Materials Needed: 4 varieties or types of plants, slides, coverslips, microscope, paper

Questions for the Scientist:

1. What characteristics do plants share?
2. How do plants differ from one another?

State Your Hypothesis: _____

Procedures:

1. Choose four different types of plants to observe. For example, flowering plants, fern plants, and moss plants are different varieties of plants you may choose.
2. Observe each plant. Draw each plant and describe each part you see.
3. Remove a leaf from each plant.
4. Make a wet-mount slide of each leaf by placing the leaf in the center of the slide, adding a drop of water in the center, and placing a coverslip on top.
5. Examine the leaf under a microscope. Record at what microscopic power you are observing each leaf.
6. Draw each leaf as you see it under the microscope.*

Key Questions:

1. What plant characteristics do you see without using the microscope?

2. What plant characteristics do you see when you use the microscope?

Results and Application:

After studying your results, what conclusions can you draw? Do your results support your hypothesis? Explain your reasoning.

(Note: The plant slides or sketches are used in the "Animal Cells" experiment.)

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