

Name: _____

Date: _____

Period: _____

NEWTON SCOOTERS

For every action there is an equal and opposite reaction!

Introduction:

In this project, you will use Newton's 3 laws of motion to design a vehicle. This vehicle must travel forward 1.5 meters by pushing backward on the floor, the air, or some other object. The vehicle must be able to carry a passenger.

On the due date, you will demonstrate your vehicle.

Project Rules:

- You must have teacher approval of your plans for construction before you begin
- You must use only Newton's 3rd law to make the vehicle move
- Your vehicle must travel forward at least 1.5 meters and stay within a width of 1 meter
- You may not interfere with the vehicle's movement
- You cannot use any form of electricity or pull of gravity nor can you push the vehicle
- The following items are prohibited:
 - Remote controls vehicles
 - Store-bought projects
 - Latex Balloons
 - Batteries

Methods to Consider:

- Spring-loaded design – Spring pushes against a surface and sends the vehicle forward
- Rubber band – release of tension sends the vehicle forward
- Winding wheels – Unwinding causes forward motion of wheels
- Mousetrap- force from the spring sends car forward
- Clothespin springs
- propellers
- **There are others. You come up with a new method!**

Suggested Material:

You can use recycled materials from home for your project:

- Toys
- Building blocks
- Non-latex Balloons
- Springs
- Straws
- Bamboo skewers
- Fishing line
- Paper towel rolls
- Mouse traps
- Propellers
- Etc! **Use your imagination!**

- **Do Not** make your car completely from a kit like legos or knex. They will not be accepted.

Be creative and have fun! You don't have to limit yourself to vehicles with wheels. Think of other ways to make your vehicle move 1.5 meters while staying within a width of 1 meter.