

Pond Study

Description: Students will be given nets and rubber boots to explore the gently flowing waters of the crayfish pool. Through catching crayfish and other aquatic species, students will examine the health of the stream, take note of invasive species and how they impact this ecosystem.

Learning Skills: Self-Regulation, Responsibility

Grade 5- 8: Health and Physical Education

Overall:

Living Skills:

- Personal Skills
- Interpersonal Skills
- Critical and Creative Thinking

A. Active Living

- A1. Active Participation
- A2. Physical Fitness
- A3. Safety

B. Movement Competencies: Skills, Concepts, and Strategies

- B1. Movement Skills and Concepts
- B2. Movement Strategies

Grade 5: Science and Technology

Overall:

Understanding Matter and Energy: Properties of, and Changes in Matter.

1. Evaluate the social and environmental impacts of processes used to make everyday products

Understanding Earth and Space Systems: Conservation of Energy and Resources.

1. Analyse the immediate and long-term effects of energy and resource use on society and the environment, and evaluate option for conserving energy and resources.

Specific:

Understanding Matter and Energy: Properties of, and Changes in Matter.

- 1.1 Evaluate the environmental impacts of processes that change one product into another product through physical or chemical change.

Understanding Earth and Space Systems: Conservation of Energy and Resources.

- 1.1 Evaluate the long-term impacts on society and the environment of human uses of energy and natural resources, and suggest ways to reduce these impacts.

Grade 6: Science and Technology

Overall

Understanding Life Systems: Biodiversity

1. Assess human impacts on biodiversity, and identify ways of preserving biodiversity
2. Investigate the characteristics of living things, and classify diverse organisms according to specific characteristics.
3. Demonstrate an understanding of biodiversity, its contributions to the stability of natural systems, and its benefits to humans.

Specific

Understanding Life Systems: Biodiversity

- 1.1 Analyse a local issue related to biodiversity, taking different points of view into consideration, propose action that can be taken to preserve biodiversity, and act on the proposal.
- 1.2 Assess the benefits that human societies derive from biodiversity and the problems that occur when biodiversity is diminished.

- 2.1 Follow established safety procedures for outdoor activities and fieldwork.
- 2.2 Investigate the organisms found in specific habitat and classify them according to a classification system.
- 2.3 Use scientific inquiry/research skills to compare the characteristics of organisms within the plant or animal kingdoms.
- 3.1 Identify and describe the distinguishing characteristics of different groups of plants and animals and use these characteristics to further classify various kinds of plants and animals.
- 3.5 Describe interrelationships within species, between species and between species and the environment, and explain how these interrelationships sustain biodiversity.
- 3.7 Explain how invasive species reduce biodiversity in local environments.

Grade 7: Science and Technology

Overall

Understanding Life Systems: Interaction in the Environment

- 1. Assess the impacts of human activities and technologies on the environment, and evaluate ways of controlling these impacts.
- 2. Investigate interactions within the environment, and identify factors that affect the balance between different components of an ecosystem.
- 3. Demonstrate an understanding of interactions between and among biotic and abiotic elements in the environment.

Specific:

- 1.1 Assess the impact of selected technologies on the environment.
- 2.1 Follow established safety procedures for investigating ecosystems.
- 2.3 Use scientific inquiry/research skills to investigate occurrences that affect the balance within a local ecosystem.
- 3.1 Demonstrate an understanding of an ecosystem as a system of interactions between living organisms and their environment.
- 3.2 Identify biotic and abiotic elements in an ecosystem, and describe the interactions between them.
- 3.3 Describe the roles and interactions of producers, consumers, and decomposers within an ecosystem.
- 3.7 Explain why an ecosystem is limited in the number of living things that it can support.
- 3.8 Describe ways in which human activities and technologies alter balances and interactions in the environment.

Grade 8: Science and Technology

Overall:

Understanding Earth and Space Systems: Water Systems

- 1. Assess the impact of human activities and technologies on the sustainability of water resources.
- 2. Investigate factors that affect local water quality.
- 3. Demonstrate an understanding of the characteristics of the earth's water systems and the influence of water systems on a specific region.

Specific

Understanding Earth and Space Systems: Water Systems

- 1.3 Assess the impact on local and global water systems of scientific discovery or technological innovation.
- 2.1 Follow established safety procedures for the use of apparatus and chemicals.
- 2.3 Test water samples for a variety of chemical characteristics.
- 2.4 Use scientific inquiry/research skills to investigate local water issues.
- 3.2 Demonstrate an understanding of the watershed as a fundamental geographic unit and explain how it relates to water management and planning.
- 3.3 Explain how human and natural factors cause changes in the water table.