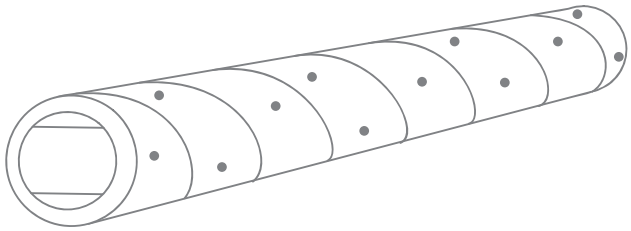
The Pitter Patter of Rain (Sticks)

A rainstick is a type of musical instrument that mimics the sound of rain. Rainsticks traditionally were made of dried plants that are indigenous to dry regions such as cactus, reeds and bamboo. If cactus was used, the thorns were pulled off and pushed back through the flesh so the thorns were on the inside. The dried cactus would be filled with small pebbles and the ends sealed with pieces of wood. This rainstick uses more common materials.

A rainstick lets you tell a story about weather through music. Can you incorporate a rainstick or other instruments that mimic storm sounds to tell a story about a weather event you experienced?



WHAT YOU NEED:

- Cardboard tube from paper towels or gift wrap
- Rice (1/2 cup)
- Beans (1/4 cup)
- Duct tape
- T-pins or finishing nails (about 20)
- Foil
- Measuring cups
- Markers, glue, tissue paper (optional)

WHAT TO DO:

1. Cover one end of the cardboard tube with a few layers of foil and secure it in place with tape.
2. Pour about 1/4 cup beans into the tube.
3. Pour about 1/2 cup of rice into the tube.
4. Cover the other end of the tube with foil and secure it with tape, sealing the beans and rice inside.
5. Push t-pins or finishing nails through the tube in a spiral pattern about an inch apart. Follow the seam of the tube as a guide. You should have 15 to 20 pins inserted into the tube.
6. Place tape or foil around the rainstick to make sure the t-pins don't fall out. Decorate the tube with markers or, if you used foil, glue tissue paper to the foil. Use your imagination to complete your rainstick!
7. Turn the tube upside down and listen to the sounds. Try turning the tube at different speeds to hear the difference in the sound it makes.

EXPERIMENT:

- Can you make different sounds by changing how you move the rainstick?
- What happens if you add more pins around the tube?
- Do materials other than rice and beans make the rainstick sound different?

WHAT'S THE SCIENCE?

As the rice and beans bounce off each pin on their way through the tube, a small sound is made. Just like one individual drop of rain may not be noticeable, each bean or single grain of rice doesn't make very much noise. But collectively, a lot of raindrops together is a storm, and a lot of rice and beans hitting the pins make a louder sound.

Using the rainstick to tell a story about the weather is an effective way to communicate. Brains are more likely to remember information when it is communicated through a story. When music and story are used to convey information, it can evoke emotions in the listener, and emotions create stronger memories than facts alone.

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