

Backyard Birding

- S.IP.05.11** Generate scientific questions based on observations, investigations, and research.
- S.IP.05.12** Design and conduct scientific investigations.
- S.IP.05.16** Identify patterns in data.
- S.IA.05.13** Communicate and defend findings of observations and investigations using evidence.
- S.RS.05.17** Describe the effect humans and other organisms have on the balance in the natural world.
- L.OL.05.41** Identify the general purpose of selected animal systems (digestive, circulatory, respiratory, skeletal, muscular, nervous, excretory, and reproductive).
- L.OL.05.42** Explain how animal systems (digestive, circulatory, respiratory, skeletal, muscular, nervous, excretory, and reproductive) work together to perform selected activities.
- L.HE.05.11** Explain that the traits of an individual are influenced by both the environment and the genetics of the individual.
- L.EV.05.11** Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them to survive in their environment.
- L.EV.05.12** Describe the physical characteristics (traits) of organisms that help them survive in their environment.
- L.EV.05.21** Relate degree of similarity in anatomical features to the classification of contemporary organisms.

Great Lakes Adventure

- S.IP.E.1** Inquiry involves generating questions, conducting investigations, and developing solutions to problems through reasoning and observation.
- S.IA.E.1** Inquiry includes an analysis and presentation of findings that lead to future questions, research, and investigations.
- S.RS.E.1** Reflecting on knowledge is the application of scientific knowledge to new and different situations. Reflecting on knowledge requires careful analysis of evidence that guides decision making and the application of science throughout history and within society.
- L.OL.M.4** Animal Systems—Multicellular organisms may have specialized systems that perform functions which serve the needs of the organism.
- L.EV.M.1** Species Adaptation and Survival—Species with certain traits are more likely than others to survive and have offspring in particular environments. When an environment changes, the advantage or disadvantage of the species' characteristics can change. Extinction of a species occurs when the environment changes and the characteristics of a species are insufficient to allow survival.
- L.EV.M.2** Relationships among Organisms—Similarities among organisms are found in anatomical features, which can be used to infer the degree of relatedness among organisms. In classifying organisms, biologists consider details of internal and external structures to be more important than behavior or general appearance.
- LS1.C:** Organization for Matter and Energy Flow in Organisms—Food provides animals with the materials they need for body repair and growth and the energy they need to maintain body warmth and for motion.
- LS2.A:** Interdependent Relationships in Ecosystems—The food of almost any kind of animal can be traced back to plants. Organisms are related to food webs in which some animals eat plants for food and other animals eat the animals that eat plants. Some organisms, such as fungi and bacteria, break down dead organisms (both plants or plant parts and animals) and therefore operate as “decomposers.” Decomposition eventually restores (recycles) some materials back to the soil. Organisms can survive only in environments in which their particular needs are met. A healthy ecosystem is one in which

multiple species of different types are each able to meet their needs in a relatively stable web of life. Newly introduced species can damage the balance of an ecosystem.

- **5-LS2-1** Develop a model to describe the movement of matter among plants, animals, decomposers, and the environment.

ESS3.C: Human Impacts on Earth Systems: Human activities in agriculture, industry, and everyday life have had major effects on the land, vegetation, streams, ocean, air and even outer space. But individuals and communities are doing things to help protect Earth’s resources and environments.

- **5-ESS3-1** Obtain and combine information about ways individual communities use science ideas to protect the Earth’s resources and environment.
- **5-ESS3-1** Science findings are limited to questions that can be answered with empirical evidence

PS3.D: Energy in Chemical Processes and Everyday Life—The energy released (from) food was once energy from the sun that was captured by plants in the chemical process that forms plant matter (from air and water).

W.5.8 Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.

MP.2 Reason abstractly and quantitatively.

Great Lakes Food Web

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Invasive Species Musical Chairs

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Michigan through the Ages

5 – U1.2.2 Use case studies of individual explorers and stories of life in Europe to compare the goals, obstacles, motivations, and consequences for European exploration and colonization of the Americas (e.g., economic, political, cultural, and religious

5 – U1.4.2 Use primary and secondary sources (e.g., letters, diaries, maps, documents, narratives, pictures, graphic data) to compare Europeans and American Indians who converged in the western hemisphere after 1492 with respect to governmental structure, and views on property ownership and land use.

5 – U1.4.3 Explain the impact of European contact on American Indian cultures by comparing the different approaches used by the British and French in their interactions with American Indians.

5 – U1.4.4 Describe the Columbian Exchange and its impact on Europeans, American Indians, and Africans.

Uncovering Michigan's Prehistoric Past

L.EV.05.11 Explain how behavioral characteristics (adaptation, instinct, learning, habit) of animals help them to survive in their environment.

L.EV.05.13 Describe how fossils provide evidence about how living things and environmental conditions have changed.

L.EV.05.14 Analyze the relationship of environmental change and catastrophic events (for example: volcanic eruption, floods, asteroid impacts, tsunami) to species extinction.

5—U1.1.3 Describe Eastern Woodland American Indian life with respect to governmental and family structures, trade and views on property ownership and land use.

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Uncovering Michigan's Prehistoric Past: Columbian Exchange Activity

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