

Exploring Acceleration: *A Dive into Newton's Second Law of Motion*

Engage: What makes the Hot Wheel cars travel such a great distance? (5 pts)

- List at least three factors that affect an objects speed: (Record in Know column)

K

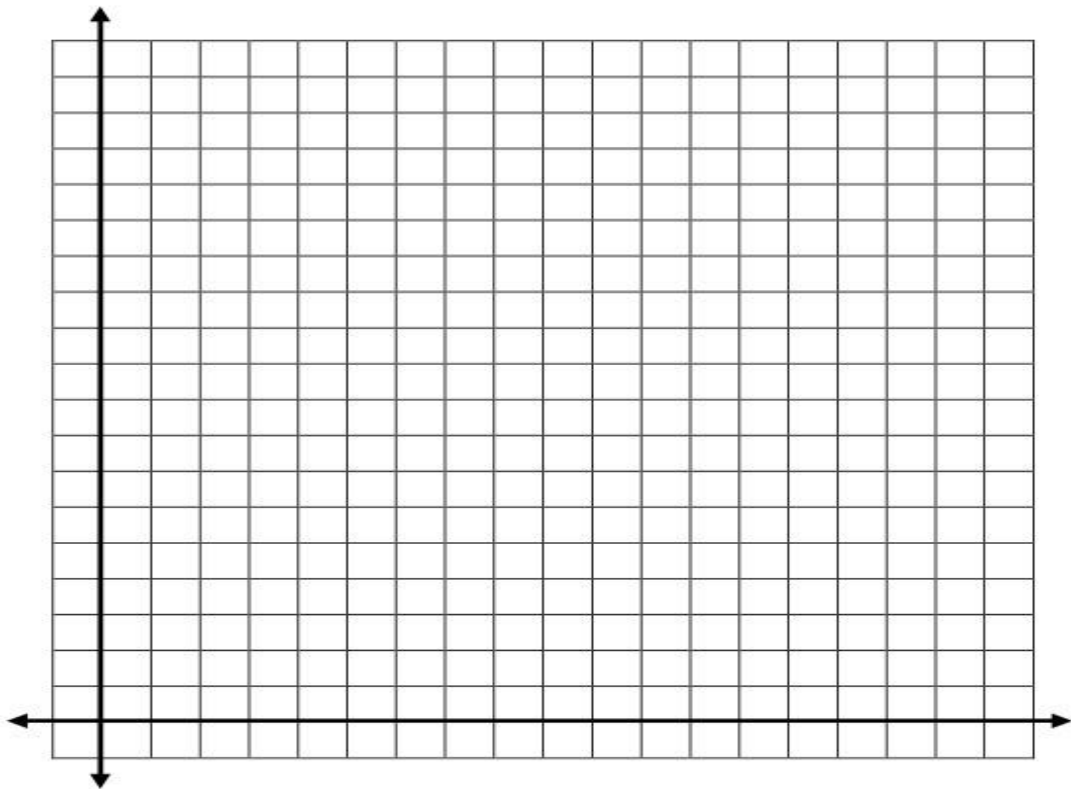
Explore: (20 pts)

Driving Question- "Can you construct two vehicles that will travel farther than your peers' vehicles?"

Group Vehicle 1	Group Vehicle 2
Materials:	Materials:



	Distance Traveled	
Model Vehicle 1		
Model Vehicle 2		
Class Vehicle 1		
Class Vehicle 2		
Class Vehicle 3		
Class Vehicle 4		
Class Vehicle 5		



Explain: (20 pts)

- What you have learned about force and motions based on your observations and evidence you collected using your vehicle models and the previous discussions? (Also record under the Learn and Evidence columns)

L	E

New Vocabulary Terms:

1. _____
Definition:

2. _____
Definition:

3. _____
Definition:



New Group Vehicle Design

Force:

Materials:

Why will this vehicle be more successful in traveling the furthest distance?

Elaborate: Answer and Explain- What makes the Hot Wheel cars travel such a great distance? (20 pts)

- What are other real-life examples of Newton's Second Law of Motion?

New Student-Generated Driving Question: (Also record under the Wonder column)

W



Procedure:

Observations/Evidence:

Conclusions: Articulate and explain what you have learned about Newton's Second Law based on the observations and evidence you collected using your car models and new data.

Evaluate: Consider you were in charge of designing a new *Hot Wheels* toy that will launch vehicles, the farthest and fastest in order to beat a world record. Based on the information you have learned, how would you design the toy to achieve this goal? (5pts)

