

UV Hand Washing

This activity takes about 10 mins plus an introduction



Intro:

This activity demonstrates the importance of good hand washing techniques, and gives scope to discuss infection prevention and control.

The Science:

The skin has lots of different microorganisms living on it, such as *Staphylococcus aureus* and *Propionibacterium acnes* which are hugely beneficial, and it's this microbiome that keeps us healthy. Some microbes secrete substances that prevent pathogens from colonising, and others alert the body to a pathogen's presence and aid an immune response. However, it's really important to maintain healthy levels of these microorganisms - especially if coming into contact with vulnerable people such as newborn babies, the elderly or sick people. This activity introduces good hand washing techniques which are vital in infection prevention and control. During the activity it's important to stress that the idea of hand washing isn't there to rid us of ALL microorganisms on our skin it's to maintain healthy levels. Also when it's relevant to wash hands is an important take home message, for instance, after going to the toilet, when preparing food, after handling pets/animals.

What you will need:

- UV hand gel/lotion
- UV black light box
- Hand sanitiser
- Hand washing facilities
- Hand washing instructions

Instructions:

Get the audience to rub some UV gel/lotion over their hands. Then get them to look at their hands under UV light and highlight areas that need to be concentrated on (usually nail beds and between the fingers).

Firstly use the hand sanitiser then look at their hands again under UV light to see how much dirt has been removed. Then get them to wash their hands using soap and water. Look again under UV light. This shows how soap and water is better than hand sanitiser at cleaning hands, this is because the soap actually lifts the dirt from the skin and the water washes it away whereas the alcohol in the gel just evaporates. Although in a clinical setting it can be argued that using alcohol gel is better, for the general public soap and water is a better option.

*If using this in a classroom setting you can get UV powder which you can dust over an item, in secret, that will be often be handled like a pen, pencil or door handle. At the start of the activity after the introduction and before any UV produce is applied get the pupils to look at their hands under the UV light. Their hands will glow from the powder you applied beforehand in secret. This shows them how microbes are picked up from everyday objects throughout the day and this will make them more aware of microbes being around them in the environment.