

Backward Design

Stage 1: Desired Results

Content Standard: Grade 5 Standard 11 – Motion

Conceptual Strand 11 – Objects move in ways that can be observed, described, predicted, and measured.

Essential Questions – What causes objects to move differently under different circumstances?

Understandings – **The student will design an investigation, collect data, and draw conclusions about the relationship among mass, force, and distance traveled.**

1. The student will predict how the amount of mass affects the distance traveled given the same amount of applied force.

Mass, Force, Distance Traveled Partner Activity; A Day at the Races Activity Lab; Forces in Action Promethean Flipchart

2. The student will prepare statements about the relationship among mass, applied force, and distance traveled. **Motion Promethean Flipchart; Motion Worksheet; Activity and Motion Activity Lab and Worksheet**

3. The student will design and conduct experiments using a simple experimental design to demonstrate the relationship among mass, force, and distance traveled. **Cotton Ball Catapult; Force Fun Activities; A Day at the Races Activity Lab; Mass Force Distance Traveled Partner Activity**

Stage 2: Assessment Evidence

Definition Matching Worksheet

Science journal

Motion Worksheet

Stage 3: Learning Plan and Activities

Textbook – Houghton Mifflin Harcourt Tennessee Science Chapter 10 Lesson 1 p.348-361 Forces, Motion, and Work

The students will perform the activities and experiments listed above and record all data in their Science journals.

The student will use the Motion Worksheet to show their understanding of the Laws of Motion. The two Promethean Flipchart give definitions and help introduce the learning.