

Superbugs: Join the Fight Secondary Vaccines Lesson Plan - Ages 11-14

This programme is initiated and funded by Pfizer.

Lesson summary:

Pfizer's 'Superbugs: Join the Fight!' education programme has a goal; that is for young people to help raise awareness about stopping the spread of infectious disease and reducing the rise of superbugs.

Learners will discover what vaccinations are and how they work, touching on their history and role in helping to address the antimicrobial resistance (AMR) – superbugs – problem. The activities link to Personal Social and Health Education (PSHE), Relationships and Sex Education (RSE), Sciences, Personal and Social Education (PSE) and Learning for Life and Work (LLW) (see full curriculum links at the end). The lesson can stand alone or can be taught in conjunction with the superbugs lesson for ages 11 – 14.



Suggested timing

You can use this lesson in a classroom setting or for distance learning. The lesson takes around 40 to 90 minutes, plus optional extension activities. The activities can be used flexibly, according to the time you have, and could also be split over more than one lesson to allow more in-depth exploration of the issue.



Preparation and resources:

- Vaccines Presentation
- Activity Sheet 1: How Vaccinations Work
- Activity Sheet 2: Pitch Preparation
- Parent Letter
- Devices with internet access (for research)

Learning objective:

We are learning about the importance of vaccination and how it works.

Learning outcomes:

- I can describe what vaccination is and how it works.
- I can explain the purpose and importance of vaccination.
- I can explain how vaccination can help to reduce the spread of disease.

Key words: antibiotics, antibodies, bacteria, booster, disease, immune, immune system, immunisation, infection, inoculation, pathogen, superbugs, vaccines, vaccination, virus

Introduce the session

Young people will be exploring the spread of superbugs and the impact of anti-microbial resistance. Before beginning, it is important to highlight that this is a challenging topic with real-life implications, therefore it is important to respect the content within the presentation and ensure that all learners feel comfortable with covering the content within this module. It would be advised that a safe learning environment is created prior to starting the session, establishing ground rules that will enable fair discussion and sharing of facts and opinions. Some examples of ground rules could be:

- 'I will respect the ideas and opinions of other people.'
- 'I will not interrupt someone when they are sharing an opinion.'
- 'I will not force anyone to speak if they do not wish to.'

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Starter

(slides 2-3)

Show learners the words on **slide 2** and give them two minutes to create a mind map showing their existing knowledge of any of these words/concepts.

Read through the learning objective and outcomes on **slide 3**.

Main activities

Introduction to vaccination (slides 4-8)

Run through the slides to introduce vaccination and how it has been used to successfully eradicate, or reduce instances of, certain deadly diseases.

How vaccination works (slides 9-14)

Give pupils a copy of **Activity Sheet 1** (shown on **slide 9**). Ask them to read through the information and then discuss answers to the questions in pairs.

Continue with presentation (**slides 10 – 14**), looking at vaccination in the UK and its role in stopping the spread of superbugs (you may need to offer more detailed explanation if the learners have not yet completed the superbugs lesson – see the Superbugs resources for more information on the issue), as well as some of the challenges to vaccination.

Vaccination debate (optional) (slides 15-17)

Show **slide 15 and 16** and hand out **Activity Sheet 2** (shown on **slide 17**), which demonstrates that measles and mumps cases in England have increased in recent years. Explain that learners are now going to take part in a discussion around why they think people may be hesitant about having vaccinations or why vaccination rates for some diseases might be falling, despite the NHS saying that the MMR vaccine is well tolerated, and what people might need to know to help increase uptake of vaccinations.

The sheet helps learners prepare a pitch – it may also be useful to provide learners with an electronic copy, so they can easily access the links. You may wish to allow time during this lesson for research, or to set the research for homework and ask learners to deliver their pitches in a follow-up lesson.

Plenary (slides 18-20)

Show learners information on **slides 18 and 19** around stopping the spread of superbugs and how they can enter a competition (**slide 20**).

Ask learners to share with a partner one thing they've learnt during this lesson that they didn't know before. Learners could annotate their mind maps from the start of the lesson (key words on **slide 2**) with a different colour. How confident do they now feel about explaining these terms to others?

Optionally, give the Parent Letter to take home.

Extension/homework ideas:

- Learners could conduct a whole-school or community survey to investigate existing understanding about vaccination.
- Role play could be used to explore different attitudes to vaccination.
- Learners could research additional facts and design their own 'Why vaccinate?' brochures.
- Learners could create persuasive blog articles or campaign letters covering the benefits of vaccination.
- Assign young people into teams, with each allocated a particular disease to research in terms of the effects of vaccination and any challenges to success.

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Sites for additional research:

The following links contain useful and age appropriate information if learners wish to conduct additional research.

Vaccination facts and benefits:

<https://www.nhs.uk/conditions/vaccinations/why-vaccination-is-safe-and-important/>

<https://www.who.int/en/news-room/fact-sheets/detail/immunization-coverage>

https://www.euro.who.int/_data/assets/pdf_file/0005/339620/Myths-and-facts.pdf

UK vaccine schedule:

<https://www.nhs.uk/conditions/vaccinations/nhs-vaccinations-and-when-to-have-them/>

<https://vk.ovg.ox.ac.uk/vk/uk-schedule>

Vaccination history:

<https://www.cdc.gov/smallpox/history/history.html>

<https://publichealthengland.exposure.co/50-years-of-measles-vaccination-in-the-uk>

<https://ukhsa.blog.gov.uk/2015/11/12/phe-data-week-immunisation-in-numbers-5-fascinating-facts/>

(Additional pupil-friendly links can be found on **Activity Sheet 2**.)

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Curriculum links:

England

Relationships and Health Education¹

Health and prevention

- about personal hygiene and germs including bacteria, viruses, how they are spread and treated, and the importance of handwashing.
- the facts and science relating to allergies, immunisation and vaccination.

Science²

All learners:

- are equipped with the scientific knowledge required to understand the uses and implications of science, today and for the future.

Scotland - Sciences³

- I have explored how the body defends itself against disease and can describe how vaccines can provide protection. SCN 3-13c.

Northern Ireland – LLW: Personal Development⁴

- Investigate the influences on physical and emotional /mental personal health of, for example, immunisation, regular physical activity, personal hygiene, diet, stress, addiction, life/work balance etc.

Wales - Science⁵

- Applications of science, medicine and technology that are used to improve health and the quality of life, including those in countries with different levels of economic development.

1. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1019542/Relationships_Education_Relationships_and_Sex_Education_RSE_and_Health_Education.pdf Accessed November 2021

2. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/335174/SECONDARY_national_curriculum_-_Science_220714.pdf Accessed November 2021

3. <https://education.gov.scot/Documents/sciences-eo.pdf> Accessed November 2021

4. <https://ccea.org.uk/downloads/docs/ccea-asset/Curriculum/Statutory%20Requirements%20for%20Personal%20Development%20at%20Key%20Stage%203.pdf> Accessed November 2021

5. <https://hwb.gov.wales/storage/779c7300-574d-4a12-a518-c873557d6a7a/science-in-the-national-curriculum> Accessed November 2021

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