

## 5 STEM ACTIVITIES TO GET YOU STARTED

### ULTRA VIOLET BRACELET

**TASK:** DESIGN A BRACELET THAT WILL LOOK GREAT WITH ANY OUTFIT

**MATERIALS NEEDED:**

10 UV Beads      2-5 Pipe Cleaners



**DIRECTIONS:**

1. Use one or more pipe cleaners to make the band of the bracelet. You can weave, braid, etc. together.
2. Thread at least 3 or more beads into the band.
3. Wrap bracelet design around wrist and twist the ends together.
4. Go outside and watch the magic!
5. Document what happens to the beads.
6. The darker the beads, the more sunscreen you will need to wear to protect your skin.

\*\* Remember to think about the Scientific Method or STEM Process with this activity. Where can the steps fit into this activity? Put this activity into the Integrated Curriculum Template. Make adjustments where needed.

### RACE CAR BRIDGES

**TASK:** BUILD A BRIDGE OUT OF NEWSPAPERS THAT WILL ALLOW A CARD TO RACE ACROSS.

**MATERIALS:**

Newspapers      Toy car      Ruler      Tape



**DIRECTIONS:**

1. Draw a bridge design on a separate sheet of paper or on the STEM Process worksheet.
2. Create your idea using only newspaper and tape.
3. Your bridge will need to hold the weight of the toy car.
4. You will need to have the toy car move across from one end to the other.
5. Build your bridge.
6. Place your toy car at one end of the bridge and give the car a little push.
7. Measure how far the toy car traveled.
8. Revise your design.
9. Measure again. Did the toy car make it all the way across?
10. Revise your design.

\*\* Remember to think about the Scientific Method or STEM Process with this activity. Where can the steps fit into this activity? Put this activity into the Integrated Curriculum Template. Make adjustments where needed.



## SUPERSONIC GLIDERS

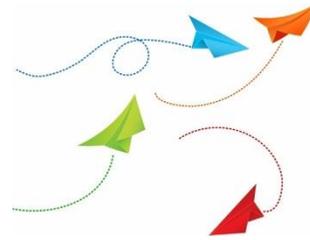
**TASK:** MAKE A PAPER AIRPLANE GLIDER TO FLY IT THE FASTEST AND/OR THE HIGHEST.

### MATERIALS:

8 x 10 sheet of paper      Paperclips      Ruler      Scissors

### DIRECTIONS:

1. Using one sheet of paper, fold/cut into a paper airplane glider.
2. Practice flying the glider. Try throwing it hard, easy, up, down, etc.
3. Observe and draw its flight pattern with every type of throw.
4. Place one or two paperclips in various spots of the glider.
5. Observe and draw its flight pattern.
6. Make revisions to your glider design to make it go the distance.
7. Test your final design.
8. Measure the distance.
9. Make revisions to your glider design to make it go high in the air.
10. Test your final design.
11. Create a way to measure its distance.



\*\* Remember to think about the Scientific Method or STEM Process with this activity. Where can the steps fit into this activity? Put this activity into the Integrated Curriculum Template. Make adjustments where needed.

## CRAZY BALL BOUNCE

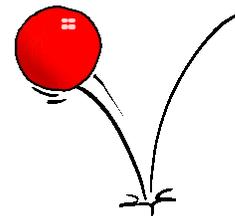
**TASK:** DESIGN A WAY TO LAND THE BALL ONTO A LANDING PAD WITHOUT BOUNCING OUT

### MATERIALS:

Various types of balls      Hula Hoops      Various types of paper      Rubber bands      Toilet paper rolls  
String      Ruler      any other items such as cans, cups, etc.

### DIRECTIONS:

1. Use any materials available to create a way that will allow a ball of choice to drop into the hula hoop without bouncing out.
2. Draw your idea and then build it.
3. Place the hula hoop on the floor or table.
4. Place your ball dropping contraption near or in the hula hoop.
5. Measure the distance the ball will drop and record the results.
6. Revise/improve your design until your ball remains in the hoop.



\*\* Remember to think about the Scientific Method or STEM Process with this activity. Where can the steps fit into this activity? Put this activity into the Integrated Curriculum Template. Make adjustments where needed.



# MARSHMALLOW CATAPULT

**TASKS: BUILD A CATAPULT THAT CAN LAUNCH A MARSHMALLOW TO GO FAR.  
BUILD A CATAPULT THAT CAN LAUNCH A MARSHMALLOW TO GO HIGH.**

## **MATERIALS:**

7 Craft Sticks

3 Rubber bands

3 small Marshmallows

Ruler

## **DIRECTIONS:**

1. Put together the catapult as shown in the picture.
2. The base consists of 5 sticks and 2 rubber bands wrapped around the sticks at both ends.
3. The arms consist of 2 sticks and 1 rubber band wrapped at one end
4. Slide the bottom arm in between the fourth and fifth stick of the base.
5. The top arm will rest on the top of the base.
6. Slide the base up and down the arm to figure out how the marshmallow will eject.
7. Place the marshmallow at the end of the arm resting on the top of the base.
8. Press down on the top arm and release it to eject the marshmallow.
9. Use a ruler to measure the marshmallow's distance/height.
10. Revise/improve design to achieve the task's goal.
11. Research other designs.
12. Design one of your own.
13. Make a comparison of both designs.



**\*\* Remember to think about the Scientific Method or STEM Process with this activity. Where can the steps fit into this activity? Put this activity into the Integrated Curriculum Template. Make adjustments where needed.**

