

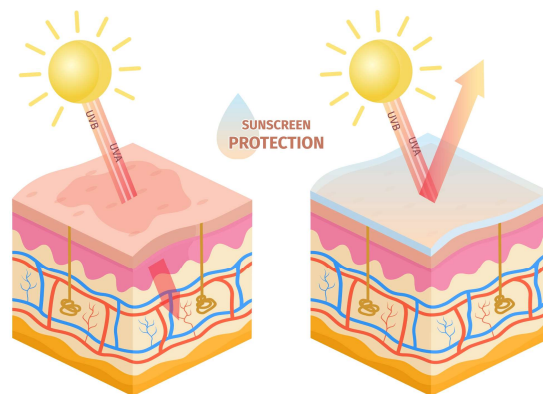
# Sunscreen Science with CEENTA At-Home Activity

Conduct a series of experiments to visualize the sun's ultraviolet rays and watch sunscreen work in real time!

## Materials:

- Assorted sunscreens (spray-on is easiest)
- UV beads (5-10 per strand to test)
- Wax paper or parchment paper
- Pipe cleaners or thick string

**Procedure:** \*Complete the prep steps indoors/in a shaded space to avoid activating the beads too early!



1. Dump some UV beads onto a sheet of wax/parchment paper, then divide them into different groups (one “control” group, plus one group for each type/brand of sunscreen you want to test).
2. Build your “control” strand by stringing a few (5-10) beads onto a pipe cleaner or string and tying a knot so that they do not fall off. Set this one aside.
3. Assemble a “test” strand by stringing a few beads onto a different pipe cleaner/string, then spraying (or rubbing) the beads with sunscreen. Make sure to get coverage on all sides of the beads!
  - a. Repeat this process with new strands of beads for as many different sunscreens as you want to test.
4. Once you have all your samples ready, head outside and bring the beads out into the sun and expose them to direct sunlight for ~5 minutes.
  - a. You should see the control group start to change colors! *This is because the color in the beads is activated by the energy contained in the UV rays from the sun.*
  - b. However, the beads with the sunscreen should be less bright or might even remain completely white! *This is because the sunscreen blocks the UV rays from reaching the beads and activating the color change.*

## Results:

Strand	Sunscreen Brand	Sunscreen SPF	Bead Brightness from 0 (white) to 5 (full color)
Control	N/A	N/A	
Test #1			
Test #2			
Test #3			

**Extension:** Repeat the experiment with different brands of sunscreen and/or different SPFs. Judging by your results, which one offers the best protection?