

GYSTC Discover Georgia STEM Camp: Day One

Title: Bee a Pollinator

Presenter: Tammy Nowell

Purpose:	Students will revisit a life cycle and learn about the life cycle of a honeybee as well as the important role that pollinators play in our world.
Standard:	<p>S2L1: Obtain, evaluate, and communicate information about the life cycles of different living organisms.</p> <p>a. Ask questions to determine the sequence of the life cycles of common animals in your area: a mammal such as cat, dog or classroom pet, a bird such as a chicken, an amphibian such as a frog, and an insect such as a butterfly.</p> <p>c. Develop a simple model that depicts an animal’s role in dispersing seeds or in the pollination of plants.</p>
Materials:	Pipe cleaners, Toothpicks, Empty toilet paper rolls, Crayons or markers, Tissue paper, (Students may use other materials in order to decorate their bee)
Procedures:	<ol style="list-style-type: none"> 1. Students will watch a video that takes them onsite to a working honeybee hive. There they will get to observe the honeybees in their different stage of the lifecycle as well as all of the members (queen, worker, drone) of the hive in action. 2. Students will be asked questions. 3. We will discuss the importance of pollinators, especially the honeybee. 4. Students will have the opportunity to engineer and design their own pollinators.
Science Behind It:	<p>Honeybees develop in four distinct life cycle phases: egg, larva, pupa, and adult. The total development time varies a bit among the three castes of bees, but the basic miraculous process is the same: 24 days for drones, 21 days for worker bees, and 16 days for queens.</p> <p>Honeybees are not only extremely important for humans, but also for entire ecosystems to function. As we know, bees allow plants to reproduce through pollination. These plants contribute to the food system by feeding animals – aside from humans – such as birds and insects.</p>
Questions to Ask:	<ol style="list-style-type: none"> 1. What is a life cycle? 2. What is the life cycle of a honeybee? 3. What is a pollinator? 4. If you were an engineer, how would you create a “bee” to help pollinate plants? 5. What can you do to help pollinators?