

POP BOTTLE COMPLETE FLOWER PROJECT

Objective: I used this project to teach my students the parts of the complete flower and it allows them to produce a flower of their own design. Your students will enjoy producing them and it will allow you to discuss complete, incomplete, perfect and imperfect flowers in your session of plant reproduction.

Materials:

- a. Complete flower illustration
- b. One clear and one green, 1 liter pop bottle, same brand
- c. Copy paper
- d. Ruler
- e. Pencil
- f. Non-permanent marking pen
- g. Colored permanent felt pens
- h. Utility knife
- i. Scissors, straight or artsy
- j. Colored pom-pom, plastic beads with holes, colored pipe cleaners
- k. Hot glue gun
- l. Glue remover

Procedure:

- a. Explain a complete flower.
- b. The flat part of a pop bottle measures 10 inches by 3 ½ inches. On the copy paper, have the students draw a 10" x 3 ½" rectangle and divide the rectangle into eight 1 ¼" x 3 ½" rectangles. They will need two copies, one for petals and one for sepals.

Each rectangle represents a petal or sepal. Remember that the base of the petal must have some substance because when cut and bent they must stay attached. Once drawn, cut out the patterns and save them.

- c. Fill the pop bottles with hot water, leave stand several minutes to soften the glue and then remove the labels. Leave the water in the bottle; it is easier to write on the bottle.
- d. Remove the glue.
- e. Attach the petal pattern to the clear bottle. The cap end is the base of the flower. Use the non-permanent marking pen to trace the pattern. Use the sepal pattern on the green bottle. Remove the water from the bottles and do not wipe off your pattern.
- f. Use the utility knife to cut a slit, insert the scissors, cut along the pattern lines of the petals and sepals
- g. You must remove the neck and cap of the clear bottle, using the utility knife, cut where the curved top of the bottle joins the neck. **Do not cut the neck and cap of the green bottle.** The cap is what holds the pistil and stamen of the flower.
- h. Use the permanent felt pens to color both sides of the petals. It makes a brighter flower. Be creative.
- i. The green bottle used for the sepals and receptacle of the flower do not need to be colored, but you may if you wish. You may color the cap green.
- j. Place the clear bottle inside of the green bottle, position them, and snap them together.
- k. Bend the sepals and petals to the shape them to look like the flower has bloomed.

- l. To make the pistil, get a colored pom-pom, a different colored pipe cleaner and an even different colored plastic bead. Measure the length of the flower from the cap to just above where your petals are bent. Add $\frac{1}{2}$ " to this length and cut the colored pipe cleaner. At the end of the pipe cleaner, bend about $\frac{1}{2}$ ", 90 degrees to the rest of the pipe cleaner. It should look like a L. Poke the pipe cleaner through the pom-pom and slide it down to the L shaped end. Use the hot glue gun and attach the plastic bead to the opposite end of the pipe cleaner. The pom-pom is the ovary, the pipe cleaner is the style and the plastic bead is the stigma.
- m. Now build the stamen! You need four lengths of a different colored pipe cleaner than the pistil. You also need four plastic beads of a different color than the stigma. Cut them the same length that you cut the pistil and bend them into the same L shape. Hot glue the plastic beads onto the end of the pipe cleaner, opposite of where you bent the pipe cleaner.
- n. Take the cap off the bottle. Put a generous amount of hot glue into the cap. Make sure to not get glue on the threads because you want the cap to screw back onto the bottle. Place the stamens into the glue. Make a \perp pattern with the stamens. Next, place the pistil in the center of the \perp pattern of the stamens and hold them until the glue is set. You now have the reproductive portion of the flower complete.
- o. Once the glue is set, screw the cap back onto the bottle and your Complete Flower Project is finished.

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