

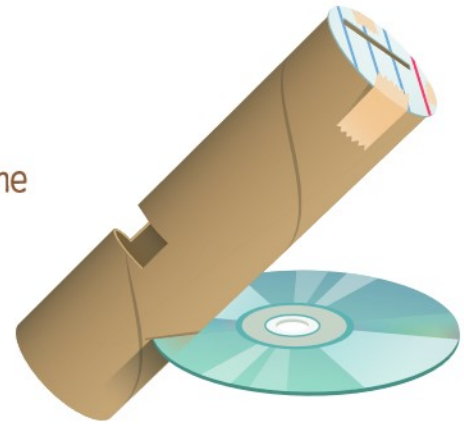


CONSTRUCT A SPECTROSCOPE!

Scientists use this tool to separate white light in to a spectrum, or rainbow, of colors. Make your own and start exploring the amazing properties of light!

WHAT YOU'LL NEED:

- Paper towel roll
- A CD - you can use a blank one or recycle an old one
- Pencil
- Ruler
- Index card
- Masking tape
- Scissors



HOW TO DO IT:

1. Take the ruler and measure about 2 to 3 inches up from one end of the paper towel roll. With the pencil, draw a small line to mark this measurement.
2. Using the mark as your guide, cut a thin slit at about a 45° angle, pointing down towards the bottom of the tube. (You may want an adult to help.)
3. Now, cut a small hole across from the slit. This will be your peephole into the spectrometer. Make it large enough to look in with your eye.
4. Trace one end of the paper towel roll on the index card. Cut this circle out.
5. Cut a rectangular slit in the center of the circle
6. Tape this circle to the top of the paper towel roll.
7. Insert the CD, shiny side up, into the 45° slit and ta-da! You have a spectrometer!
8. To use the spectrometer, point the slit on top towards a light source. Look through the peephole to see a spectrum of light! While you are exploring light on Earth, think about this: astronomers will use spectrometers to study light in space! Light can tell us things like the temperature of an object in space or even how fast it is moving! So cool!



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