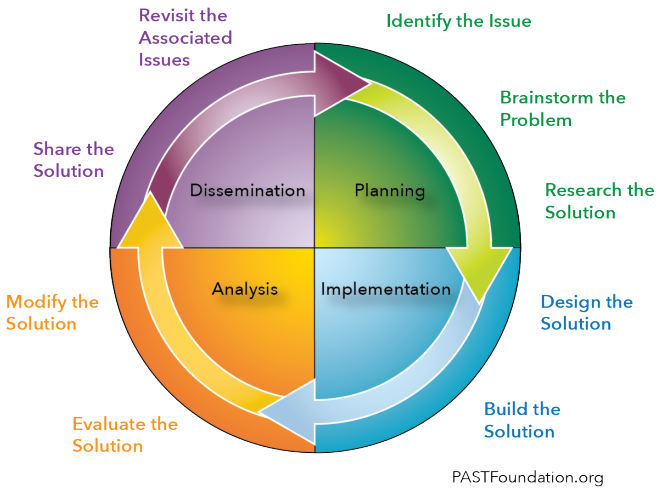
THE PAST FOUNDATION
access through innovation

Name:_____

Date:_____

Indoor Snowball Fight



Problem Scenario: Snowball fights are always fun, but sometimes it is too cold to play outside. You want to create a snowball launcher than you can use safety in the house, but you also need to find a way to create indoor snowballs to use with your launcher!

Challenge: Create indoor safe snowballs and a launcher to make them fly the longest distance

Materials:

Items to make a launcher:
- Plastic cups
- Scissors
- Rubber Bands
- Balloons
- String

Possible items to use for snowballs:
- Socks
- Balloons
- Styrofoam Balls
- Cotton Balls

Brainstorm: Work together to answer the following questions and make a prediction:

1. What will help make the snowball come out of a launcher?
2. What types of characteristics do you think a good indoor snowball needs to have?
3. Thinking about Newton's three laws of motion how will they apply to your launcher?

Prediction: Which indoor snowball do you think will fly the farthest? _____

Design

For launcher:

Take a plastic cup and cut the bottom off. Choose what you would like to use to launch your snowball (example: rubber bands taped to the bottom of the cup)

You will place the snowball in the cup to launch.

For snowballs:

Choose the item(s) you are using for your snowball, and place them in your cup making sure that they fit.

Build

From the designs above create your snowball launcher!

Remember that the snowball goes into the cup, and you will create a force from the bottom of the cup (example: pulling back on the rubber and letting go to hit the snowball)

Test:

Launch your snowballs! Measure how far each of your launches go! You can use a ruler to measure or measure using your feet, counting the number of steps!

Launch 1:

Launch 2:

Launch 3:

Launch 4:

Launch 5:

Modify: Here are a few modifications you can make!

Try different launching mechanisms (example: a balloon stretched around the bottom of the cup)

Come up with your own snowball!

Create a target and a point system for each snowball that hits the target.

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