Grade 1 - Balance & Motion (Blue)

Overview

This FOSS module provides students with new experiences to:

- develop a growing curiosity and interest in the motion of objects
- investigate materials constructively during free exploration and in a guided discovery mode
- solve problems through trial and error
- develop persistence in tackling a problem
- explore concepts of balance, counterweight, and stability
- observe systems that are unstable and modify them to reach equilibrium
- discover different ways to produce rotational motion
- construct and observe toys that spin
- explore and describe some of the variables that influence the spinning of objects
- observe and compare rolling systems with different-sized wheels
- explore and describe the motion of rolling spheres
- acquire the vocabulary associated with balance and motion

We live in a world where everything seems to be in motion. Some things move from one place to another. Others just go round and round, moving with rotational motion. Still others remained balanced on a thin line between rest and motion. The Balance and Motion Kit includes three investigations for students to explore the phenomena of balance and motion.

The first investigation, “Balance”, provides opportunities for students to discover ways to balance two-dimensional shapes. They discover how to use counterweights to balance a pencil on its point, and they apply their understanding of balance to making mobiles.

Then, in the second investigation, “Spinners”, students create tops to learn about rotational motion. They explore variables that influence the spinning of the tops, and move on to investigate different spinning motions of twirlers and zoomers.

Finally, students investigate rolling objects through wheel-and-axle systems made from wheels and cups. They observe linear motion, compare objects and systems that roll, and communicate their notions of rolling motion from their experiences.

Assessments

FOSS assessment is organized into three categories:

- **Content knowledge**: the facts and scientific concepts of the module
- **Conducting Investigations**: the skills needed for successful inquiry
- **Building Explanations**: the communication of ideas and evidence to support student learning

*Formative and summative* assessment strategies help the teacher understand what the students have learned and can do. Throughout the investigations, teachers use formative assessment strategies to inform their instruction, and the end-of-module and portfolio summative assessments provide evaluate information.

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