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## **Audubon Classroom Program – PA**

### **Before the Audubon presenter comes:**

Please review the Curriculum Integration Guide information and materials with your class. We don't need you to teach the lesson, but it helps if students have some basic background in the concepts that we are teaching.

### **When the Audubon presenter is in your class:**

Please remember that we are guests in your school. We appreciate you being present during the lesson, helping with discipline and making connections between our lesson and other things that your students are doing.

### **After the Audubon presenter leaves:**

Please keep the learning going. There is a post visit activity to do, along with many other ways to keep the students learning.

There is a teacher survey at <http://auduboncnc.org/classroomevaluation> that you can complete to tell us how we are doing and what we can do to better suit your needs.

# Wetland Life Cycles

## Curriculum Integration Guide

### Pre-visit activities

- Talk about a basic life cycle.
- Have the students guess some life cycles that the Audubon presenter might talk about.
- Look at pictures of wetlands.

### Extend the learning

- Color the life cycles on the post-visit activity.
- On a piece of paper have the students draw a life cycle of something familiar, a family pet, themselves, or something from the class. Plants are appropriate.
- We may role-play being turtles during the presentation. Try to role-play being frogs from the egg stage to the adult stage.
- Come to Audubon.

### Books for students

- *Are you a Dragonfly?* by Judy Allen. This K-3 grade level book explores traits of dragonflies and how they change throughout their life cycles.
- *Near One Cattail: Turtles, Logs and Leaping Frogs* by Anthony D. Fredericks. This book explores several wetland creatures, providing accurate science content with a rhyming cadence.
- *Salamander Dance* by David Fitz Simmons. This book explores life in the vernal pool and following the life of the Spotted Salamander.

### PA Standards

**B3.3.4 A.1** Identify life processes of living things.

### Objective of the program

Students will learn that many animals change dramatically as they move through their life cycle and that some depend on two totally different habitats for survival. Students will learn the life cycle of the turtle, frog, and dragonfly.

## Wetland Life Cycles

### Background Information for Teachers

A *Life Cycle* is how an individual grows, reproduces and dies. Many animals have life cycles much like a person. This information is for **teacher reference** to answer student questions. *Please do not teach this material to the students before your Audubon visit.*

**Snapping Turtle Life Cycles** start as eggs, which are laid in the ground. The young turtles hatch and are on their own. They eat the same type of food when they are young as when they are older: plants and meat. Young turtles eat insects, older ones eat fish and frogs. As they grow, they will just get bigger and bigger till they are full grown, just like a person. Snapping turtle's eggs are laid on land, but once hatched they will spend most of their life in the water.

**Frog Life Cycles** start in the pond as eggs. The tadpole that hatches out generally eats plants. It stays in the pond, slowly growing back legs and then front legs. As it turns into an adult frog, its whole body slowly changes. Its mouth and tongue become better suited for catching insects and other living things. It gives up its plant diet entirely. As adults, only two of our local frogs spend much time in the pond when they are not mating: the Bullfrog and the Green Frog. Several of our frogs live in forests, including the Gray Tree Frog, Spring Peeper and the Wood Frog. Leopard Frogs live in fields and American Toads (all toads are frogs) live in forests, fields and anywhere damp outside the water. All of these frogs return to the water to start the life cycle – the eggs are laid in the water and the young all grow up as tadpoles.

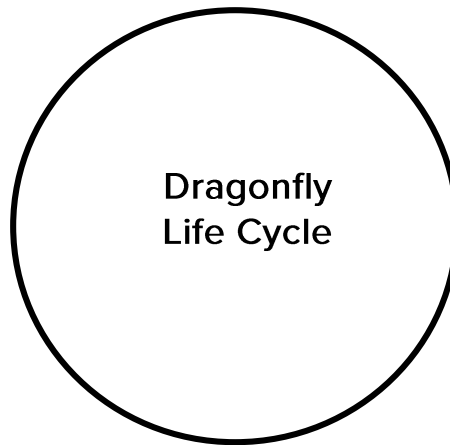
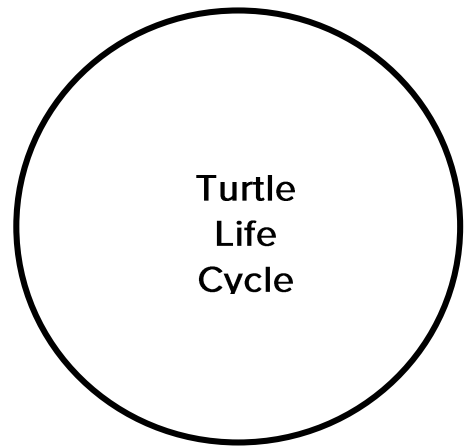
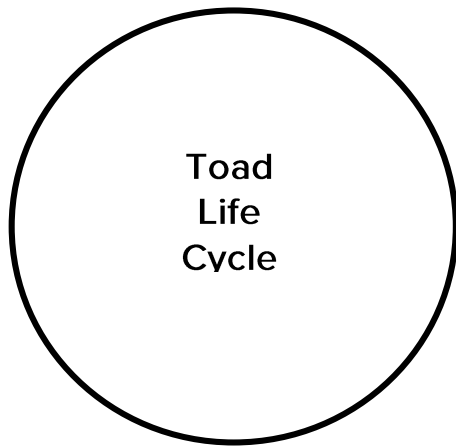
**Dragonfly Life Cycles** start out under the water. The young dragonfly (*nymph*) hatches out of the egg as a predator. It has a jaw that folds up under its body like a long arm. (It is called the *labium*, if you want to sound like a smart intellectual type.) This can be used to reach out and grab insects, small fish, and tadpoles for food. When it is ready to emerge as an adult, it climbs on a cattail stem, tree or rock and the skin, called an exoskeleton, across its back cracks open. The adult slowly emerges from the exoskeleton in a process that takes about one or two hours. The nymph exoskeleton is left behind and the adult dragonfly uses air and blood pressure to expand its wings and body to full size, which is much larger than the nymph it started as. The adults fly about to catch insects around ponds, fields and forests. Only the sexually mature dragonflies are found around ponds. The males often defend a territory there; the females come to mate and then return to the fields and forests once they lay their eggs in the water.

**Wetlands** are important because they contain more life than any other habitat in our area. Mosquitos, dragonflies, frogs, salamanders, and many other animals need wetlands as a key part in their life cycles. They also provide habitat for herons, egrets, ducks, geese and swans to live in and rest in as they migrate. Wetlands are the most diverse habitat in our area.

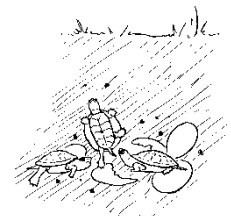
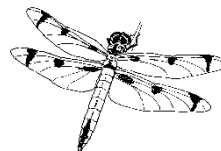
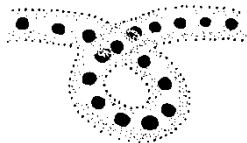
## Wetland Lifecycles

### Post-visit Activity

Today you learned about life cycles. Cut out the pictures at the bottom and glue them in order on the correct life cycle circle.



toad eggs



## Wetland Lifecycles Answer Key

### Post-visit Activity

Today you learned about life cycles. Cut out the pictures at the bottom and glue them in order on the correct life cycle circle.

