

Magnuson Nature Programs - Wetland Discoveries field trip- NGSS Correlations K-2

| Field Trip Activity | Disciplinary Core Ideas | Crosscutting Concepts | Science and Engineering Practices | MNP Objectives (Students will:) |
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| <p>Animal Signs: Students will explore the idea that there are many ways to tell if animals have been in an area, even if the animal itself is not seen. They will then be nature detectives as they led on a guided walk through the wetlands in search of animal signs and clues. They will use their observations and prior knowledge to decide if the sign is caused by a bird, insect, or mammal.</p> | <p>LS1.A: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)</p> <p>LS1.C: All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)</p> | <p>Structure and Function: The shape and stability of structures of natural and designed objects are related to their function(s).</p> <p>Systems and System Models: Objects and organisms can be described in terms of their parts. Systems in the natural and designed world have parts that work together.</p> | <p>Asking Questions and Defining Problems: Ask questions based on observations to find more information about the natural and/or designed world(s). Ask and/or identify questions that can be answered by an investigation.</p> <p>Planning and Carrying out Investigations: Make observations (firsthand or from media) and/or measurements to collect data that can be used to make comparisons. Make predictions based on prior experiences.</p> <p>Analyzing and Interpreting Data: Record information (observations, thoughts, and ideas). Use and share pictures, drawings, and/or writings of observations. Use observations (firsthand or from media) to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems. Compare predictions (based on prior experiences) to what occurred (observable events).</p> <p>Constructing Explanations and Designing Solutions: Use information from observations (firsthand and from media) to construct an evidence-based account for natural phenomena.</p> | <p>Be able to identify multiple signs that wildlife is or has been present in the park, and be able to see parallels of these signs in their own daily lives.</p> <p>Understand that wildlife habitat can easily co-exist within the human activity zones of the park.</p> |
| | <p>LS4.D There are many different kinds of living things in any area, and they exist in different places on land and in water. (2-LS4-1)</p> | <p>Patterns: Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.</p> | <p>Analyzing and Interpreting Data: Record information (observations, thoughts, and ideas). Use and share pictures, drawings, and/or writings of observations. Use observations (firsthand or from media) to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems. Compare predictions (based on prior experiences) to what occurred (observable events).</p> | <p>Understand the the signs left by wildlife are related to their habitat needs and the special adaptations that they use to get the things they need.</p> |
| | <p>ESS3.A: Living things need water, air, and resources from the land, and they live in places that have the things they need. Humans use natural resources for everything they do. (K-ESS3-1)</p> | <p>Cause and Effect: Events have causes that generate observable patterns.</p> | | |
| <p>Water Wonders: Students will explore the aquatic invertebrates that are found in the ponds at Magnuson Park. They will attempt to identify their discoveries through careful observation, and make connections about life cycles and food webs within the ponds. (?)</p> | <p>LS1.A: All organisms have external parts. Different animals use their body parts in different ways to see, hear, grasp objects, protect themselves, move from place to place, and seek, find, and take in food, water and air. Plants also have different parts (roots, stems, leaves, flowers, fruits) that help them survive and grow. (1-LS1-1)</p> <p>LS1.B: Adult plants and animals can have young. In many kinds of animals, parents and the offspring themselves engage in behaviors that help the offspring to survive. (1-LS1-2)</p> | <p>Structure and Function: The shape and stability of structures of natural and designed objects are related to their function(s).</p> <p>Systems and System Models: Objects and organisms can be described in terms of their parts. Systems in the natural and designed world have parts that work together.</p> | <p>Planning and Carrying out Investigations: Make observations (firsthand or from media) and/or measurements to collect data that can be used to make comparisons. Make predictions based on prior experiences.</p> <p>Analyzing and Interpreting Data: Use observations (firsthand or from media) to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems. Use and share pictures, drawings, and/or writings of observations.</p> | <p>Be able to identify macroinvertebrates in the pond water through careful observation of traits and use of scientific identification guides.</p> <p>Understand that each macroinvertebrate is important to the health of the whole wetlands food chain.</p> |
| | <p>LS1.C: All animals need food in order to live and grow. They obtain their food from plants or from other animals. Plants need water and light to live and grow. (K-LS1-1)</p> | <p>Patterns: Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.</p> | <p>Read grade-appropriate texts and/or use media to obtain scientific and/or technical information to determine patterns in and/or evidence about the natural and designed world(s).</p> | <p>Understand that the presence or absence of certain species can be an indicator of the health of the greater ecosystem.</p> |
| | <p>LS1.D: Animals have body parts that capture and convey different kinds of information needed for growth and survival. Animals respond to these inputs with behaviors that help them survive. Plants also respond to some external inputs. (1-LS1-1)</p> | <p>Scale, proportion, and quantity: Relative scales allow objects and events to be compared and described (e.g., bigger and smaller; hotter and colder; faster and slower).</p> | <p>Asking Questions and Defining Problems: Ask questions based on observations to find more information about the natural and/or designed world(s).</p> | |
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 ESS2.C: Water is found in the ocean, rivers, lakes, and ponds. Water exists as solid ice and in liquid form. (2-ESS2-3)

Wetland Homes: After discussing what all animals need from their habitat, students will be given identification cards labelled "food," "water," "shelter," and "nesting places." Students will then have the opportunity to explore a stretch of trail and look for places that could provide these things for different types of animals (mammals, birds, or insects).

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Structure and Function: The shape and stability of structures of natural and designed objects are related to their function(s).
 Systems and System Models: Objects and organisms can be described in terms of their parts. Systems in the natural and designed world have parts that work together.
 Patterns: Patterns in the natural and human designed world can be observed, used to describe phenomena, and used as evidence.

Asking Questions and Defining Problems: Ask questions based on observations to find more information about the natural and/or designed world(s). Ask and/or identify questions that can be answered by an investigation.
 Analyzing and Interpreting Data: Use observations (firsthand or from media) to describe patterns and/or relationships in the natural and designed world(s) in order to answer scientific questions and solve problems.
 Constructing Explanations and Designing Solutions: Use information from observations (firsthand and from media) to construct an evidence-based account for natural phenomena. Generate and/or compare multiple solutions to a problem.
 Engaging in Argument from Evidence: Construct an argument with evidence to support a claim. Make a claim about the effectiveness of an object, tool, or solution that is supported by relevant evidence.

Understand the four basic needs of all wildlife, and how the habitat in the wetlands provides for these needs.
 Understand that wildlife habitat and areas designed for human recreation can easily co-exist.
 Be able to see how their own backyard, schoolyard, or neighborhood is already providing these basic needs, and how it could be changed to better accomplish this.

Overarching Message

ESS3.C - Things that people do to live comfortably can affect the world around them. But they can make choices that reduce their impacts on the land, water, air, and other living things. (K-ESS3-3) (secondary to K-ESS2-2)

Have their curiosity about pond organisms and other wetlands wildlife encouraged, and develop empathy and respect for these organisms.
 Develop the art of watching and listening, and recognize the rewards that result.
 Be empowered to instigate and carry out stewardship activities in their own community that will benefit wildlife.