Horrid Hands





KEY OBJECTIVES

To understand that infection can be spread through touch.

To understand that we can pick up microbes through things we touch and spread them to others.

To understand that we wash hands to remove microbes.

To understand that washing hands is the best way to prevent the spread of microbes.

To understand that washing with soap and water is better than using water alone.

INTRODUCTION

In this session, students will learn how microbes can spread through touch and that the best way to remove microbes and prevent them from spreading is by washing your hands with soap and water.

Activities include:

- "Horrid hands" experiment to observe how microbes can spread from person to person by shaking hands
- Activity that shows which handwashing method is best at removing microbes
- "Horrid hands" facts sheets and quiz to use in class

Microbes spread easily through coughs and sneezes, food and water, animals, and touch. Every day thousands of microbes get onto our hands from the things we touch and we transfer these microbes onto other place or people.

Washing your hands is the best tactic to stop the spread of any harmful microbes and preventing people getting ill. Although washing hands in water alone, or in cold water eliminates visible dirt, soap



is required to break up the oil on the surface of the hands that can trap microbes.

Most microbes on our hands are harmless or even good for our skin. Sometimes however, we can pick up potentially harmful microbes from the things we touch every day e.g. toilet handles, raw food, dishcloths and other peoples' hands when we shake them!

How we wash our hands is just as important as when we wash them, especially when it comes to eliminating harmful microbes. We don't need any special cleaners or cleaning equipment – just soap and water.

Horrid Hands





GUIDING QUESTIONS

What makes our hands dirty?
Why should we wash our hands?



MATERIALS & PREPARATION

Activity 1

- 2 washing up bowls
- Water
- A box containing GloGerm gel and a UV light
- Kitchen roll
- Bin liners
- Hand soap
- 1) Shake the GloGerm gel bottle to mix the contents, or the demonstration may not work
- 2 Fill the washing up bowls with water
- The water should be changed every 2-3 groups and should not get too murky.

Activity 2

- Small plastic bowls
- Water
- Washing up liquid

Pepper

Cocktail sticks

Set up a few bowls of water with pepper sprinkled on the surface, a few plain bowls of water, and another bowl with washing up liquid in

TASKS & PROCEDURE

Activity 1

This activity demonstrates what happens if we don't wash our hands and how germs can be spread. The concept is to pretend that the participants have just got their hands dirty i.e. by sneezing in them or preparing a meal, and then to observe how the germs will spread.

- Explain to the students that microbes are everywhere and they get on to our hands from the things that we touch. We then pass these on to other people. Washing our hands is the best way to remove these microbes.
- Explain when we should wash our hands before and after preparing food, after using the toilet, after touching animals and after coughing or sneezing.
- Ask the students to line up one behind the other like a queue. If there are more than 5 students, form 2 queues so that there are no more than 5 students per queue.
- Squeeze a little GloGerm gel into the student at the front of the line's hands and ask them to rub in the 'pretend microbes'.
- The person in the front should then turn around and shake hands with the person behind them, and so on, until they have all shaken hands with the person behind them in the queue.

Horrid <u>Hand</u>s





- Use the UV light to show the students how the germs got passed down the line point out how dirty their hands are and how the germs spread because they didn't wash their hands. The person at the back of the queue should still have germs on their hands.
- Ask participants to rinse their hands in the washing up bowls as they would usually and give kitchen roll to each person to dry their hands.
- The UV light can be used again to see how many germs remain.
- Demonstrate the proper way to wash hands with soap and ask them to follow your movements: do the six step technique palm to palm, back of the hands, in between the fingers, back of the fingers, the thumbs, tips of the fingers.

Activity 2

This activity aims to show why washing with soap and water is better than using water alone. Demonstrators should help children with cocktail sticks to ensure safety. The bowls must be rinsed after each group for this to work.

- Tell participants that the surface of the water in the bowls represents their hands, and that the pepper represents harmful microbes that need to be washed away.
- Dip the end of a cocktail stick into the plain bowl of water and then into the pepper water. Gently swirl the cocktail stick around and explain that using water to wash your hands only moves the microbes around.

- Dip the cocktail stick into the bowl of washing up liquid and then into the pepper water.
- The pepper 'microbes' will move towards the edges of the bowl as the soap hits the surface of the water.
- Tell the students that this shows why using soap when you wash your hands is important, because it breaks up the oils on the surface of your hands that microbes stick to and then they can be rinsed away under running water.
- Rinse the pepper water bowls, dry with kitchen towels and reset between groups.

POSSIBLE EXTENSIONS

Horrid Hands Fact Sheet

Horrid Hands Quiz

SOURCES

Presented by Emilia Angelillo

Horrid Hands Fact Sheet





WHAT MAKES OUR HANDS DIRTY?

We get microbes on our hands from everything that we touch like door handles, school desks, the floor or our pets. We also get microbes on our hands when we hold hands, pick our nose or sneeze into our hands!

Why should we wash our hands?

We wash our hands to get rid of bad microbes that might make us ill. It is important that we wash our hands after using the toilet, before eating or cooking, after stroking animals or after coughing or sneezing.

Did you know?
Surprise your friends and family with these fun facts!



- Most microbes on our hands are under our finger nails!
- Nearly everyone says they wash their hands after using the toilet, but more than half don't!
 Just think what may be on their hands!
- Most toilet handles have 400 times more microbes than the toilet seat.
- There are more microbes on one person's hand than people on the planet.
- Hand-washing is the best way to stop microbes spreading.
- Microbes can stay alive on our hands for up to three hours!

Horrid Hands Quiz





- 1 Gather together your friends or family
- Someone will need to be the quizmaster and read the questions!
- Teams/players must hold up one of the cards with their answer
- 4 The one with the most correct answers wins!







Horrid Hands Quiz





We should only wash our hands once a day	We should never use soap to wash our hands
All the microbes on our hands are good for us	Soap can remove more microbes than washing with water alone
We should wash our hands after sneezing into them	Microbes can spread from person to person when we touch things
You can pick up microbes from door handles	Washing our hands often can help stop us getting ill
There is no need to wash your hands before visiting friends or family in hospital	Microbes can hide in the oil of our skin to avoid being washed away
You should always wash between your fingers	All microbes on our hands are bad for us
There is no need to wash your hands often I	ecause microbes cannot live more than 5

Horrid Hands Quiz





FALSE

FALSE

We should only wash our hands once a day **FALSE** We pick up microbes from the things that we touch, so we should wash our hands often. We should never use soap to wash our hands Soap helps to remove bad microbes from our hands so we should always use soap to **FALSE** wash our hands. All the microbes on our hands are good for us FALSE Microbes on our hands are both good and bad. Soap can remove more microbes than washing with water alone Soap removes the oil on our hands, which washes away microbes. This removes more TRUE microbes than washing with water alone. We should wash our hands after sneezing into them TRUE Sneezes contain bad microbes which can spread onto our hands when we sneeze. Microbes can spread from person to person when we touch things Microbes are found on our hands and when we touch things, we can spread these **TRUE** microbes on to other people. You can pick up microbes from door handles We pick up microbes from the things that we touch such as door handles, school desks TRUE or the floor Washing our hands often can help stop us getting ill Washing our hands is the best way to remove bad microbes from our hands that could **TRUE** make us ill. There is no need to wash your hands before visiting friends or family in hospital We should was our hands before visiting people in hospital so that we don't take bad **FALSE** microbes into the hospital that could make people ill. Microbes can hide in the oil of our skin to avoid being washed away Microbes stick to the oil on our skin. This is why we should use soap to wash our hands. TRUE as it removes the oil and washes away the microbes. You should always wash between your fingers TRUE Microbes are found between our fingers!

There is no need to wash your hands often because microbes cannot live more than 5

We should wash our hands often as microbes can live for up to 2 hours on some

All microbes on our hands are bad for us

minutes on many surfaces

surfaces

Microbes on our hands are both good and bad.