Unit 4 Hot Wheels

Content Area: **Technology**
Course(s):
Time Period: **January**
Length: **4 Days**
Status: **Published**

Unit Overview

Students will use the Hot Wheels Speedometry classroom set to perform several experiments.

1. Design a track that will allow the car to perform a loop.
    - Students will need to decide on launch height, track length, angle, and other variables in building their track.
2. Use repeated measurements to determine the "best" track car.
    - "Best" as measured by distance travelled after leaving the ramp.
    - Students will collect and graph multiple measurements in order to make a determination.
3. As a group, build the longest and highest ramp that will still allow the car to travel the entire path of the track.
    - Students will collaborate to create the best method of supporting the ramp along its length.

Standards

CS.K-2.8.1.2.CS.1	Select and operate computing devices that perform a variety of tasks accurately and quickly based on user needs and preferences.
CS.K-2.8.1.2.CS.2	Explain the functions of common software and hardware components of computing systems.
CS.K-2.8.1.2.CS.3	Describe basic hardware and software problems using accurate terminology.
CS.K-2.8.1.2.DA.3	Identify and describe patterns in data visualizations.
CS.K-2.8.1.2.DA.4	Make predictions based on data using charts or graphs.
CS.K-2.8.2.2.ED.1	Communicate the function of a product or device.
CS.K-2.8.2.2.ED.4	Identify constraints and their role in the engineering design process.

Materials

- Hot Wheel Kits

Assessment

Formative Assessment

- Teacher Observation
- Checks for Understanding

- Exit Tickets

Summative Assessment

- Performance Tasks & Projects

Accommodations & Modifications

Special Education

- Follow IEP Plan which may contain some of the following examples…
- In class/pull out support with special ed teacher or assistant
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

504

- In class/pull out support with special ed teacher or assistant
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

ELL

- Translation device/dictionary
- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

At-risk of Failure

- Preferred seating
- Directions repeated/clarified
- Extended time for completing tasks
- Vocabulary support
- Limit number of tasks

Gifted & Talented

- Independent projects
- Online games
- Extension activities

Interdisciplinary Connections

SCI.2-PS1-3	Make observations to construct an evidence-based account of how an object made of a small set of pieces can be disassembled and made into a new object. Constructing Explanations and Designing Solutions Energy and Matter

Career Readiness, Life Literacies & Key Skills

TECH.9.4.2.CI.1	Demonstrate openness to new ideas and perspectives (e.g., 1.1.2.CR1a, 2.1.2.EH.1, 6.1.2.CivicsCM.2).
TECH.9.4.2.CI.2	Demonstrate originality and inventiveness in work (e.g., 1.3A.2CR1a).
TECH.9.4.2.TL.1	Identify the basic features of a digital tool and explain the purpose of the tool (e.g., 8.2.2.ED.1).
TECH.9.4.2.TL.3	Enter information into a spreadsheet and sort the information.
TECH.9.4.2.TL.6	Illustrate and communicate ideas and stories using multiple digital tools (e.g., SL.2.5.).
TECH.9.4.2.IML.4	Compare and contrast the way information is shared in a variety of contexts (e.g., social, academic, athletic) (e.g., 2.2.2.MSC.5, RL.2.9).