



## Train to Win: Push Car Derby Workshop

Grades K - 2

### Subject Areas Covered:

Physical Science, Reading Standards & Literature, Speaking & Listening, Measurement & Data.

### Workshop Description:

Student will build a car with a removable brake and use a spring launcher to explore push and pull forces, and the effects of friction. Then explore and explain how force and friction can change the speed of an object and affect how far it'll go in a push car race.

### Education Standards:

#### **NGSS.K-PS2-1, K-PS2.2 (Kindergarten)**

**Next Generation Science Standards – Physical Science.** Students 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. 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.

#### **CCSS.ELA-LITERACY.RL.K.10 (Kindergarten)**

**Common Core – Reading Standards for Literature and Informational Text.** Students will engage in group reading activities with purpose and understanding.

#### **CCSS.ELA-LITERACY.SL.K.2 (Kindergarten)**

**Common Core - Speaking and Listening.** Students confirm understanding of a text read aloud or information presented orally or through other media by asking and answering questions about key details and requesting clarification if something is not understood.

#### **CCSS.ELA-LITERACY.SL.1.2 (Grade 1)**

**Common Core – Speaking and Listening.** Students ask and answer questions about key details in a text read aloud or information presented orally or through other media.

#### **CCSS.ELA-LITERACY.SL.2.1, 2.1c, 2.2 (Grade 2)**

**Common Core – Speaking and Listening.** Students participate in collaborative conversations with diverse partners about grade 2 topics and texts with peers and adults in small and larger groups. Ask for clarification and further explanation as needed about the topics and texts under discussion. Recount or describe key ideas or details from a text read aloud or information presented orally or through other media.

#### **CCSS.MATH.CONTENT.2.MD.A, A.1, MD.D, MD.D.9 (Grade 2)**

**Common Core – Measurement and Data.** Students measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

