

Kindergarten

Amplify Science unit name and summary

NGSS performance expectations addressed

Pushes and Pulls

Designing a Pinball Machine

Students play the roles of pinball machine engineers as they explore the effects of pushes and pulls on the motion of an object. They conduct tests in their own prototypes (models) of a pinball machine, contributing to the design of a class pinball machine.

K-PS2-1: Motion and Stability: Forces and Interactions
K-PS2-2: Motion and Stability: Forces and Interactions
K-2-ETS1-1: Engineering and Design
K-2-ETS1-2: Engineering and Design
K-2-ETS1-3: Engineering and Design

Sunlight and Weather

Solving Playground Problems

In their roles as weather scientists, students look into why one fictional schoolyard is too cold in the morning, while another, which is nearby, is too hot in the afternoon. They use physical models and firsthand investigation to figure out the impact of sunlight on Earth's surface.

K-PS3-1: Energy
K-PS3-2: Energy
K-ESS2-1: Earth's Systems
K-ESS3-2: Earth and Human Activity
K-2-ETS1-1: Engineering and Design
K-2-ETS1-2: Engineering and Design

Needs of Plants and Animals

Milkweed and Monarchs

Students take on the roles of scientists in order to figure out why there are no monarch caterpillars in the garden since the vegetables were planted. In so doing, they investigate how plants and animals get what they need to live and grow, and make a new plan for the community garden that provides for the needs of the monarch caterpillars in addition to vegetables for humans.

K-LS1-1: From Molecules to Organisms: Structures and Processes
K-ESS2-2: Earth's Systems
K-ESS3-1: Earth and Human Activity
K-ESS3-3: Earth and Human Activity
K-2-ETS1-1: Engineering and Design
K-2-ETS1-2: Engineering and Design