

Year 5-6

Germs

This lesson was written in January 2021 and reflects information available, and guidance issued at the time.



Objectives:

- To use information from observation to describe how a virus can spread
- To use a tissue to catch coughs
- To remember to wash hands
- To explain why we need to keep the 2 metre rule
- To explain in simple terms and based on observation why the virus cannot be seen

Curriculum Links:

- **PSHE: (from PSHE Association) H9.** That bacteria and viruses can affect health; how everyday hygiene routines can limit the spread of infection; the wider importance of personal hygiene and how to maintain it
- **PSHE: (from PSHE Association) R30.** That personal behaviour can affect other people

Key Vocabulary:

- virus
- contaminated
- droplet
- microscopic

Resources:

- PowerPoint
- bubble gun
- bubbles
- chairs

FAQs:

Why do we cough? Coughing is a way for our bodies to get rid of dust, irritants, microbes, snot and germs from the throat. Coughing forces air out of the lungs under high pressure to clear the throat.

How can a cough spread a virus? A cough pushes droplets of liquid from our mouth which can contain the virus. Smaller droplets can become aerosols and hang around in the air for longer. This is why it is so important for good ventilation to keep the air moving around, and why the risk of infection is higher indoors. Check out this YouTube video by the Slo-Mo guys for a demonstration of how many droplets are exhaled from our mouth when we talk / cough / sneeze

<https://www.youtube.com/watch?v=gZ66wJFD3bs>

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FAQs cont:

Why are we safer outdoors? There are no walls and ceiling, and the wind blows. The virus can move away from people further and more rapidly.

Why should we stay 2 metres apart? When people who have the virus cough/sneeze/or even just breathe out or talk, the virus is released into the air on the droplets of breath. These droplets vary in size. If we stay at least 2 metres apart, then most of those droplets, particularly larger ones, can't travel as far as 2 metres. If someone coughs or sneezes, then these droplets will travel further – which is why it's REALLY important to cover your mouth if you cough or sneeze.

Why can't we see the virus? Viruses are microscopic, they are so tiny that you cannot see them without a microscope.

Introduction:

5 mins



Mascot Video- explaining how the virus is spread through the air when we talk, shout or cough.

- **How can you catch Coronavirus? (contact with virus- getting close to infected people, touching infected surfaces)**

Tell the children that the virus spreads through the air when an infected person breathes, speaks, shouts, sings or coughs.

The average cough would fill about three quarters of a 2 litre lemonade bottle with air. Coughs also force out thousands of tiny droplets of saliva. About 3,000 droplets are expelled in a single cough, and some of them fly out of the mouth at speeds of up to 50 miles per hour!

Main Activity:

20 mins



Show children the bubble gun and let them watch as bubbles are produced. Imagine the bubbles are droplets produced by breathing, talking loudly, shouting, singing or coughing.

- **What is happening to the bubbles? (they are moving across the classroom)**
- **How far do they travel?**
- **How can you keep yourself safe from the 'Bubble cough'? (move back)**

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Main Activity cont:

20 mins



Talk about what happens when bubbles land on people or surfaces- if the bubbles were the virus then they would contaminate the person or surface. Once they pop you cannot see them. Place chairs 0.5 metres, 1 metre and 1.5 metres from you and fire with the bubble gun.

- What do you notice about the chairs? (closer chairs have been contacted by more bubbles)
- What do you think will happen when we blow bubbles outside?

Take children outside and use the bubble gun.

- What is different about how the bubbles are moving? (they move further and drift away)
- Are you safer from the virus indoors or outdoors? Why? (outdoors, less ventilation indoors and harder to stay 2 metres apart)

Plenary:

5 mins



- Why is the 2 metre rule important? (we are less likely to come into contact with the virus the further away we stay from infected people, a 2 metre distance is the minimum)
- Can you tell by looking that a person or surface is contaminated? Why? (No, particles are microscopic)
- How can you keep yourself and your family safe? (by washing hands regularly and staying at least 2 metres apart from those outside your bubble)



Possible Extension Activities:

- Measure how far the bubbles travel indoors and outdoors and compare.
- Optional video to show importance of fresh air.

<https://youtu.be/qYZMOG2kUWg>