## Lesson Plan: Rock Exploration 101

Standards: 4th Science: R 4.1.4, ST 4.2.1 & 2

Objective: Students will learn about:

* Scientific process
* Scientific journal
* Research in proving your hypothesis

Prior learning: Study identification of rock types. Discuss the scientific method and how to collect data, make observations, make hypotheses and research online.

**Procedure- Have students:**

1. **Explore:** Look for an interesting or unusual rock or fossil on the playground.
2. **Record observations and collect data**
   1. Before students take their rock out of the playground, have them take pictures (place a coin or pen near the object to give a sense of size) or make a sketch.
   2. Write notes regarding location (Location? What is the nearest landmark? Are there roads, railroad tracks, or trails in the area? Creeks or streams?
   3. Add notes about color, size, weight of rock/fossil
3. **Make a hypothesis** (Guess) – “I think I found a \_\_\_\_\_\_\_\_\_\_.” Now students can wrap the rock in a piece of cloth or paper and bring into classroom. Have students explain what makes it interesting. Why did it catch their eye? Record their observations in science journals.
4. **Test their guess.** Have students try and figure out what the rock is by taking measurements of length, height and width. Describe the surface and features of your object.
5. Weigh it – Is the rock unusually heavy for its size? This may indicate a high metal content, like an iron meteorite.
6. Use a magnet – Is the rock magnetic?
7. Smell it- Does it smell like sulphur?
8. Use a magnifying glass – Do you see inclusions, flecks, etc…?
9. Record your observations in your journal.
10. Research online to determine the type of rock found.
11. Write a conclusion summarizing your process.