Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  **Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Classifying Rocks**

**Objective:**

* Classify rocks according to their origins (igneous, sedimentary, or metamorphic).
* Identify different types of igneous, sedimentary, and metamorphic rocks.

**Procedure:**

* Access the virtual lab on your tablet through the website listed below.

<http://glencoe.com/sites/common_assets/science/virtual_labs/ES04/ES04.html>

* Click the video button. Watch the presentation to review igneous, sedimentary and metamorphic rocks. Observe how rocks are formed and compare their different characteristics.
* Click and drag rock samples to the test plate.
* Drag the magnifying glass over the rock sample to determine whether is it igneous, sedimentary or metamorphic. Review the presentation if you need more help identifying the samples. **Record your 1st observation of the rock sample in the chart.**
* Take the rock to the appropriate rock-testing lab by clicking the door you want to enter. Only the door to the correct lab will open.
  + **Igneous Rock Testing Lab:** Drag the magnifying glass over the rock sample to get a close-up view. Click the posters on the wall to get specific information about the igneous rocks (texture and composition). Use the left and right arrows to page through the information on the poster.
  + **Metamorphic Rock Testing Lab**: Drag the magnifying glass over the rock sample to get a close-up view. Click on the posters on the wall to get specific information about metamorphic rocks (banding, recrystallization and hardness). Use the left and right arrows to page through the information on the poster. Remove the magnifying glass from the rock sample. Drag the rock sample over the piece of glass to see if it will scratch.
  + **Sedimentary Rock Testing Lab**: Drag the magnifying glass over the rock sample to get a close-up view. Click the posters on the wall to get specific information about sedimentary rocks (carbonate materials and size of sediments). Use the left and right arrows to page through the information on the poster. Then click the 5% HCl solution bottle to place a drop of HCl on the rock sample. If no reaction occurs after the hydrochloric acid is dropped on the rock, the result is negative.
* Open the table at the bottom of the website on the left hand side. Compare your observations about your rock sample to the data in the Table. **Record your 2nd observation of the rock sample in the chart.**
* Click the door to return to the main lab. Click the arrow on the front of the test plate and select the name of the rock. Click check to see if you identified the rock correctly. **Record your guess of the rocks sample and the actual name of the rock sample in the chart.**
* Repeat this process with all seven samples then answer the question following the chart.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Sample** | **1st Observation of rock sample** | **Igneous, Sedimentary or Metamorphic** | **2nd Observation of rock sample** | **Name of Rock Sample**  (your guess) | **Name of Rock Sample**  (actual answer) |
| **Example** | Dark in color  Flat/smooth  Banding | Metamorphic  (Foliated) | Yes banding  No recrystallization  Dark in color  Flat, smooth surface | Slate | Slate |
| **1** |  |  |  |  |  |
| **2** |  |  |  |  |  |
| **3** |  |  |  |  |  |
| **4** |  |  |  |  |  |
| **5** |  |  |  |  |  |
| **6** |  |  |  |  |  |
| **7** |  |  |  |  |  |

**Questions**

1. For each rock sample you tested, how did you decide what testing lab to use?
2. What observations did you make about your rocks samples? (Give examples)
3. How did you identify your rock sample?
4. When you find a rock on your own, what steps can you take to identify it?