

# Classification & Variation

**Title:** Classification & Variation

**Subject:** Science (Scientific observation, Systems)

**Grade Level:** Grades 5-6

**Outcome:**

The purpose of the following activity is to:

1. Allow students the opportunity to sharpen their observation and analysis skills.
2. Allow students to imagine the different perspectives of interpretation.
3. Introduce concepts of variation and scientific classification .
4. Correspond with “General Curriculum Outcome2” as outlined in the Atlantic Canada Science Curriculum Foundation:

*“Students will develop the skills required for scientific and technological inquiry...(namely “Performing and recording” and “Analysing and interpreting”) (p 14)*

**Description: (Teacher to student)**

Today we will be learning about variation and classification. “Variation” means “differences”. We will be going outside and we will be classifying a number of things. You will be working in groups of 3 (assign groups), please stay with your groups the entire activity.

**Procedure:**

1. Ask students “What are some ways that scientists classify things in our world?” (eg. size, genes, living vs. non-living).  
“What do you think people, flowers, cats, insects and trees all have in common?” (They are all alive). Explain that they will be walking all over the Outdoor Learning Site, looking for objects to classify as living or non-living. Each group will have to fill in the table, and explain why the items are living or non-living.
2. Explain that once they have completed that table, come back to the amphitheatre and your group will be assigned a plant to work with.  
**NOTE: do not pick the plants- you can look at them without taking them out of the ground!**

3. They will be looking for differences between the plants and for similarities. For example, they could write “plants are all different heights” or “plants have different size leaves” or “plants are all different shades of green” or “some plants are healthy looking and some look like they are dying.” Answers are to be written in the table (only one table is needed per group). The instructors will need to be available for help.  
\* Each group should be assigned a type of plant, and they should have three specimens to examine. For example, one group could look at dandelions. They will need to look at three different dandelions, and look for similarities between all three (eg. all have leaves with jagged edges, all have yellow flowers, all grow under tree, etc) and look for differences (all have different size flowers, all smell different, etc.)
4. Explain what the difference is between quantitative observations (measurements) and qualitative observations (subjective). Explain that both quantitative and qualitative observation methods should be used.
5. Go outside and explore! When groups finish with both tables, they should answer the questions.

Group members:



**Differences** (explain how the plant specimens are all different)


Plant name: \_\_\_\_\_



2. What kinds of differences can appear in the same plant species?

3. What is the difference between a quantitative observation and a qualitative observation?