



Treatment of infection: Antibiotics

Through teacher-led discussion and debate, students learn the importance of using antibiotics and other medicines appropriately.

Curriculum Links

Science

Working scientifically, Animals, including humans (Upper KS2 only)

PSHE/RSHE

Health and prevention

English

Reading and comprehension

Key Words

Antibiotic, Disease, Immune system, Infection, Medicine, Natural defences, Vaccine

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e-bug.eu/eng/KS2/lesson/Antibiotics

Learning Outcomes

All students will:

- Understand that most common infections get better on their own through time, bed rest, hydration and healthy living.
- Understand that if antibiotics are taken, it is important to finish the course.
- Understand that antibiotics treat bacterial infections only.
- Understand that they should not share antibiotics or other medicines that are prescribed by a doctor or healthcare professional.

Resources Required

Main Activity:
Comic Strip Scenarios
Per group

- Copy of SH1
- Copy of SH2
- Copy of TS1

Extension Activity 1:
Antibiotics Flash Cards
Per group

- Copy of SH3

Extension Activity 2:
Word Mix Up
Per student

- Copy of SW1

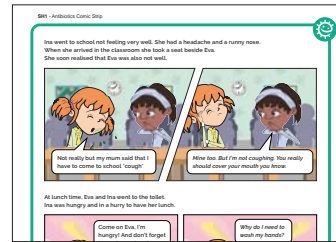
Fascinating Fact

In 1901, most people didn't live past 47 years old. Now most people live to the age of 77 years or longer thanks to modern medicines like antibiotics.

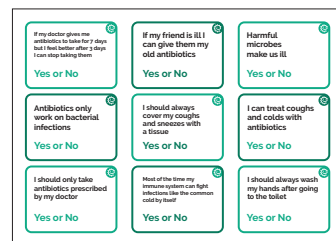
Supporting Materials



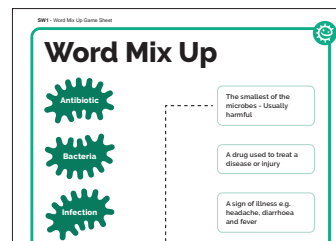
TS1 Teacher Discussion Points



SH1-2 Antibiotics Comic Strip



SH3 Antibiotics Flashcards



SW1 Word Mix Up Game Sheet



Lesson Plan



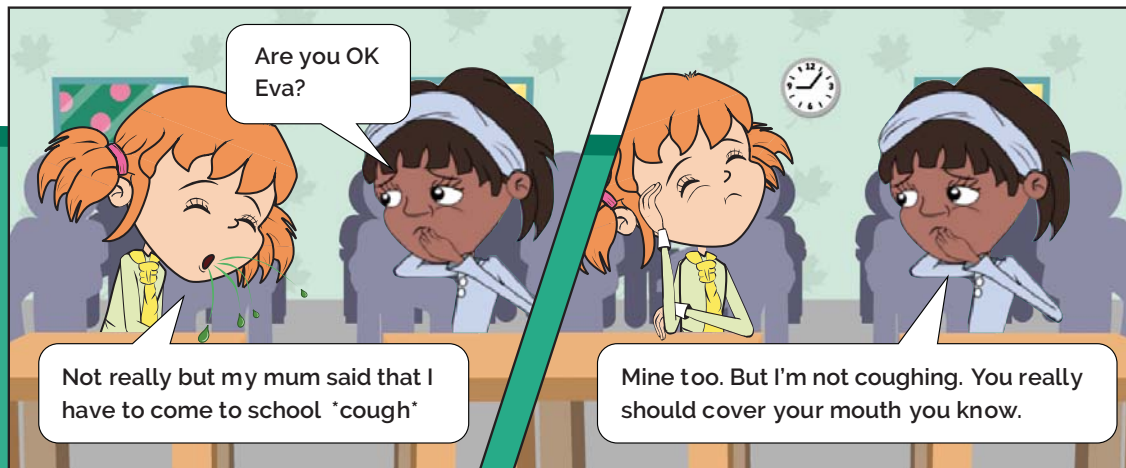
Introduction

1. Begin the lesson by explaining to the students that they are going to learn about some common infections and when antibiotics should and should not be used. Remind students that harmful microbes can cause an infection and make us ill. Ask students about their own experiences of being ill, what was the illness, how did they feel and what did they do? Did they think it was caused by a microbe/ infection? If so, why did they think that? Did they stay at home or did they go to the doctor or visit the chemist? Did they get any medicine?
2. Tell students that before we get medicine for common infections, we should try and let our bodies fight the harmful microbes. Explain that inside our bodies we have an immune system that fights harmful microbes. If we get plenty of sleep and eat properly we keep our immune system strong and it keeps fighting the harmful microbes.
3. Explain however, that sometimes, if a lot of harmful microbes get into the body, the immune system may need help. This is when we need medicine. Explain that different types of medicine are used to treat the symptoms of different infections e.g. cough remedies, painkillers, medicines to bring down temperatures, etc.
4. Highlight to students that antibiotics are medicines that are used to treat only bacterial infections. Antibiotics make us better by stopping or killing the harmful bacteria that make us ill. Explain to students that different antibiotics affect different bacteria therefore we should not use other people's antibiotics because they might not work; we should only take antibiotics given to us by the doctor, nurse or chemist. Explain that antibiotics will not work on infections caused by a virus, for example antibiotics cannot stop or kill COVID-19 or the common cold.
5. Explain that if we do get antibiotics from the doctor, nurse or chemist then it is important to finish the course. If not, we may not kill all the harmful bacteria and they could make us ill again or become resistant to the bacteria.
6. Students should know that many of the other medicines e.g. pain killers or cough mixtures are used to relieve the symptoms of infection such as headaches, fever, congestion, etc.

≡ Main Activity: Comic Strip Scenarios

1 Read through the comic strips

2 Make decisions about antibiotic use for the characters



Main Activity: Comic Strip Scenarios and discussion

This activity can be carried out in small groups or as a classroom discussion. The task is presented like a cartoon story.

1. Each section of the cartoon has a situation with a decision that needs to be made. The words spoken by the decision maker are in italics to highlight them.
2. Show each box to the students (either all together SH1 and SH2, or as individual boxes on the white board) and discuss whether the decision maker has made the right or wrong choice.
3. Discussion points can be found in TS1. Students will learn how and when to use antibiotics appropriately.

≡ Extension Activities

Antibiotic flashcards

This activity can be carried out in small groups of 3 or 4 or as part of a class discussion. Provide students with SH3 and ask them to answer either 'yes' or 'no' to the statements. Answers are available on the e-bug website.

Word mix up game sheet

This fun activity can be carried out either individually or in groups of 2 or 4 students. Provide students with SW1. Students should match the word on the left-hand column with the definition on the right-hand column. Answers are available on the e-bug website.

Learning Consolidation

At the end of the lesson, ask the class if they can name different ways to correctly use antibiotics.

For example:

- Only use antibiotics prescribed to me by my doctor
- Always finish the course once started
- Never take somebody else's antibiotics
- Sign up to become an antibiotic guardian
- Or write your own

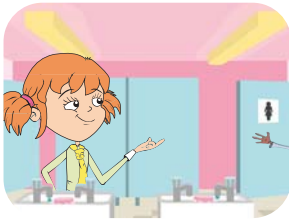




Discussion Points



Eva should cover her mouth whilst coughing. Infection can easily spread from person to person through coughing and sneezing. A sneeze travels at approximately 100mph and at high force meaning that the microbes carried in a sneeze can travel very far and infect other people.



You should always wash your hands after going to the toilet. Many harmful microbes that make you ill are found in toilets. Good personal hygiene is essential to a healthy lifestyle and can greatly reduce the spread of infection. Trials show that proper hand washing reduces absenteeism in schools, not just from tummy bugs but from coughs and colds too.



Eva should NOT use her sister's antibiotics. There are many different types of antibiotics which treat different bacterial infections. Doctors prescribe specific antibiotics for specific illnesses and at a dose suitable for the patient. Taking someone else's antibiotics may mean your infection does not get better



Mrs Brooke should have washed Luca's cut knee to clean any dirt or microbes which may have been present. Antiseptic cream applied to deeper cuts can also help prevent infection. There is generally no need to cover smaller cuts and grazes with a plaster, fresh air will help the scabbing process.



Dr Cooper is right; antibiotics only work on bacterial infections. Coughs and colds are caused by viruses and in many cases the body's own natural defences will fight these infections. Other medicines from the chemists help with the symptoms of coughs and colds.

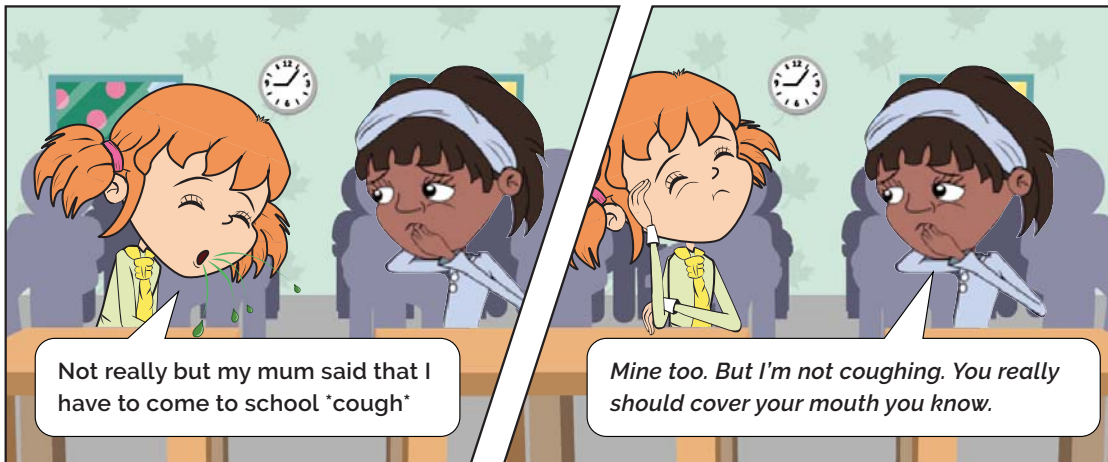


It is important for Luca to finish the course of antibiotics. Not finishing the course could result in the bacteria not being killed properly and becoming resistant to the antibiotic in the future.





Ina went to school not feeling very well. She had a headache and a runny nose. When she arrived in the classroom she took a seat beside Eva. She soon realised that Eva was also not well.



At lunch time, Eva and Ina went to the toilet. Ina was hungry and in a hurry to have her lunch.



During lunch Eva was talking to her friend Luca about her headache and runny nose.

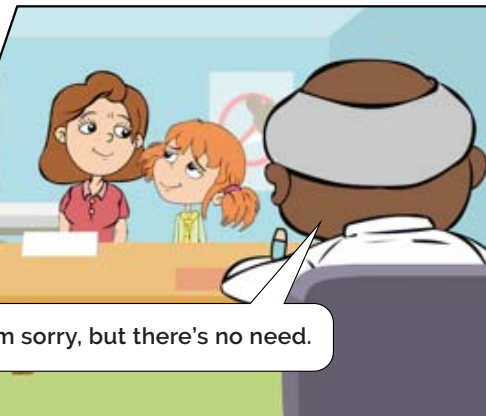
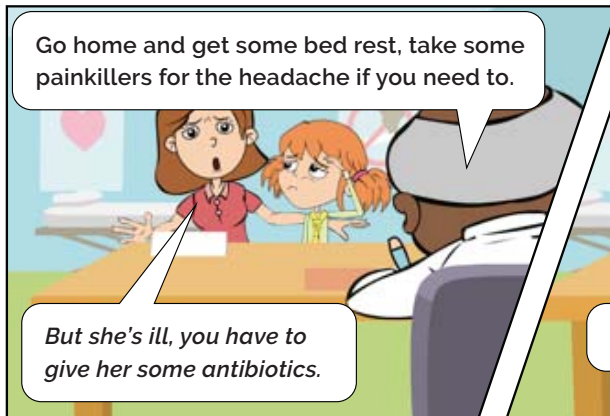




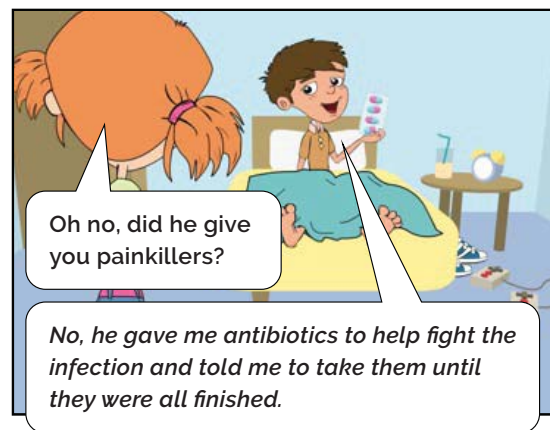
After they had eaten, the children went out to play. Luca fell over and cut his knee very deeply.



When Eva got home, her mother decided to take her to the doctor. Dr Cooper said that she had a bad cold.





A few days later, Luca didn't come to school, so Eva called around to see him on her way from school.






Harmful
microbes
make us ill
Yes or No



I can treat coughs
and colds with
antibiotics
Yes or No


I should always wash
my hands after going
to the toilet
Yes or No



If my friend is ill I
can give them my
old antibiotics
Yes or No


I should always
cover my coughs
and sneezes with
a tissue
Yes or No


Most of the time my
immune system can fight
infections like the common
cold by itself
Yes or No


If my doctor gives me
antibiotics to take for 7 days
but I feel better after 3 days
I can stop taking them
Yes or No


Antibiotics only
work on bacterial
infections
Yes or No


I should only take
antibiotics prescribed
by my doctor
Yes or No





Word Mix Up

Antibiotic

Bacteria

Infection

Medicine

Painkiller

Virus

Symptom

The smallest of the microbes - Usually harmful

A drug used to treat a disease or injury

A sign of illness e.g. headache, diarrhoea and fever

Special medicine used to treat bacterial infections

A disease caused by a microbe

Very small microbe that can be helpful or harmful

A drug used to take away pain

