

**LOUISIANA SCIENCE STANDARDS INTRODUCED OR REINFORCED  
DURING TREES AND TRAILS FIELD TRIP  
SCIENCE  
6<sup>th</sup> Grade**

**EARTH AND HUMAN ACTIVITY**

- **6-MS-ESS3-4:** Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.  
**MS.ESS2E.a:** Living organisms interact with Earth materials resulting in changes of the Earth.  
**MS.ESS1B.a:** Responsible management of Louisiana's natural resources promotes economic growth, a healthy environment, and vibrant productive ecosystems.

**FROM MOLECULES TO ORGANISMS: STRUCTURES AND PROCESSES**

- **6-MS-LS1-1:** Conduct an investigation to provide evidence that living things are made of cells, either one or many different numbers and types.  
**MS.LS1A.a:** All living things are made up of cells, which are the smallest living unit. An organism may consist of one single cell (unicellular) or many different numbers and types of cells (multicellular).
- material(s) that enter and leave the cells in order to maintain homeostasis.

**ECOSYSTEMS: INTERACTIONS, ENERGY, AND DYNAMICS**

- **6-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.LS2A.a:** Organisms, and populations of organisms, are dependent on their environmental interactions both with other living things and with nonliving factors.  
**MS.LS2A.b:** In any ecosystem, organisms and populations with similar requirements for food, water, oxygen, or other resources may compete with each other for limited resources, access to which consequently constrains their growth and reproduction.

- 6-MS-LS2-2:** Construct an explanation that predicts patterns of interactions among organisms across multiple ecosystems.

**MS.LS2A.d:** Predatory interactions may reduce the number of organisms or eliminate whole populations of organisms. Mutually beneficial interactions, in contrast, may become so interdependent that each organism requires the other for survival. Although the species involved in these competitive, predatory, and mutually beneficial interactions vary across ecosystems, the patterns of interactions of organisms with their environments, both living and nonliving, are shared.
- 6-MS-LS2-3:** Develop a model to describe the cycling of matter and flow of energy among living and nonliving parts of an ecosystem.

**MS.LS2B.a:** Food webs are models that demonstrate how matter and energy is transferred between producers, consumers, and decomposers as the three groups interact within an ecosystem.

**MS.LS2B.b:** Transfers of matter into and out of the physical environment occur at every level.

**MS.LS2B.c:** Decomposers recycle nutrients from dead plant or animal matter back to the soil in terrestrial environments or to the water in aquatic environments.

**MS.LS2B.d:** The atoms that make up the organisms in an ecosystem are cycled repeatedly between the living and nonliving parts of the ecosystem. Geochemical cycles include carbon, nitrogen, and the water cycle.

## **ANCHOR PHENOMENA THAT CAN BE INTRODUCED IN THE CLASSROOM (PRE-TRIP OPTIONS)**

- Links to *Mr. Parr's Food Chain Song*: <https://www.youtube.com/watch?v=iWfEn8J5xKM>, and to *Mr. Parr's Decomposers Song*: <https://www.youtube.com/watch?v=WLk-9ib0OVA>. These are short videos with a great beat and relevant terminology.
- All detritivores are decomposers but not all decomposers are detritivores.
- Make a Venn Diagram of Food Chain and Food Web. Use sketch for students to copy.

4. Plants and animals are composed of cells and tissues.
5. Vascular plants have a circulatory system so do we.
6. Photosynthesis is a biochemical process. Link to a basic explanation of photosynthesis: [http://www.biology4kids.com/files/plants\\_photosynthesis.html](http://www.biology4kids.com/files/plants_photosynthesis.html)
7. Symbiotic relationships, good or bad?
8. Pack (Was?) f (y)14 ( si004 Tw170.2h [(phot)12 T)-5 (h)2 (iu4 ( s2 (ex)a)4 (y)Cands)4 (iF)5)

5. Earthworm Inquiry: Students will learn about the life cycle of earthworms. This website has great Citizen Science activities for earthworms and other organisms. Journey North: <http://www.learner.org/jnorth/tm/worm/Resources.html>