

Balloon Car Races

Objectives: (Major Grade - 60%)

- to create a balloon powered race car for maximum speed and distance
- to incorporate Newton's Laws of Motion
- to learn how to use the formula $\text{Speed} = \text{Distance} / \text{Time}$

Materials: (Use materials you can find at home)

- 9 inch balloon is standard
- pen barrel or straw
- various materials to construct the racers
- No toy cars
- Teacher will provide 1 balloon

Rules:

- The car must be powered by no more than 2 balloons.
- You can build the car out of anything.
- It must have at least three wheels. Wheels are defined as anything that is round and goes around.
- The wheels **can not** be wheels from a toy car. They must be made out of something that was not originally meant to be used as wheels.
- The car may not leave the ground.
- The car must be capable of traveling at least 5 meters.
- You can not use a toy car.

Procedure:

1. You will bring assemble your car **at home**.
2. On race day we will set up a track in our hallway.
3. You will race in pairs against other classmates.
4. These awards will be given in three categories.

- Best Looking Car
- Fastest Car (in first 5 meters)
- Farthest Distance Traveled

Helpful Links:

<http://pbskids.org/zoom/freeloads/ballooncar.html>

http://www.kyrene.k12.az.us/schools/Pueblo/Tech/balloon_car.htm

http://www.alaska.faa.gov/flt_std/aved/teachers/Rcar.html

<http://library.thinkquest.org/50109/projects/bcars.html>

http://www.eecs.umich.edu/mathscience/funexperiments/agesubject/lessons/other/rocket_car.html

-----cut and return to Mrs. Schneider-----

Students Name: _____ (Print first and last name)

I am aware my child has to create a balloon car racer (major grade - 60%) at home and is due on _____.

Parent Signature: _____