



Playcard Environmental Education Center Pre-visit Information Sheet
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Playcard Pre-visit Information Sheet Sixth Grade

6th Grade Science Standards:

Cells, Energy Transfer, and Water Cycles

Endothermic vs Ectothermic. Investigate thermal energy transfer for ectotherms such as conduction and radiation. Determine which surfaces maximize regulation of temperature. Basic cellular processes of plants and animals. Cell wall vs Cellular Membrane. Vascular tissue of plants. Photosynthesis. Flow of Energy: Water Cycle. (6 PS3-3, LS1-1, LS1-2, ESS1-4, ESS2-4)

PROGRAM DESCRIPTION:

Students will receive first-hand experiences exploring the plant and animal communities within a primary successional field, an old-growth forest, and a black-water beaver-pond swamp environment. Students will investigate which surfaces maximize thermal energy transfer for ectothermic organisms. The students, working in teams, will explore the environments of Playcard through the use of sampling equipment. They will collect and observe a variety of biotic and abiotic components of habitats including insects and their larva, vertebrate, invertebrate, and plant species. Students will examine lily pad stems for insight into plant's cellular processes and parts, such as vascular tissue, chlorophyll, and cell wall. The black-water beaver-pond swamp environment will serve as an example of the water cycle and the dependency of this ecosystem on the water cycle will be explored.

VOCABULARY: [Conduction](#) [Radiation](#) [ectotherm](#) [endotherm](#)
[Chlorophyll](#) [Unicellular](#) [multicellular](#) [Water Cycle](#)

Preparing for your Visit

1. Please encourage students to wear clothing appropriate for the weather conditions and be ready to explore nature with all their senses.
2. CHAPERONES: Students should have a 1 adult for every 5 students. This is not a requirement, but does add to the program significantly.
3. Please bring ONE 1 GALLON SIZED ZIPLOCK BAG PER STUDENT for collections.

Post Visit Activity

As an assessment, each grade level is encouraged to create a learning, "feedback" project. These projects may be any appropriate feedback method as prescribed by the teacher. Some examples are, letters of what the students learned with drawings and/or photographs of the experience, learning logs, journals, projects (i.e. a bug collection, leaf collection, copy of presentation, etc.)

Digital Post Visit: [Inaturalist](#) is an online resource used to classify animals and plants.