

Fold-N-Roll

Grades 3+ | Students Served: 32

ELEMENTARY



Essential Questions

How does the placement of mass affect how far a Fold-N-Roll car can travel?

Why are there differences in the distances traveled by the same car?

How does the angle of the roll ramp affect the distance traveled by the vehicle?

Career Connections:

- Automotive Engineer
- Graphic Artist
- Race Car Driver
- Mechanic

STEM Connections

Science

- Gravity
- Modeling
- Newton's laws
- Friction

Technology

- Design process
- Testing
- Problem solving

Engineering

- Engineering design
- Dynamics

Math

- Patterns
- Geometric solids
- Spatial sense



Sample Activity

Don't Cross the Line!

Challenge

After selecting and constructing the car of choice, make modifications to the car so it will stop closest to a specified point.

- Set up the roll ramp and mark a line with tape two to four feet from the base of the ramp.
- Roll the car down the ramp to see how far over the line it travels.
- Make modifications to the car to make it get as close to the line as possible without crossing it.

Discussion

How did your modifications affect the distance the car traveled? What other modifications could have been made?