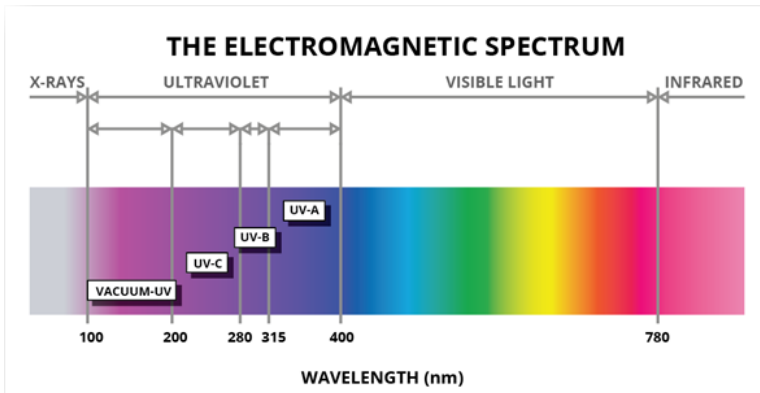


# Light That's Outta Sight

## Try It Out

Hold the tube in the sunlight and see what color the beads are after a few seconds. Now hold the tube in a shadow and wait a few more seconds. What do you notice?



(Image: ecnmag.com)

## What's Going On?

Ultraviolet (UV) light is electromagnetic radiation with a wavelength shorter than that of visible light but longer than X-rays. UV radiation makes up about 10% of the total light output of the Sun, so it's present in sunlight, even though we can't see it.

## Why Does It Matter?

Ultraviolet rays have both positive and negative impacts. The same light that causes sunburn also forms vitamin D, which is important for bone strength. While we can't see ultraviolet light, some insects, birds, and other animals can. Reindeer use UV light to spot polar bears, which can be hard to see in the normal visible spectrum.



Left to right: The same flower with human vision, UV-only vision (bright = UV), simulated bee vision (UV+G+B), and simulated bird vision (tetrachromatic: UV+R+G+B).  
(Photos: © Dr Klaus Schmitt, uvir.eu)

## Wonder While You Walk...

A UV light detector seems like it would have many different applications. In what ways do you think it could be used to improve our lives?



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