

# Color vision at night

Try this fun activity to test your color vision at night!

## Materials:

- A piece of white paper
- A variety of colors of crayons, with the paper wrappers removed



## What to do:

1. When night falls, grab your crayons and paper and head outside to a safe area where there are no lights. You can also try this in a room with a window (so that natural light comes in) and the lights off.
2. Select a crayon in the darkness (remember, make sure the paper wrapper on the crayon has been removed). Without using a light, look at the crayon and try to figure out what color it is.
3. Make your best guess and write the name of the color of your crayon on the piece of paper. You can also draw a line, a scribble or another shape on your paper and remember in your mind the color of your crayon.
4. Now it's time to see if you guessed correctly! Head back to a place where there is light, or switch on the light in your room. Look at your paper. Did you guess the color of your crayon?

## Explanation:



If you had a hard time seeing the color of your crayon, there is a reason for that! In the daylight, our eyes detect a variety of colors. But at night, those colors fade to gray and black making it hard to tell one color from another. Why? It has to do with the way our eyes are built! In our eyes there are structures called cones and rods. Cones help us see colors and fine details, but need light to work. When the lights go down, our rods take over. Rods work

together to capture small amounts of light that help us to see in the dark, but they do not allow us to see colors or fine details. So, if you could not tell what color your crayon was, that's because your rods were working hard to help you see in the dark!

