



Nature Study

Each Friday morning, you will go through two of our nature cards. These are short, factual cards with images to help your child become familiar with objects in the natural world.

As you progress through our sessions, you may find it handy to keep your past nature cards in a binder for easy reference when your children come across a familiar object. These seeds you are planting will grow into a wonderful garden of knowledge for your children in years to come.

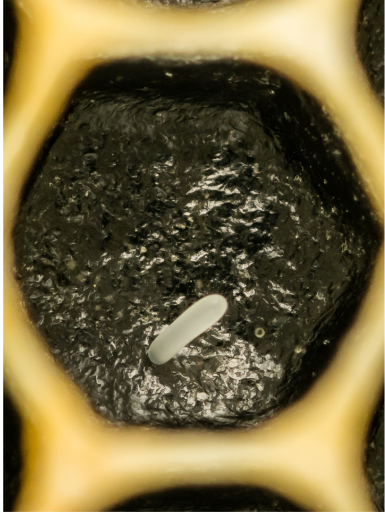
As you explore nature outside your home, watch and listen for newly discovered delights. Most of all, remember...

"Point to some lovely flower or gracious tree, not only as a beautiful work, but as a beautiful thought of God."

~ Charlotte Mason

Nature Study

Honey Bee (egg stage)



- Honey bees are social insects that live in colonies or hives, made up of one queen and thousands of workers and drones. They are one of the most important pollinators of flowers and plants, as they transfer pollen between the flowers, which helps to fertilize for reproduction.

- The queen bee can lay roughly 2,000 eggs a day, which she places in different cells within the honeycomb.
- The eggs are the size of a grain of rice.

Honey Bee (larval stage)



- After three days, the eggs hatch into larvae, which have no eyes, legs, or wings.
- As the larvae grow, they are fed a type of jelly by “nurse bees” (young worker bees) until they molt. The nurses then seal the larvae in their cells, and the larvae spin themselves a cocoon in which they grow.

- When a larva has fully grown into an adult, it chews its way out of its cell and gets to work.

Honey Bee (pupa stage)



- Fertilized eggs become female, who are the worker bees and keep the hive running. Unfertilized eggs become male, who work as drones tending to the queen.
- When the bees are grown, they feed on pollen and honey.

- Queen bees, however, feed on something called “royal jelly” their entire lives, which helps them grow into a full queen that can lay eggs.

Honey Bee (adult stage)



- Queen bees regulate the hive with their pheromones and spends most of her days laying more eggs to repopulate the hive.
- During winter, the bees huddle together for warmth while living off all the stores they have saved. During this time, drones still living will usually be kicked out of the hive.

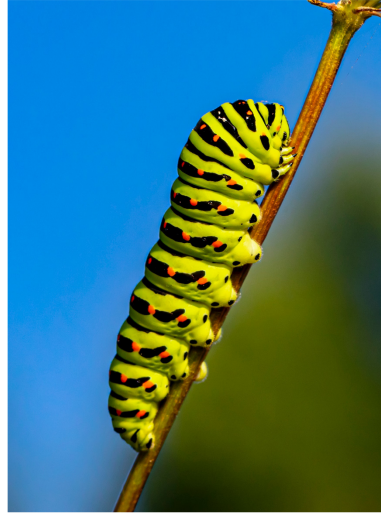
- Come spring, the queen begins laying eggs again.

Butterfly (egg stage)



- The life cycle of butterflies develops through a process called metamorphosis.
- Female butterflies lay their eggs on a leaf, which is "glued" to the egg through a substance secreted by the mother.
- When the egg hatches the leaf becomes the food source for the eggs.

Butterfly (larval stage)



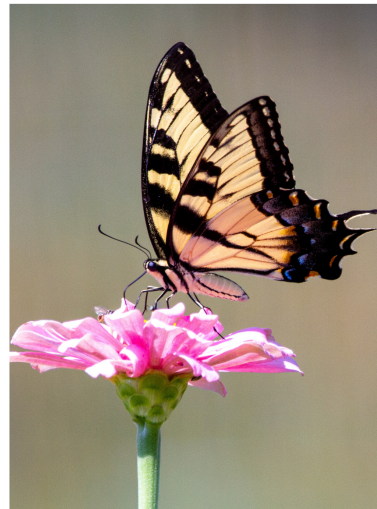
- The egg hatches into a larva, otherwise known as a caterpillar. The caterpillar lives only to eat and store food so that it can grow.
- During this time, the caterpillar can grow up to 100 times its original size! It does this by shedding its skin multiple times throughout this period.

Butterfly (chrysalis stage)



- When the caterpillar is fully grown, it becomes a pupa and builds a chrysalis, or cocoon, around itself, in which it can grow. They usually develop in a couple of weeks, but can take months or even years.
- During this time, the caterpillar releases digestive fluids that break down its body, which it uses to rebuild itself and create new body parts, such as legs, antennae, and wings.

Butterfly (adult stage)



- When it is fully developed, the butterfly emerges. At this time its wings are soft and crumpled, so it exercises for a few hours until the wings have hardened. Thus begins the adult butterfly's life.
- The butterfly does not need to eat, but lives off the food stored during its caterpillar days. However, it can draw more energy from nectar, fruits, or other sugars.
- The adult butterfly lives to mate and lay eggs to begin the cycle again.