

# Spark Wonder Activities

## Ages 3-5



### Activity 1: Colorful Rain!

#### Supplies:

- Jar or cup
- Shaving cream (any brand)
- Food coloring or liquid watercolors
- Glitter (optional)
- Dropper or Pipette
- Flashlight (LED, if possible)
- Water

#### Procedure:

1. Place your jar or cup in front of you. You will need to fill it about  $\frac{3}{4}$  of the way with water.
2. Add 2-3 inches of shaving cream to the cup, it should float on top of the water.
3. Take your food coloring or liquid watercolor and place a couple of drops of different colors. You can also mix glitter into the watercolor and add it to the top of the shaving cream.
4. Try different color combinations and see what happens. In a few moments you will notice the liquid color you added to the shaving cream is making the shaving cream heavy. Similar to clouds that have increased in size and weight because of vapor in the form of evaporation.
5. Keep adding droplets until you see the colors run through the shaving cream into the water. You have now produced rainbow rain in your kitchen!

### Activity 2: Recycled Percussion Band

#### Supplies:

- Metal jar lids (assortment of sizes)
- Rubber Balloons (10-12 inch, 1 per lid)
- Pencil with eraser top (2)

#### Procedure:

1. Place the assortment of lids in front of you. For every lid you will need 1 balloon.
2. Use your scissors to cut the neck of the balloon, where you would blow into it.
3. Stretch the opening of the balloon over one of the lids and make sure it fits tightly. 4. The top of the lid should be facing the table once the balloon is stretched over the opening. Repeat steps 3-4 for all the remaining lids.
5. Arrange your lids from largest to smallest. Use your 2 pencils as drumsticks to strike each balloon covered lid to see the pitch it produces. Remember different lids will make a variety of sounds!

### Activity 3: Recycled Jar Xylophone

#### Supplies:

- Assortment glass jars
- Teaspoons or tablespoons (1-2)
- Food coloring (Optional)
- Water

#### Procedure:

1. Set out all your glass jars on a table. Fill each glass with water, each glass should have a bit more water in it as you go down the row of glasses. This will create a scale and when the jar is struck you will hear a different pitch.
2. Using your spoons, gently tap each jar, what do you notice? Is the pitch high or low?
3. Tap the jars at different points to see if the sound changes. Tap on the neck of the jar, the middle, and the bottom. Do you notice anything interesting?
4. Now you have enough sounds to produce a song! Remember you can add or remove water as you go to change pitch.

# Spark Wonder Activities

## Ages 6+



### Activity 4: The Cade Confetti Cannon

#### Supplies:

- Paper cup
- Balloon
- Confetti
- Cotton ball
- Scissors
- Tape

#### Procedure:

1. Place your balloon in front of you, using the scissors cut off the top of the balloon. 2. Now using your scissors cut a hole about the size of a quarter coin on the bottom of your cup.
3. Stretch your balloon over the drinking area of the paper cup. The neck of the balloon should be hanging outside of the cup. The balloon should fit snug around the rim of the cup.
4. Gently pull on the balloon while holding the cup still. Once you stretch the balloon about 5-6 inches, let the balloon snap back. You should feel a rush of air come out the hole at the bottom of the cup.
5. Now place a small amount of confetti on the table. Use your cup as a cannon to knock some of the confetti off the table!

#### What's this all about?

So, where did you get the energy to put your cannon and snap the balloon? Well, what did you eat today? Everything you put into your body was converted into fuel for you to burn when you do work. Remember energy is the ability to do work! Whether you ate a bowl of fruit loops or cold pizza for breakfast you gave your body fuel. That fuel helped you move and transfer your mechanical energy to the end of the balloon and the snap caused the air molecules to bump into each other.

### Activity 5: Recycled Light Show

#### Supplies:

- Bright flashlight (LED, if possible)
- Scissors
- Glue stick
- Cellophane (multiple colors, if possible) or clear plastic (recyclables like deli containers or water bottles)

#### Procedure:

1. Ask for permission from an adult to search the recycle bin for clear plastic containers (deli containers, water bottles, clear plastic lids, etc.).
2. If you are using colorful cellophane, cut the cellophane into pieces about the size of a penny. If you don't have cellophane, color pieces of plastic containers with markers. 3. Take the cellophane or plastic pieces and glue them to the surface of another see through recycled container.
4. Now grab your bright LED flashlight, turn off the lights in the room, and shine your light through the cellophane or recycled container onto a wall. Take a step back to see how far you can stretch the light.
5. Make more colorful lens with markers and recycled plastic to explore what happens if you put two lenses on top of one another. Invite friends and family to your light show!