of light-colored minerals, and mafic rocks are made up of dark-colored minerals.
6. andesite
7. 0–10 percent
8. granite