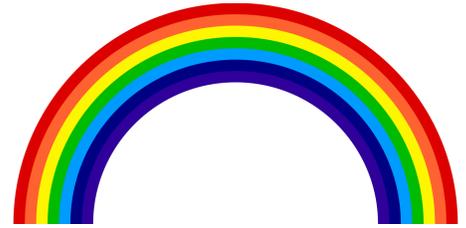


MARCH STEM ACTIVITY

Make a Rainbow

modified from buggyandbuddy.com

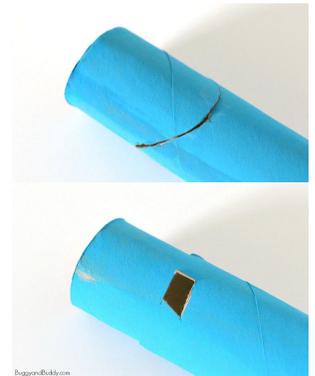


Materials Needed:

-  Empty paper towel or toilet paper roll
-  Blank or old CD
-  Small piece of cardstock or cardboard
-  Paint or markers (optional)
-  Scissors
-  Pencil
-  Tape

Instructions:

1. (Optional) Decorate your paper towel/toilet paper roll. If using paint, let it dry before moving on to step 2.
2. Loosely pinch the end of the roll, and cut a slit at a 45 deg angle, about 1.5 inches from the bottom of the roll. It should look like a frowny face.
3. Directly across from the slit, make a small, rectangular peephole.
4. Trace one end of your paper towel roll onto your small scrap of cardboard or cardstock. Cut out the circle.
5. Cut a straight, rectangular slit across the middle of the cardboard circle.
6. Tape to the top of your paper roll (opposite end from the frowny face slit)
7. Insert the CD into the 45 deg slit, with the shiny side facing up.
8. Take completed spectroscope outside. Point the top slit at the bright sky and look through the peephole. See the rainbow!



 Video tutorial: https://youtu.be/z-hi_nzHdEs

What is happening?!

Light from the Sun is white light, containing all the colors on the light spectrum. When that light is broken into individual wavelengths, it is called diffraction, and we see it as a rainbow. Red, the longest visible wavelength, is always the biggest arc. Violet, the shortest visible wavelength, is always seen as the smallest arc. When the sunlight hits the grooves in the CD, it is diffracted into a rainbow. It is the same effect as when sunlight travels through water droplets after a rainstorm.

Other resources

-  How rainbows form: <https://www.youtube.com/watch?v=xkDhQGxqwCM>
-  Cultural connection:

<https://us-moneyreserve.medium.com/pot-of-gold-at-the-end-of-the-rainbow-origin-u-s-money-reserve-b9446ad064be>



For more fun STEM activities, [visit www.doulassciencecenter.org](http://www.doulassciencecenter.org)