

WATER BALLOON/ EGG DROP

SUMMARY OF ACTIVITY:

Activity Description: Participants will build structures to protect a water balloon from breaking when dropped from a certain height!

STEAM Skills: Engineering - Building, problem solving,

Physics - Gravity, force

Ideal Age Group: All ages

Length: 30 - 1 hour

MATERIALS AND SUPPLIES:

<ul style="list-style-type: none">• Egg or small water balloon	<ul style="list-style-type: none">• Aluminum Foil (8 ½ x 11)
<ul style="list-style-type: none">• Foam paper (8 ½ x 11)	<ul style="list-style-type: none">• Newspaper
<ul style="list-style-type: none">• Large popsicle sticks (5)	<ul style="list-style-type: none">• Cardboard (8 ½ x 11)
<ul style="list-style-type: none">• Egg cartons (individuals)	<ul style="list-style-type: none">• Plastic wrap
<ul style="list-style-type: none">• Straws (6)	<ul style="list-style-type: none">• Paper cup
<ul style="list-style-type: none">• Elastic bands	

General supplies needed: markers, scissors, tape

→ Other materials can also be an option for them to use

TALKING POINTS AND BACKGROUND:

- **The law of conservation of energy:** Energy can neither be created nor destroyed, only transferred. When something falls to the ground, some of its energy is transferred to the ground. A ball bounces less and less on the ground over time because the kinetic energy of the ball is diminishing!

PROCEDURE:

1. Have participants create a structure or protective “helmet” for the water balloon or egg to prevent it from breaking when it is dropped.
2. Try restricting the amount of supplies they are allowed to use to see how they can protect the balloon with the least amount of materials.
3. Take participants outside to test out their helmets! Drop the eggs from a certain height and see if they break. Can try finding higher heights to test the ones that survive.

TIPS AND TRICKS:

- There are egg drop competition videos on youtube where competitors try and achieve the farthest egg drop!