Macaroni Monarchs

This lifecycle assembly projects helps students create and illustrate their understanding of monarch life cycle.

Materials:

- 1 paper plate per student
- 1 lb each rotini, ancini de pepe (cous cous or other tiny round pasta), large shell and bowtie pasta
- green, red and yellow food coloring
- 2 bottles rubbing alcohol or white/cider vinegar
- green markers
- green construction paper
- 1 each per person - black and white pipe cleaners, cut into 1 inch pieces (slightly longer than the rotini pasta)
- glue

Instructions:

1. At least one day prior to the project, soak the bowtie pasta in red/yellow food coloring mixed with vinegar or rubbing alcohol to make it orange. Do the same for the shell pasta with green food coloring and vinegar or rubbing alcohol.
   Green shell = pupa, orange bowtie = adult, small round noodle = egg, rotini wrapped in black and white pipe cleaners = caterpillar
2. Soak several hours until pasta is desired shade. Drain, and spread to dry on a surface covered in wax paper, or towels you don't care about getting stained. Remember to protect the surface underneath because food coloring can stain!
3. Instruct students to draw a milkweed plant on their paper plate. Label the plant.
4. Cut one approximately 2 inch leaf out of green construction paper. Glue it to the milkweed plant.
5. Pass out one of each type of pasta and pipe cleaners to each student. Discuss which part of the monarch life cycle each represents.
6. Instruct students to glue the "egg" pasta onto the milkweed leaf and label it.
7. Ask students to use the pieces of pipe cleaner to make the larva pasta look more realistic.
8. Have students glue the larva onto a part of the plant where they think they might find it. Have them label it and draw an arrow from the egg to the larva.
9. Have students glue the pupa pasta onto a different part of the plant where it might be found. (Remind students that larvae usually climb off milkweed plants to pupate, and discuss why this might be so.) Have them label it and drawn an arrow from the larva to the pupa.
10. Finally, have students find somewhere on their diagram to glue the adult butterfly, and label that as well. Have them draw an arrow from the pupa to the adult.

These directions were put together by the University of Minnesota Monarch Lab and adapted from various other activities.

Monarch Lab