

## GROUP ACTIVITY

### ACTIVITY NAME: CATAPULT WITH MARSHMALLOW OR PING PONG BALLS

#### PURPOSE:

Students will work as a team to build the catapult. They will use catapult to apply learning of precision and accuracy, and critical thinking and concept of trial and error to improve test results.

#### TIME: 30 MINUTES

#### MATERIALS NEEDED (PER TEAM):

- Ping pong balls or marshmallows (5)
- Craft Sticks (6)
- Plastic Spoon (1)
- Rubber bands (3)
- Tape measure (1)
- Target (Printable red dot) (1)



## DIRECTIONS:

1. Take 5 sticks and stack them, securing one end with a rubber band. Wrap the rubber band around the sticks several times to make it secure.
2. Slide one stick between the bottom stick and the rest of the stack.
3. Secure the other end tightly with a rubber band.
4. Place the spoon on top, and attach the end of the spoon to the end of the single stick with a rubber band.
5. Pull the spoon down gently and place a ping pong ball or a marshmallow in the spoon. Let it go.
6. Do this five times, paying attention to how the catapult was launched and where the item landed.
7. Place the target on the floor on the floor where the items generally landed.
8. Load the spoon with the ping pong ball or marshmallow. Let it go.
9. Repeat this five times. Record your results using a tape measure, measuring from red dot to place where item landed.

## DISCUSS:

- What is your accuracy? How did you improve or change your accuracy? Can you hit the same target every time, even when you adjust the launcher, the distance from the target, or how far you pull the spoon back?
- What is your precision? How were you able - or unable - to be precise? When you launch the ball or marshmallow the same way, each time, do you get the same result?
- Were you accurate AND precise?

## ACTIVITY CREDITS:

Special thank you to Mahoning Valley Manufacturers Coalition (MVMC) for providing MakingOhio with this activity.



**MVMC**  
Mahoning Valley  
Manufacturers Coalition