

Sample 2 – First Level – Germs and Hygiene

What's happening?

In this lesson pupils will learn about germs and the importance of hygiene.

Experiences and Outcomes and Related Benchmarks

SCN 1-13a - I know the symptoms of some common diseases caused by germs. I can explain how they are spread and discuss how some methods of preventing and treating disease benefit society.

- Provides explanations, supported by evidence, of how some diseases spread and discusses ways in which some diseases can be prevented through good hygiene and vaccination.

HWB 1-33a - I am becoming aware of how cleanliness, hygiene and safety can affect health and wellbeing and I apply this knowledge in my everyday routines such as taking care of my teeth.

- Explains the importance of daily hygiene routines, for example, hand washing, teeth brushing and body cleanliness.

Pupil will learn:

- Where germs come from.
- How germs are spread.
- How basic hygiene can stop the spread of germs.

Resources Required

- Ultraviolet Thief Detection Powder - <https://amzn.to/33Q64kd>
- Ultraviolet Torch - <https://amzn.to/33Wlwvy>
- YouTube Video - <https://bit.ly/2NNdOy2>
- Pupil Sheer FR1 from MaidSafe Foundation website.

Preparation

The teacher should either dust their own hands or commonly used classroom items such as pencils, rulers, rubbers with the UV reactive powder before children enter the classroom in the morning. Do not tell the children that this has been done. (The powder is non-toxic and won't cause any reaction if it is ingested).

Introduction

Ask children if they have heard of germs. Can anyone explain what they are and what they do? Watch the YouTube video linked above. Discuss the main points from the video.

Development

Ask the children to look at their hands and to raise them if they think they are clean. Explain that something in the class was coated in a special powder that shows up under a special light from the torch. Have the children who raised their hands come to the front of the class and hold out their hands. Switch off the classroom lights and make it as dark as possible. Use the UV torch to examine the children's hands. This will no doubt reveal that some of them have come into contact with the powder. In this instance the powder is acting as germs. Examine the hands of the remaining pupils. Use the UV light to explore the rest of the class, beginning where the powder was initially placed to show how far it has spread in one day. Ask pupils how to remove germs. Have them wash their hands or use antibacterial wipes to clean themselves and their belongings that glowed under the light. Switch the class lights back on and complete the pupil sheet.

Plenary

Come together as a class and review the pupil sheet. Have pupils self-assess their answers and correct where necessary. Emphasise the need to wash hands throughout the day, especially after visiting the bathroom, in order to protect themselves and their classmates from germs. If desired, the teacher could explain that they will do the same experiment again to check if the germs have been spread as far. If not then hand hygiene will have improved within the class.

Assessment

Discussion following the video will provide immediate feedback on how well pupils have understood the main points.

The completed pupil sheets will serve as a summative assessment of the lesson.

Repeating the experiment without pupils being aware will show if hand hygiene has improved.

Differentiation

Using targeted questioning following the video will help to support and challenge pupils appropriately.

Those who require support to complete the pupil sheet could either work with a peer to discuss the answers and complete the sheet jointly, or work in a small group with the class teacher. Answers could also be dictated and scribed.

Useful Questions

Q. What are germs?

A. Germs are small living things which grow into larger organisms. Germ is not a technical name, it is like a nickname. What we are investigating specifically in this lesson is bacteria. Bacteria are small organisms that can cause illness.

Q. How do bacteria spread?

A. They mainly spread through touching or through air. If you touch an object that has the bacteria on it, it will be transferred onto you. You will then pass it onto anything you touch. Bacteria can also be spread by coughing and sneezing.

Q. What can we do to minimise the spread of bacteria?

A. Washing hands thoroughly with soap, especially after using the bathroom, plays a big part. Coughs and sneezes should be caught in a tissue which is then disposed of, or in the crook of an arm, not a hand.

Q. What can we do to help our bodies fight bacteria.

A. Have good personal hygiene – wash your body, face and hair with soap regularly. Having a good, varied diet which includes all sections from the food triangle or healthy eating plate will give you the vitamins and minerals and energy required to keep healthy.

Why teach this?

This science lesson teaches the importance of good hygiene and hand washing to control the spread of bacteria, an important lesson to learn! It also illustrates to children how bacteria is spread.