3D - Flower Model

Purpose: Students will learn the parts of the flower by constructing a 3-D flower model. Students will be able to differentiate between parts of the flower.

Background:

The basic part of a flower is made up of many different parts. The **sepal** and **petals** are usually easy to see. The **petals** are the colorful, often bright part of the flower. Colorful petals attract pollinators and are usually the reason why we buy flowers or grow them in a flower bed. The **sepals** look like little green leaves growing at the base of the petals. Collectively the sepals make up the **calyx** of the flower which serves to protect the flower's reproductive organs. The sepals enclose and protect the developing flower bud before it opens into a fully developed flower. Flowers contain the reproductive system of the plant. Some of the most important parts of a flower are the male and female parts that carry the traits the parent plant will pass on to its offspring.

The male part of the flower is called the **stamen**. The **stamen** is the pollen producing part of the plant, and it is made up of two parts: the anther and filament. The **filament** is the stalk that holds the anther and attaches it to the flower. The **anther** produces and holds the pollen, which will hopefully be transported to the female part of the flower by wind, animals, or insects.

The female part of the flower is called the **pistil**, and it is made up of the stigma, style, and ovary. The **stigma** is the head of the pistil; it often looks like a sticky bulb on a long stalk in the center of a flower. The stigma receives the pollen grains. The **style** is the stalk that the stigma sits on top of, and the **ovary** is usually at the base of the style.

When a plant is pollinated, the pollen that has landed on the stigma grows a pollen tube that reaches down through the style to the ovary. If pollen from an incompatible plant of a different species lands on the stigma, it won't grow a pollen tube. When the pollen tube reaches the ovary, the ovules inside the ovary can be fertilized by the pollen. Then the ovules become **seeds**, and the ovary swells. Seeds can be sown to grow new plants, and they can also be important food sources. We eat the seeds of wheat, corn, beans, and many other plants. We also eat many fruits, which are enlarged ovaries that contain the seeds of the plant.

Some flowers are considered **perfect**, meaning they have both male parts and female parts in the same flower. Roses, lilies, and dandelions have perfect flowers. Other flowers are called **imperfect**, meaning each flower has either all male parts or all female parts. Cucumbers, pumpkins, and melons have imperfect flowers.

Materials:

Part of the Plant	Supply
Flower	Flower printout off internet (students can color) Tissue paper Construction Paper
Reproductive Part/Pollen	Q-tip colored yellow with marker. Yellow pipe cleaner
Stem	Green pipe cleaners Straws Green tissue paper to cover the straw. Green construction paper to cover the straw
Leaves	Green tissue paper Green construction paper Green pipe cleaner
Roots	Brown yarn/string
Display/Label	Clear cup to hold up plant, roots below and plant above White paper to label structures Small post-its to label structures
Other Supplies	Tape, glue, scissors

Activity:

1. Instruct the students that they will be creating a 3-D plant model that includes the flower, stem, leaves, roots, and reproductive parts. They can use some or all the given supplies to create their plant.
2. Have students label the plant parts on their model.
3. Once they have labeled all the parts, have them take out a piece of paper and list the parts. Then define each one.
4. Discuss with your students which parts of the plant we can eat and have them give some examples from the fruits and vegetables they enjoy at home.
5. Also, you can discuss whether plants are a renewable or nonrenewable resource.