

Brief Lesson Overview For Teachers

A. NGSS Performance Expectation

[HS PS2-1: Motion and Stability, Forces and Interactions](#)

Analyze data to support the claim that Newton's second law of motion describes the mathematical relationship among the net force on a macroscopic object, its mass, and its acceleration.

B. Lesson Objectives

1. Ss will apply their understanding of Newton's Laws to predict the outcome of a demonstration.
2. Ss will develop a model to explain the cause and effect of two strings being pulled with unequal forces acting upon 2 identical masses.
3. Ss will plan and conduct an investigation to find evidence to validate their claim.

D. Activity Sequence (based on a 60 min period)

- Introduction (3:00 min)
- Play Segment 1 (2:35-reg. speed)
- Activity 1 (8:00 min)
- Play Segment 2 (2:40)
- Activity 2 (8:00 min)
- Play Segment 3 (3:00)
- Activity 3 (20:00 min)
- Play Segment 4 (2:20)
- Assessments/Challenge (8:00 min; HW)
- Revisit balloon scenario from start of lesson (2:30 min)