



INSECT SWEEPS

Objective: To show students the diverse array of insect species found in NC wetlands

Materials:

- Butterfly nets
- Clear containers for examining insects
(peanut butter/mayonnaise/mason jars with holes in the lids work well)
- Paper
- Clipboards
- Colored pencils
- Magnifying glasses if desired

Curriculum Connection:

- 1.L.1: Ecosystems
- 2.L.1: Structures and Functions of Living Organisms
- 5.L.2: Ecosystems

What you need to know:

North Carolina's wetlands are habitat for many animals, but it is not often we remember some of the most important ones--bugs! Insects provide a base for wetland food webs, and they include important pollinators that we need for our crops. In these ways, wetlands rely on insects, but insects rely on wetlands too! Bugs like dragonflies, crane flies, mosquitos, and damselflies spend the nymph stages of their lives in water (see diagram on next page). In this hands-on activity, students will get a close look at some insects found in our wetlands and use their creativity to sketch and color what they find! Using this activity in a grassy wetland is ideal, but if you are unable to use one, a grass field works well.

The activity:

- ❖ Split students into small groups or partners
- ❖ Provide each group with at least one butterfly net and several jars
- ❖ Instruct students to gently sweep nets across tall grasses, and NOT to slam nets down on top of insects (If you have a pond, stream, or wetland with standing water you can look on the underside of rocks or in leaf packs to find aquatic insects.)
- ❖ After each insect is caught, have students transfer the critters into the examination jars by placing the open jar on top of the insect and pushing the net inside-out (touching the bug for transfer is not required)
- ❖ Once groups have caught at least 1 insect per person, have them find a quiet spot where they can examine their findings and sketch and/or color their drawing of the bug
- ❖ After they have completed their sketches, students may safely return bugs back to the grass or water (hold jar close to ground, then remove lid and let insect jump/fly out)

Follow-up:

Explain that insects have 3 body parts (head, abdomen, and thorax)(spiders are not insects) and have students try to label them on their drawings.

If accessible, have students use copies of insect field guides to identify their insects or use [this guide](http://watermonitoring.uwex.edu/pdf/level1/LifeintheWetlandPoster.pdf): <http://watermonitoring.uwex.edu/pdf/level1/LifeintheWetlandPoster.pdf>.

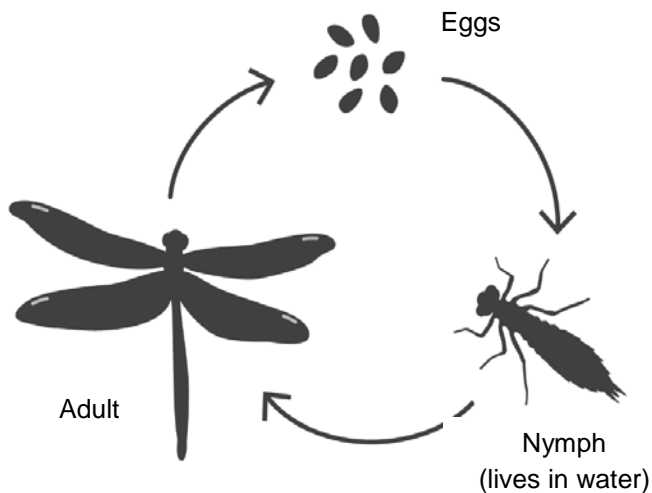
If you found aquatic insects, how are they adapted for life in water/a wetland? (*gills, leg adaptations, etc.*)

Why are wetlands important for insects? (*They provide water, food, and shelter. The water in wetlands can also be necessary for the life cycle requirements of some insects.*)

Streams (which are often associated with wetlands) are crucial to the lifecycle of some insects that we see in wetlands (e.g., dragonfly, damselflies, crane fly), what phases of insect lifecycles may be dependent on wetlands and/or streams and why?

Why are insects so important to wetlands? (*They are the base of the food web! So many animals rely on insects as a food source. They also pollinate many wetland plants.*)

DRAGONFLY LIFE CYCLE



Dragonflies are one of many species that rely on wetlands as part of their life cycle. Adult dragonflies lay their eggs in water, and the nymphs that hatch from the eggs live under leaf litter in small ponds and streams. The nymphs will continue to grow for up to 4 years! When they are ready to molt into adult dragonflies, they crawl out of the water onto a nearby plant and emerge from their exoskeleton.