Standards and Glossary

Standards:

Planning a Field Study

Next Generation Science Standards

- Disciplinary Core Idea LS2.A
    - Organisms and populations of organisms are dependent on their environmental interactions both with other living things and nonliving factors.
    - In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources. This limited access consequently constrains their growth and reproduction.

Common Core

- CCSS.ELA-LITERACY.RI.8.1 - Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

Modeling a Habitat

Next Generation Science Standards

- MS-LS2-1 - Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- SEP 2 - Developing and Using Models
    - Develop and/or use a model to predict or describe phenomena.
    - Use a model to test cause and effect relationships or interactions concerning the functioning of a natural or designed system.

Common Core

- CCSS.MATH.CONTENT.6.G.A.1 - Find the area of right triangles, other triangles, special quadrilaterals, and polygons by composing into rectangles or decomposing into triangles and other shapes; apply these techniques in the context of solving real-world and mathematical problems.

Planning Conservation Choices

Next Generation Science Standards

- MS-ESS3-3 - Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.
- SEP 2 Developing and Using Models
    - Develop a diagram or simple physical prototype to convey a proposed object, tool, or process Common Core.
- CCSS.ELA-LITERACY.SL.8.4 - Present claims and findings, emphasizing salient points in a focused, coherent manner with relevant evidence, sound valid reasoning, and well-chosen details; use appropriate eye contact, adequate volume, and clear pronunciation.

Conducting a Local Field Study

Next Generation Science Standards

- MS-LS2-1. Analyze and interpret data to provide evidence for the effects of resource availability on organisms and populations of organisms in an ecosystem.
- MS-LS2-4. Construct an argument supported by empirical evidence that changes to physical or biological components of an ecosystem affect populations.
- SEP 3 Planning and Carrying Out Investigations
    - Collect data to serve as the basis for evidence to answer scientific questions.

Glossary:

Ecosystem	A community of interacting organisms and their physical environment
Elevation	The height of a geographic location above sea level
Environmental Factor	Any factor, living or nonliving, in an ecosystem that influences the organisms in that ecosystem
Extirpate	Removal of a species from one part, but not all, of its range
Digital Application	Online software that serves a particular purpose
Field Study	A scientific study conducted outside of a lab environment
Geospatial Analysis	Applying data in geographic space for the purpose of answering a scientific question
Geographic Information System (GIS)	Software used to gather, manage, and analyze data in geographic space
Habitat	The natural home or environment of an animal, plant, or other organism
Habitat Degradation	A decline in habitat quality for a particular species or group of species
Habitat Fragmentation	When parts of a habitat are destroyed, leaving behind smaller unconnected areas
Habitat Suitability	The ability of a habitat to support a specific species
Historical Range	The amount of geographic space where a particular species used to be found
Human Impact	Changes to ecosystems, natural resources, or biodiversity caused directly or indirectly by human actions

Human Influence Index	A unit of measure for the amount of influence humans have in a specific geographic area
Model	A visual representation of something, typically on a smaller scale than the original
Protected Area	A clearly defined geographic space managed for the long term conservation of nature in that area
Current Range	The amount of geographic space where a particular species can be found today
Solitary	Has a habit of living alone
Surface Area	The amount of space on the surface of a given object or place
Topography	The study of the shape of earth's surface and its physical characteristics
Tree Cover	The amount of land in a given area that is covered by trees or forest