Flower Discovery

Dissect and Inspect!

Summary:

Students will explore flowers like a scientist, identifying structures and functions. They will see the differences and similarities between different flowers. Students will draw a scientific drawing of the flower, labeling the structures and functions. Students will learn to think like a scientist, allowing their discovery to prompt questions and ideas for further exploration.

Objectives:

- Students will be able to identify some structures of a flower.
- Students will practice a scientific drawing, labeling flower parts using a key.
- Students will make an inference of the function of flower structures.

Materials and Prep:

- Sharp knife (or Exacto knife) for cutting flower
- Cutting board
- Tweezers for manipulating small fragile parts
- Paper for drawing
- Drawing tools such as pencils or colored pencils
- Flowers (picked fresh from outside, or inside potted plant)
- *Optional: Magnifying lens
- Diagram of flower parts

Vocabulary:

Petal – one of the modified often brightly colored leaves of the corolla of a flower
Pistil – a single carpel or group of fused carpels usually differentiated into an ovary, style, and stigma
Stamen – the pollen-producing male organ of a flower that consists of an anther and a filament
Sepal – one of the modified leaves comprising a calyx
Structure – something arranged in a definite pattern of organization.
Function – the action for which a person or thing is specially fitted or used or for what a thing exists.

Dialogue:

Explain that this is an opportunity for students to study real flowers to learn how they reproduce. If the students are young, ask them if they know what ***STRUCTURE*** and ***FUNCTION*** mean.

Structure – something arranged in a definite pattern of organization
Function – the action for which a person or thing is specially fitted or used or for what a thing exists

Let them know that they're going to explore flowers the way that scientist do. Take them outside (or to an indoor flowering plant) to choose a few flowers for dissecting. While looking at the flowers that are growing, prompt them to look for examples of structure and function working together. How things are shaped and put together determines what they do. Ask if they can see a relationship between structure (shape/design of a flower part) and function (how the flower uses that design to help them survive.)

After observing, select 1-4 different flowers to pick for dissection. Taking the flowers inside and lay one on the cutting board at a time. Depending on the child's age and skill level, determine if you or they will slice the flower open.

Flower Dissection:

- Print out (or pull up the image on the computer screen) the "FLOWER PARTS" diagram.
- Lay the flower down on the cutting board and hold it in place with one hand and allow the student to observe the flower structures (with a magnifying lens, if you have it) to identify as many parts as they can before cutting it open.
- Hold the flower on the cutting board with one hand, making sure that it's in a position that will allow a cut to bisect it into 2 equal pieces, if possible.
- Carefully cut the flower in half, so that the 2 halves mirror each other.
- Using the diagram, have the student inspect the flower (with the magnifying lens, if you have it) and try to identify the different structures that they see.
- Have the student draw the flower and its parts, labeling the parts and the function (they can guess at the function if they don't know it):
    - Let them know that looking at structures and how they function is something that scientists do.
    - Tell them that scientific drawings are one of the tools that a scientist uses.
    - Explain that in a scientific drawing, they are to draw exactly what they see, in as much detail, and as accurately as they can. This drawing is for sharing information, NOT for creating art.
    - In a scientific drawing, they label structures and functions.

Flower Drawing Discussion:

After the drawing is complete, discuss the structures that are labeled in the diagram and check that the student has drawn and labeled those structures in their drawing. Some questions you can ask:

- "Does your flower have _____?" (name a structure: sepals, petals, stamen, etc.)
- "How is it represented in your drawing?"
- "What did you notice about this structure (pick one) in your flower? What do you think its function is?"
- "What do you wonder about this flower?"
- "How is this drawing different from flower drawings that you've done before?"
- "Do you find scientific drawings (like the diagram) a helpful learning tool for you?"

Resources:

https://www.merriam-webster.com/dictionary/petal
https://edibleschoolyard.org/resource-search