**NAME: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ PERIOD: \_\_\_ DATE: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LAB PARTNER (S): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Rocks Observation Lab**

**Objective**: Identify the characteristics associated with the three classifications of rocks.

**Procedures:**

**Part 1: Observations**

1.) Your group will work as a team of geologist (all with a Ph. D.) who has been given the task of classifying rocks based observations. Write a description of all observations. It is vital that you note all details and use descriptive terms that are specific and easily understood by others. Avoid ambiguous terms (such as big, light, heavy, etc.) that are relative and may not be clearly understood by others.

- Appearance: color and shade (light, medium, or dark), shape (round or jagged edges), patterns, graininess (fine, medium, or course), crystals and crystal size (small, medium, or large), shiny, dull, etc.

- Texture: smooth, glassy, grainy, sandy, bumpy, sharp, hard, brittle, etc.

- Density: low, medium, high, porous, etc.

2.) Draw a detailed illustration of each rock. The illustration should include the features at various angles, so multiple drawings may be necessary. Use colored pencils so that your drawings at true to what you see. Illustrate in the circle what you see when observing the rock under a magnifying glass.

|  |  |
| --- | --- |
| WRITTEN DESCRIPTION | DRAWING  |
| Station #1  |  |
| Station #2. |  |
| Station #3 |  |
| WRITTEN DESCRIPTION | DRAWING  |
| Station #4 |  |
| Station #5 |  |
| Station #6 |  |
| Station #7 |  |
| Station#8 |  |
| WRITTEN DESCRIPTION | DRAWING  |
| Station #9 |  |
| Station #10  |  |
| Station #11 |  |
| Station #12 |  |

**Part 2: Rock Classification**

After all observations have been completed, your team will group the 12 different rocks into 3 classifications. Use similarities and differences that are based on your observations to accomplish this task. Then provide a brief explanation as to why the rocks were placed in a particular. Use the table on the next page to record your results.

**Group 1**

|  |  |
| --- | --- |
| **Station #** | **Explanation**  |
|  |  |
|  |  |
|  |  |
|  |  |

**Group 2**

|  |  |
| --- | --- |
| **Station #** | **Explanation**  |
|  |  |
|  |  |
|  |  |
|  |  |

**Group 3**

|  |  |
| --- | --- |
| **Station #** | **Explanation**  |
|  |  |
|  |  |
|  |  |
|  |  |

**Part 3: Reevaluation of Rock Classification**

Now that you have learned more about the three classifications of rocks, regroup the rocks into the three known classifications, igneous, metamorphic, and sedimentary. Be sure that there is a consensus among your team. Below each classification write a brief description of the key characteristics associated with it. In addition, explain the processes that form each classification.

|  |
| --- |
| **Igneous Rocks: Station #s \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_.** |
|  |
| **Metamorphic Rocks: Station #s \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_.** |
|  |
| **Sedimentary Rocks: Station #s \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, \_\_\_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_\_\_.** |
|  |

**Part 4: Identifying Rock Types**

Now that you are an expert geologist, name each type of rock (s).

|  |  |
| --- | --- |
| Station #1 | Station #7 |
| Station #2 | Station #8 |
| Station #3 | Station #9 |
| Station #4 | Station #10 |
| Station #5 | Station #11 |
| Station #6 | Station #12 |