Course Information

Division: Science
Course Number: GLG 015
Title: Rocks and Minerals
Credits: 2
Developed by: Dr. Carol Jones
Lecture/Lab Ratio: 2 Lecture/0 Lab
Transfer Status: ASU: Non-transferable, NAU: Non-transferable, UA: Non-transferable

Activity Course: No
CIP Code: 40.0601
Assessment Mode: Pre/Post Test (20 Questions/20 Points)
Semester Taught: Upon Request
GE Category: None
Separate Lab: No
Awareness Course: No
Intensive Writing Course: No

Prerequisites
None

Educational Value
A. To General Education
Develop an understanding of the process of identifying common rocks and minerals.

Description
Identification, classification, and origin of rocks and minerals with emphasis on materials common to Arizona.

Supplies
None
**Competencies and Performance Standards**

1. Examine the properties of minerals as the building blocks of rocks and their economic uses.

   **Learning objectives**

   * What you will learn as you master the competency:
     a. Explain the properties of a mineral.
     b. Explain the importance of ionic radius and balanced charges in the formation of minerals.
     c. Use observations and simple tests to identify minerals.
     d. Explain the formation of common and economically important minerals.
     e. Identify important minerals of Arizona.

   **Performance Standards**

   * Competence will be demonstrated:
     o in objective/essay tests
     o in lab activity reports

   * Criteria - Performance will be satisfactory when:
     o learner can identify the major minerals found in rock material
     o learner can explain the properties of a mineral
     o learner can explain the importance of ionic radius and balanced charges in the formation of minerals
     o learner can use observations and simple tests to identify minerals
     o learner can explain the formation of common and economically important minerals
     o learner can identify important minerals of Arizona

2. Compare the properties and processes that form the three classes of rocks that make up the rock cycle.

   **Learning objectives**

   * What you will learn as you master the competency:
     a. Explain the properties of a rock.
     b. Explain the general conditions under which each class of rocks forms, with attention to the stability of minerals.
     c. Explain the order and processes that form the three classes of rocks.
     d. Identify the texture and composition associated with each class of rocks.
     e. Identify the individual rocks in each class and interpret their likely environments of formation.
     f. Consider the economic importance of useful rocks.

   **Performance Standards**

   * Competence will be demonstrated:
     o in objective/essay tests
     o in lab activity reports

   * Criteria - Performance will be satisfactory when:
     o learner can explain the rock cycle
     o learner can identify the three major classes of rocks
     o learner can identify the major rocks within each class of rocks
o learner can identify the texture and composition associated with each class of rocks
o learner can identify the individual rocks in each class and interpret their likely environments of formation
o learner considers the economic importance of useful rocks

Types of Instruction
Instructions for lab procedures
Rock and mineral identification labs
Field trips optional

Grading Information

Grading Rationale
Pre- and Post-Test = 10%
Laboratory work = 50%
Quizzes = 20%
Report = 10%
Final exam = 10%

Grading Scale
A  90-100%
B  80-89%
C  70-79%
D  60-69%
F  Below 59%