

Name:

PHYSICAL GEOLOGY: MINERAL USES and IGNEOUS MINERALS HOMEWORK

Print bring completed to lecture by the due date.

Part 1: Mineral Uses

Note: the minerals in bold* will be on the lab exam.

MINERAL NAME	What are the major uses of this mineral? Please be specific!
Quartz*	
Plagioclase Feldspar*	
Potassium Feldspar*	
Olivine*	
Biotite*	
Muscovite*	
Talc	
Kaolinite	
Halite*	
Fluorite	
Calcite*	
Dolomite	
Gypsum*	
Magnetite*	
Hematite*	
Bauxite	
Galena*	
Pyrite*	

Part 2: Rock Observations

1. Define the following terms for describing rocks in your own words (see Interlude A in your textbook):

Composition:

Texture:

Part 3: Igneous Minerals:

1. Define the following terms for magma/rock composition in your own words (see Ch. 4):

Mafic:

Felsic:

Intermediate:

2. The following 8 minerals are the main constituents of igneous rocks:

augite (pyroxene), biotite, hornblende (amphibole), muscovite, olivine, plagioclase feldspar, potassium feldspar, quartz

For each general rock composition below, list the minerals that are associated with rocks of these compositional groups (See Fig. 4.14, right side):

Mafic:

Felsic:

Intermediate:

3. For Bowen's Reaction Series (box 4.1 in your textbook), which mineral is the only one to crystallize in a "continuous series" (see fig. Bx4.1b)?
4. A) Which rock compositions include the mineral from question 3?

B) Therefore, why do you think this mineral is the most common in earth's crust?