

MAINE SCIENCE AND ENGINEERING STANDARDS

K-PS2 Motion and Stability: Forces and Interactions

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.

Further explanation: Examples of pushes or pulls could include a string attached to an object being pulled, a person pushing an object, a person stopping a rolling ball, and two objects colliding and pushing on each other.

Planning and Carrying out Investigations, Forces and Motion, Types of Interactions, Relationship between Energy and Forces, Cause and Effect

K-PS2-2 Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.

Further explanation: Examples of problems requiring a solution could include having a marble or other object move a certain distance, follow a particular path, and knock down other objects. Examples of solutions could include tools such as a ramp to increase the speed of the object and a structure that would cause an object such as a marble or ball to turn.

Analyzing and Interpreting Data, Forces and Motion, Defining Engineering Problems, Cause and Effect