

## Rocks of Different Ages: Reading Geologic Maps

Geology

Mr. Traeger

Name: \_\_\_\_\_

Period: \_\_\_\_\_

Date: \_\_\_\_\_

### **Purpose**

This activity will familiarize the student with how to read the geologic time scale and geologic maps.

### **Materials**

- Geologic Map of the Pasadena Quadrangle
- Geologic Time Scale
- Magnifying Glass
- Geologic Map of California

### **Part 1 Procedure**

Look at the geologic map of La Cañada and answer the questions that follow.

1. What are things that a geologic map shows besides rock types?

2. Find information on the geologic time scale about the rock types in the following chart.

	<b>Oldest Rock</b>	<b>Youngest Rock</b>	<b>Rock Type that your house is built on</b>
Symbol of Rock Type on Geologic Map?			
Name of Rock Type?			
Type of Rock? (igneous intrusive, igneous extrusive, sedimentary, metamorphic)			
Eon?			
Era?			
Period?			
Age of Rock in Millions of Years Ago?			
Epoch?			
Major life forms dominant at this time?			
North American Rock Record?			

3. What is the purpose of the geologic time scale?

4. How do we know how old the rocks are?

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### Part 2 Procedure

Look at the geologic map of California and answer the questions that follow.

1. Find information on the geologic time scale about the rock types in the following chart.

	Oldest Rock	Youngest Rock
Geographic Location?		
Symbol of Rock Type on Geologic Map?		
Name of Rock Type?		
Type of Rock? (igneous intrusive, igneous extrusive, sedimentary, metamorphic)		
Eon?		
Era?		
Period?		
Age of Rock in Millions of Years Ago?		
Epoch?		
Major life forms dominant at this time?		
North American Rock Record?		

2. If we were to look for clam shell fossils in California, where would we go? Give a geographic region.
3. If we were to look for volcanoes in California, where would we go? Give a geographic region.
4. If we were to look for earthquake faults in California, where would we go? Give a geographic region.
5. Give the names of the places we would go to find the following rock types.

Igneous Intrusive	Igneous Extrusive	Sedimentary	Metamorphic

6. How do the ages of rock in La Cañada compare to the rest of California? (young, middle aged, old, very old)