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# K-12 Partnership Lesson Plan

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# *Animal Motion*

## Overview

This lesson provides a link between the Living Organisms and Movement Battle Creek Math and Science kits. Students explore the different ways animals move and name body parts used for locomotion. They also explore plant movement (seed dispersal) and discuss the fact that plants need help moving (being pushed by wind or water) whereas animals can move themselves.

**Objectives**

At the conclusion of the lesson, students will be able to:

* Identify body parts commonly used for animal movement
* Recognize that plants move when they are seeds
* Discuss reasons why plants and animals might want to move

**Length of Lesson**

45 minutes

**Grade Levels**

Kindergarten – 2nd grade

**Standards covered (NGSS)**

Disciplinary Core Ideas:

* **K-PS2-1.** Plan and conduct an investigation to compare the effects of different strengths or different directions of pushes and pulls on the motion of an object.
* **K-LS1-1.** Use observations to describe patterns of what plants and animals (including humans) need to survive.
* **1-LS1-1.** Use materials to design a solution to a human problem by mimicking how plants and/or animals use their external parts to help them survive, grow, and meet their needs
* **2-LS2-2.** Develop a simple model that mimics the function of an animal in dispersing seeds or pollinating plants

Cross Cutting Concepts:

* Structure and function
* Patterns
* Cause and effect

Science and Engineering Practices

* Constructing explanations and designing solutions.
* Analyzing and interpreting data

***Previous Michigan Standards Met:***

* **S.IP.00.11**: Make purposeful observation of the natural world using the appropriate senses.
* **S.IA.00.12**: Share ideas about science through purposeful conversation.
* **S.IA.00.13**: Communicate and present findings of observations.
* **S.RS.00.11**: Demonstrate scientific concepts through various illustrations, performances, models, exhibits, and activities.
* **P.FM.00.31**: Demonstrate pushes and pulls.
* **P.FM.00.32**: Observe that objects initially at rest will move in the direction of the push or pull.
* **P.FM.00.33**: Observe how pushes and pulls can change the speed or direction of moving objects.
* **L.OL.00.11**: Identify that living things have basic needs.
* **L.OL.00.12**: Identify and compare living and nonliving things.

**Materials**

* Video of plants and animals moving
* Milkweed pods with seeds (can be harvested in fall and winter and stored dry in a paper bag)

**Background**

Animals can move themselves to find food, avoid predators, catch prey, or find acceptable habitat, but plants are reliant on other forces to move them. Plants disperse as seed in order to find suitable habitat. Wind dispersed seeds, such as milkweed, have special adaptations (“parachutes”) to help them take advantage of pushes from the wind.

### Activities of the session

1. Begin by brainstorming with the students about how you tell something is alive. They may say that only living things move, or that all living things move. Teachers should explain that plants are alive but that they can’t move on their own.
2. Watch video of plant and animal movement and have the students silently paying special attention to how animals and plants are moving, and what parts of their bodies they use to move.
3. Have a student volunteer to come to the front of the class, whisper in the teacher’s ear an animal they remember from the video, then act out that animal to the class. Other students can guess the animal by noticing what body parts are used for movement. Several other students can do the same. Try to get a diversity of animals acted out (birds using wings, mammals using legs, whales/fish using fins and tail).
4. Ask the students why animals might want to move.
5. Then ask the students whether they saw any plants moving in the video. They may have seen wind blowing trees or grass. Unless there was a focus on plants in the video, they probably will not have seen seeds dispersing.
6. Show the class a milkweed pod and ask if anyone knows what it is. It holds seeds (baby plants). They should already be familiar with the fact that seeds are alive and that they grow into plants.
7. Ask for volunteers to blow the seeds to make them move. The rest of the class can catch the seeds and put them in their pocket.
8. Brainstorm with the class about what made the plant seeds move (wind pushing).
9. Brainstorm about why plants might want to move. Why not just land right below the mother plant and grow there? This will be difficult—teachers can help students along by asking whether all plants like to live in the same place, whether the plant might grow better in a new location.

### If time allows, students can draw their favorite animal or plant moving.

**Resources**

Videos of animals moving are abundant online or in PBS specials.