

Testing the UV absorption effectiveness of sun screens

This is a simple and inexpensive practical activity that could be a useful demonstration, or a whole class experiment.

It is designed to show that sun screens do absorb UV. It also shows that other creams do not, and that a very high SPF will absorb more UV than a low SPF.

Apparatus:

Plain white A4 paper
Carboard box (with a hole in the top)
UV lamp (small enough to fit in the box)
Various sun screens and skin creams

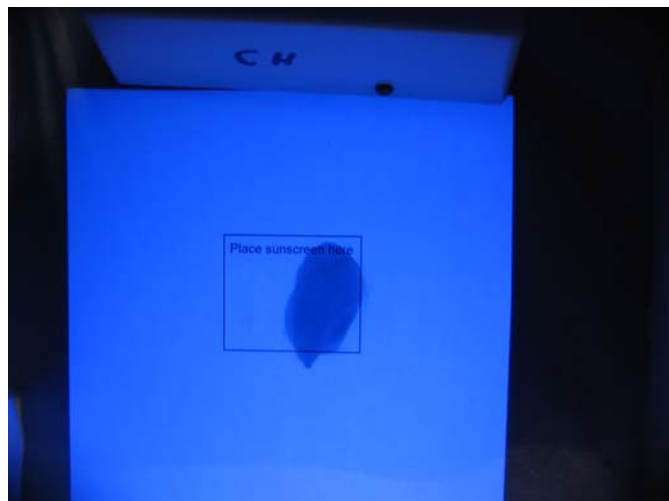


Activity:

A4 copy paper contains a little fluorescent material to make it look bright white. If you put the paper under the box containing the UV lamp and look through the hole in the box, you can see the paper fluorescing.

A student can then apply a little sun screen to their hand and make fingerprint on the paper.

When the paper is re-inserted under the box, the fingerprint can be clearly seen as the UV is being blocked (see below).



Hazards:

Some students may have a skin reaction to the contents of some creams and lotions.

Exposure to UV should be strictly controlled.

Context:

21st Century Science topic P2 "Radiation & life"