

Lesson 1

What is a Pandemic?

This lesson explores the history of pandemics and the science behind the virus and its transmission.

PLANNING

<p>Prior Learning</p>	<p>Pupils will have a prior knowledge of:</p> <ul style="list-style-type: none"> • the impact of the pandemic; and • the issues and threats surrounding COVID-19.
<p>Learning Outcomes</p>	<p>Pupils will be able to:</p> <ul style="list-style-type: none"> • understand the science behind the pandemic; • show a better awareness of the transmission; and • explore some of the data surrounding COVID-19.
<p>Thinking Skills and Personal Capabilities Focus</p>	<p>Pupils will be able to:</p> <ul style="list-style-type: none"> • distinguish fact from opinion; and • make links between cause and effect (Thinking skills and Decision Making). <p>Pupils will be able to:</p> <ul style="list-style-type: none"> • make new connections between ideas or information; and • learn from and value other people’s ideas (Being Creative).
<p>Attitudes and Dispositions</p>	<p>Pupils will be encouraged to develop:</p> <ul style="list-style-type: none"> • personal responsibility; • curiosity; and • community spirit.
<p>Resources</p>	<ul style="list-style-type: none"> • Resource 1: True or False • Resource 2: What is Coronavirus? • Resource 3: Create your own Infographic

Lesson 1 What is a Pandemic?

SUGGESTED TEACHING AND LEARNING STRATEGIES

LAUNCH

Lead a class discussion using effective questioning techniques.

- What is a pandemic?
- Have there been other pandemics?
- What is a coronavirus?
- How does it spread?

Possible answers

- Pandemic is defined as an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people.
- Pandemics have played a role in shaping human history.
- Few people today will remember outbreaks on this scale, but history shows us that although it is devastating, what we are experiencing now is not unusual.

COVID-19 is an infectious disease caused by a newly discovered coronavirus.

Coronavirus infection usually occurs through close contact with a person with novel coronavirus via coughs, sneezes or hand contact. You can also be infected by touching contaminated surfaces and not washing your hands.

DEVELOPMENT



ACTIVITY 1

True or False

Summarise what we learned about pandemics from the launch discussion.

Ask the class to form teams of three or four. Remind them to use social distancing measures.

Read out the statements about pandemics from **Resource 1: True or False**.

Ask your pupils if these are **true or false**.

Tell the class the correct answers and ask each team to record their individual scores, then total these to find which team answered most questions correctly.

Encourage the class to discuss the answers.

Lesson 1

What is a Pandemic?



ACTIVITY 2

What is Coronavirus?

Watch this [NHS video about COVID-19](#) with your pupils.

Ask your pupils to complete challenges 1 to 5 in **Resource 2**.

Now watch the next clip about [how the virus spreads](#).

Ask your pupils to complete the Mega Challenge in **Resource 2**.

Give your pupils opportunities to share their ideas from this challenge with the rest of the class.

Encourage the class to discuss the origin of the name coronavirus, other coronaviruses and how these differ from COVID-19.

Points of interest could include a discussion about the chain of events leading to the spread of the virus.

Ideas might include the difficulty getting across the measures to stop the spread of the virus and the problems of enforcing regulations.



ACTIVITY 3

Create your own Infographic

An **infographic** is a collection of imagery, charts and minimal text that gives an easy-to-understand overview of a topic. Use this example from the Centers for Disease Control and Prevention about [Antibiotic Resistance and the Global Threat](#) to show how **infographics** use striking, engaging visuals to communicate information about health – related issues quickly and clearly.

Infographic Task

Ask your pupils to create their own **infographic**.

They must include a summary of the information in **Resource 3**, with key terminology used correctly.

The audience for the infographic is the school community. Laminate and display a selection of the most striking infographics in the classroom and/or the school corridors.

Topics for discussion

Which is the most striking infographic and why?

How much information can an infographic contain?

Who is the intended audience?

Encourage your pupils to discuss their ideas about colour, layout, font and style and which information and key terms to include.

Lesson 1

What is a Pandemic?



ACTIVITY 4

Tracking data (Using Mathematics)

The [Department of Health](#) website provides up-to-date and accurate statistics on COVID-19.

Ask your pupils to look at the website and select one of the information icons for this activity.

Ask them why the information is important.

Give your pupils an opportunity to represent some of the statistics in graph form. Discuss why a graph is an effective way to communicate numbers or statistics.

Display the graphs, once complete.

Encourage the class to discuss:

- the different types of information from the overall data available on the website;
- what style of graph to use to depict the data; and
- opinions on the visual impact of a graph.

Encourage your pupils to refer to words such as mutation, corona (a Latin word meaning crown), droplets and RNA and discuss the information provided by the infographics.

DEBRIEF

Encourage your pupils to discuss what they have learned.

- What new words or terms have we learned?
- What is a pandemic and how does it spread?
- What can we do to help reduce the spread?

Lesson 1

What is a Pandemic?

RESOURCE 1: TRUE OR FALSE

1. A pandemic is a global outbreak of disease. **(True)**
2. A pandemic happens when a new virus emerges to infect people and because there is little to no pre-existing immunity against the new virus, it spreads worldwide. **(True)**
3. Young people cannot get coronavirus. **(False – no one is immune from contracting the virus.)**
4. The pandemic usually disappears in a few weeks. **(False – it usually takes a while, sometimes even months.)**
5. It only affects people who are Over 70. **(False – all ages of people can be affected, although those over 70 are considered higher risk.)**
6. The 1918 pandemic (Spanish flu) is considered to be the most severe to date. **(True – the 1918 pandemic was considered the worst in history, with one third of the population becoming infected.)**
7. Over the last 300 years, ten major influenza pandemics have occurred. **(True)**
8. Drinking hot drinks will help eliminate coronavirus. **(False, there is no evidence to support this.)**

Lesson 1

What is a Pandemic?

RESOURCE 2: WHAT IS CORONAVIRUS?

Challenge

1. What is the meaning of the Latin word that gives coronavirus its name?

2. Why is that Latin word used for this virus?

3. How is the virus transmitted?

4. How does sunlight affect the virus?

5. What is the three letter abbreviation for the place where the virus stores its genes?

Lesson 1

What is a Pandemic?

RESOURCE 2: WHAT IS CORONAVIRUS?

Mega Challenge

What are the major challenges to public health campaigners looking to change people's behaviour and how can they be overcome, in your opinion?

Lesson 1

What is a Pandemic?

RESOURCE 3: CREATE YOUR OWN INFOGRAPHIC INFORMATION SHEET

Read the following information and create your infographic version.

How do diseases spread?

The first thing to note is that not all diseases are contagious. Many diseases, for example Alzheimer's, diabetes, Parkinson's, osteoporosis, most cancers and many more, are non-communicable. This means that they cannot be transmitted from one person to another. However, many diseases are infectious: they can be transmitted between people. Infectious diseases are mainly caused by viruses, bacteria, fungi or parasites. Some infectious diseases can be passed between different species; for example, COVID-19 is generally thought to have originated in bats, and to have passed from bats to humans in the process of handling and consuming parts of infected bats.

An organism that causes a disease is called a pathogen. Pathogens infect their host and then spread from that host to other organisms. Pathogens can be transmitted in several ways. The main types of transmission are:

- direct contact with an infected person, breathing the same air as an infected person who has coughed or sneezed;
- touching a surface that has been contaminated with disease particles;
- drinking contaminated water; and
- eating undercooked or reheated food.

What can be done to prevent the spread of disease?

There are different ways to prevent the spread of different pathogens. For example, sterilising water can kill pathogens that cause diseases such as cholera, polio and typhoid fever. Cooking food properly in hygienic conditions prevents diseases such as salmonella and food poisoning. Washing surfaces regularly with disinfectant will help to kill any pathogens living there and washing your hands regularly using a suitable cleaning agent like soap will also help to maintain good hygiene. You may be familiar with the 2 metre rule too; this was put in place to make it harder for people to spread microbes. This is also why you are currently sitting at a distance from each other.

Since most disease-causing microbes enter the body through its openings, it is sensible to cover or protect those openings when appropriate. For example, the mouth and nose can be covered with a mask when in public to prevent pathogens from entering the body. This is particularly important during a pandemic.