



Snitch Launcher

Challenge: To construct a catapult using an assortment of spoons, popsicle sticks, rubber bands, tape and glue.

Goal: To teach kids about the effects of force on motion of a projectile, accuracy and optimum angles.

Discussion Points:

- What are catapults used for?
- How does force affect the speed or distance a projectile travels? (More force = greater speed and distance)
- At what angle will the projectile travel the farthest? (45 degree angle)
- If a projectile is launched at an angle greater than 45 degrees, what happens to the projectile? (travels higher, but a shorter distance)
- What is accuracy? Should the projectile land close or far from the target? (the closer to the target = more accurate)

Materials:

- Popsicle Sticks
- Plastic Spoons
- Rubber Bands
- Hot Glue
- Ping Pong balls

Steps:

- 1.) Show two videos
- 2.) Have kids grab popsicle sticks, rubber bands and 1 plastic spoon from the bins.
- 3.) Show the students the different models of the snitch launchers.
- 4.) Remind students the goal is to use their launcher to reach the target.
- 5.) Have the students test their launchers with snitches (ping pong balls) and/or cotton balls. First, they will aim for Harry's, Ron's, and Hermione's heads on the three large pictures. Then, they will aim to get the snitch or cotton ball through the Quidditch goals.
- 6.) Depending on the student's level of success, have them improve or redesign their launchers to be more accurate.