ATLANTA BOTANICAL GARDEN

SECOND GRADE PRE AND POST VISIT ACTIVITIES

GEORGIA STANDARDS OF EXCELLENCE

S2L1. Obtain, evaluate, and communicate information about how organisms (alive and not alive) and non-living objects are grouped.

a. Ask questions to determine the sequence of the life cycle of common animals in your area: a mammal such as a cat, dog or classroom pet, a bird such as a chicken, an amphibian such as a frog, and an insect such as a butterfly.

b. Plan and carry out an investigation of the life cycle of a plant by growing a plant from a seed and by recording changes over a period of time.

c. Construct an explanation of an animal's role in dispersing seeds or in the pollination of plants.

PRE-VISIT

GUIDING QUESTIONS

What is the life cycle of some plants?

What is the life cycle for different kinds of animals such as a frog, butterfly or bee?

SCHOOLYARD WALK plant and animal life cycles

Walk around the schoolyard and find different stages in a plant's life cycle.

- Can you find a tiny sprout, seed, flowers or fruits? If you find a fruit, open it to find the seeds.
- How do pine tree cones fit into the life cycle of plant?

Make a list of the different animals they see.

- What kids of life cycles do those animals have? How are they different from others? How are they the same?
- What life cycle stage are you observing?

POST-VISIT

WRAP UP QUESTIONS

What stages in the plant's life cycle did we observe at the Garden?
How does the life cycle of a bee or butterfly depend upon a plant?
How does the lifecycle of a plant depend on a butterfly or bee?

ACTIVITY growing a plant

- Plant a seed and watch it grow (suggested seeds – zinnias, beans, sunflowers).
- Make observations and record how long each life cycle stage takes for their plant. If the plant doesn't reach a full cycle of producing seeds, discuss why the plant might not have been able to make seeds.
- Resource: All About Beans Video and Lesson Plan

ACTIVITY design a flower to attract a local pollinator

- Have each student design their flower to attract a specific kind of pollinator (ex. bee, butterfly, fly, beetle, wasp, bird, etc.). They can draw their flower or create a flower sculpture with available art materials.
- How does their flower attract the pollinator (sweet smells, stinky smells, beautiful colors, mimicry)?
- How does the flower ensure the pollen gets stuck on the pollinator while it is visiting?
- Suggested video: An Orchid's Trap | Wings of Life by Nat Geo Wild
- Suggested book: Flowers are Calling by Rita Gray and Kenard Pak

SUGGESTED RESOURCES

Pollinator Lesson Plans and Build your Own Bee Hotel Video
In a Nutshell by Joseph Anthony
Treemendous: Diary of a Not Yet Mighty Oak by Bridget Heos & Mike Ciccotello
DK Readers: Tale of a Tadpole by Karen Wallace
National Geographic Readers: Caterpillar to Butterfly by Laura Marsh
Amazing Time-Lapse: Bees Hatch Before Your Eyes | National Geographic

ATLANTA BOTANICAL GARDEN

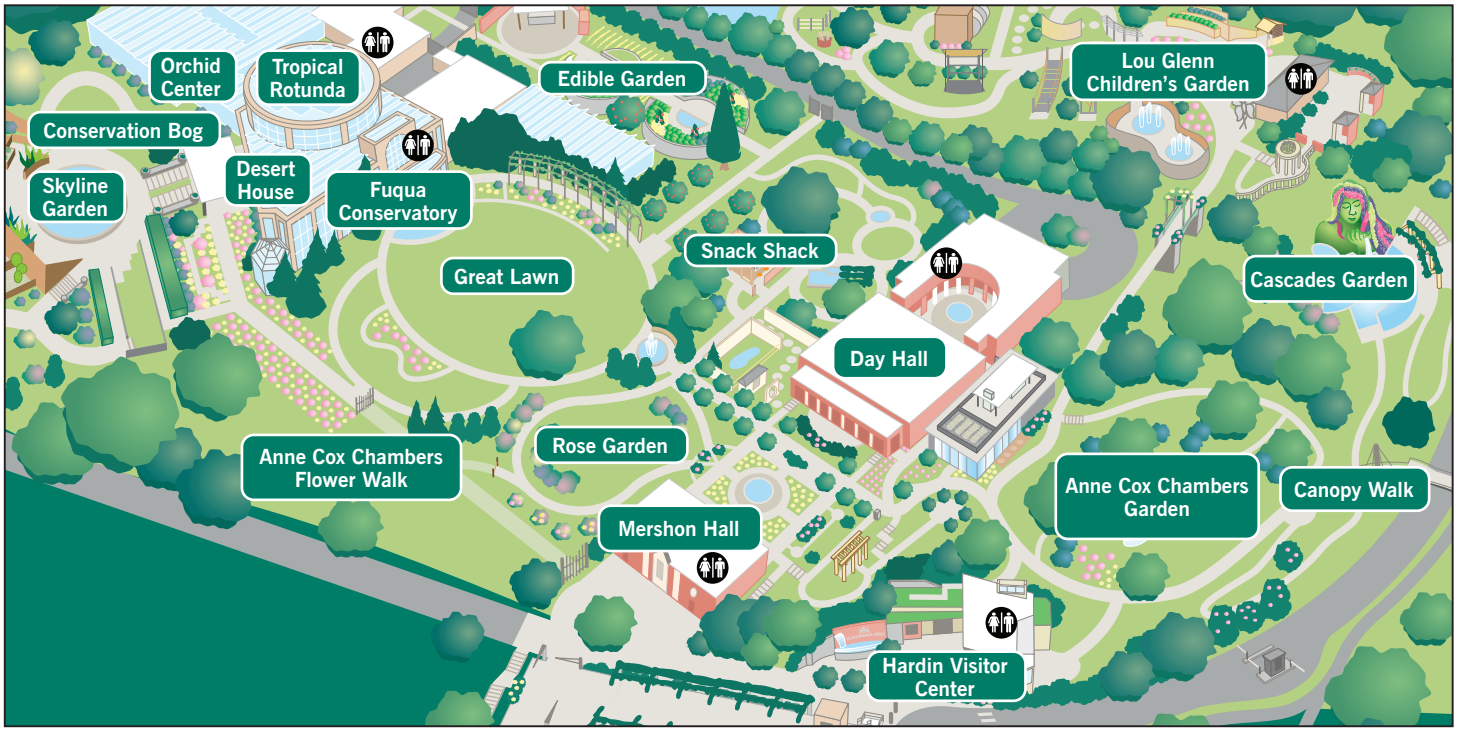
SECOND GRADE

THEMES

- Plant Life Cycles
- Animal Life Cycles
- Pollination

SUGGESTED DESTINATIONS

- Reflecting Pond in front of Fuqua Conservatory
- Fuqua Conservatory Lobby
- Children's Garden Observation Beehive



GARDEN ACTIVITIES

POLLINATION OBSERVATION

Location: Outdoor location with lots of flowers*

Choose a location with lots of bees and butterflies visiting flowers. Take a moment to watch the bugs in action. Can you see pollen on their bodies? What do the bugs do when they visit the flower? How does pollination benefit the plant? Do certain plants attract more pollinators than other plants? Why do you think that happens? Pollinators are helpful insects and are not likely to harm humans while they are gathering nectar.

BEE LIFE CYCLE

Location: Children's Garden Observation Beehive*

Look for the different stages in a bee's life cycle. egg, larva, pupa, adult Can you find a larva? Can you find a queen, worker or drone bee? Do you see bees with pollen on their legs? Where did the bees get the pollen? The liquid in the cells is honey. To make honey, the bees bring flower nectar back to the hive and transfer it mouth to mouth from bee to bee until its moisture content is reduced from about 70% to 20%, thus creating honey.

FROG LIFE CYCLE

Location: Reflecting Pond in front of Fuqua Conservatory & Fuqua Conservatory Lobby

- Reflecting Pond*: Inside this pond are often bullfrogs and bullfrog tadpoles. Make observations and discuss how tadpoles are different from adult frogs.
- Fuqua Conservatory Lobby: Visit the frog tanks in the lobby by the restrooms and make observations on the diversity of frogs from tropical regions. Sometimes there are frog eggs on the leaves and tadpoles in the small pools of water in the tanks.

SCAVENGER HUNT plant life cycle

Location: Everywhere

While walking through the Garden notice the different life stages of many flowering plants: seed, seedling, adult plant, flowers, and fruit. Prompt the students to draw the different stage they are observing on the scavenger hunt sheet. Discuss how one stage leads to another. Note: you will probably not find one plant that displays all life stages during your visit, so the drawings and observations of the life cycle stages will most likely be with different plants.

*on cooler days, pollination, honeybees and frogs might not be observable outdoors

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NAME _____

In the Garden, find and draw each stage of a plant's life cycle.
A different plant can be drawn in each box.