# Wetland Habitat Investigation

**Investigative Questions**: How do organisms interact in different habitats in a wetland? How are organisms in the habitat affected by runoff?
**Goals:** Students learn about native wetland organisms and their interrelationships. Students investigate how organisms interact with one another and their wetland environment.

**Objectives**

**Knowledge**: Students use vocabulary to describe and understand how organisms interact. Students learn how energy flows within a native wetland ecosystem.

**Skills**: Students develop observation, data collection, and analysis skills while investigating a watershed system. Students classify organisms according to the role that each can have in a community. For example: worms/decomposer, squirrel/consumer & herbivore, maple tree/producer, etc.

**Values**: Students develop an appreciation for native Virginia wetland organisms and their role within a food web and the flow of energy within this food web.

**Stewardship:** Instruct students to be respectful of organisms as they investigate the habitats and areas in each activity. Remind them that these organisms need to function and carry out their job in the ecosystem.

**Special Safety:**

- Watch out for physical hazards in the game area: uneven ground, low hanging branches, holes, vines, or roots that may be a trip hazard.
- Poison Ivy is a native plant- identify it so students can use caution!
- Rocks may be slippery. Advise students not to go in certain areas when it is raining.

Grades: 3-4

**Virginia SOL addressed**
**Science:** 2018 4.1b, d.; 4.3a, 4.8

**Materials:**

- Wetland Investigation datasheet- one per student
- Clipboards
- Pencils

**Vocabulary** (these are words that students should have familiarity with)

| | | | | |
|---|---|---|---|---|
| organism | prey | predator | consumer | decomposer |
| producer | carnivore | omnivore | herbivore | habitat |
| community | ecosystem | niche | diversity | adaptation |
| competition | | | | |

**SETUP** Print Datasheets; prepare bin with materials listed above; place at Lake Georgette on the bench.

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**Instructional Strategy:**

1. In the Lake Georgette area, begin an inquiry discussion with students about the different habitats present.
    a. Aquatic- Organisms live IN the water (have to be able to breathe underwater, swimming adaptations, all or part of the life cycle)
    b. Rocky Habitat - Organisms live ON the rocks (Have to adapt to rapid temperature changes, often very, dry)
2. Inform students that they are to find 3 organisms in each of the habitats (aquatic, rocks)
    a. Review vocabulary as needed.
    b. Students will record the organism and/or evidence of the organism. (For example, they use their observation skills to see a plant or flower, hear a bird or bug, see a mushroom or worm. Or, is there evidence an animal left behind- such as scat or nibbled leaves, or a spider web.)
    c. They will also describe what the organism looks like and what it might eat. If it's a decomposer, is it a plant, animal, or fungus? If it's a consumer, is it an herbivore, carnivore, or omnivore?
3. Break students into small groups with a chaperone. Give each group a clipboard with the datasheet, pencil. Give Students and Chaperones boundaries. Circulate among groups, assisting students.
6. Wrap Up- Bring group back together to discuss the class's findings. Inquiry: Are there some organisms that live only in one habitat? Are there some organisms that travel to different habitats? Ask for examples. Aquatic snails (decomposers) only live on the aquatic habitat while a fishing bird utilizes all layers. Are there any organism adaptations that you noticed while you were exploring in the forest? Use vocabulary words such as camouflage, mimicry, dormancy, etc.
7. Reflection/Group question- How are organisms in this habitat affected by runoff?

Science SOL (2010)
4.1a It is expected that students will differentiate among simple observations, conclusions, inferences, and predictions, and correctly apply the terminology in oral and written work.
4.5a, b It is expected that students will understand that adaptations allow an organism to succeed in a given environment. Investigate and infer the functions of basic adaptations.
4.9 d Natural resources Forests appraise the importance of natural and cultivated forests

Science SOL (2018)
4.1b planning and carrying out investigations and 4.1d constructing and critiquing conclusions and explanations
4.3a In order to meet this standard it is expected that students will analyze and model how populations, communities, and ecosystems interrelate and illustrate the food webs in a local area.
4.8 a-d Investigate the schoolyard or local ecosystem in order to identify questions, problems, or issues that affect a natural resource in the area being studied.

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Use the chart below to **record 6 different organisms**. If you can't find an organism, look for clues such as tracks, scat, or holes that can be used for identification and record your evidence.

| | Plant/Producer | Animal/Consumer | | Decomposer |
|---|---|---|---|---|
| Aquatic Habitat | Plant Name: | Animal Name or Evidence: | | Organism Name or Evidence: |
| | What does it look like? | What does it eat? | Is it a? **Omnivore Carnivore Herbivore** | It is a (an) Circle one: **Plant Animal Fungus** |

How are the organisms in this habitat affected by runoff?

| | | | | |
|---|---|---|---|---|
| Rock Habitat | Plant Name: | Animal Name or Evidence: | | Organism Name or Evidence: |
| | What does it look like? | What does it eat? | Is it a? **Omnivore Carnivore Herbivore** | It is a (an) Circle one: **Plant Animal Fungus** |

How are the organisms in this habitat affected by runoff?