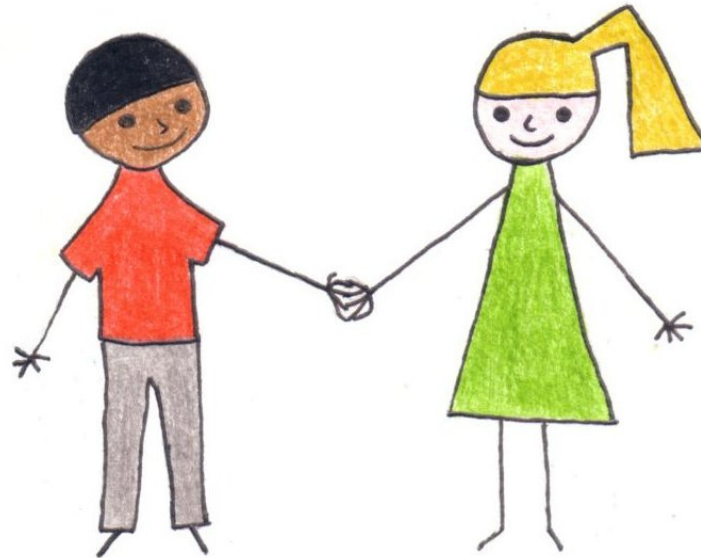


OUR BATTLE AGAINST BACTERIA ... the story of antibiotics

‘We know that some bacteria can make you ill, and some medicines can cure you - but we want to know more!’

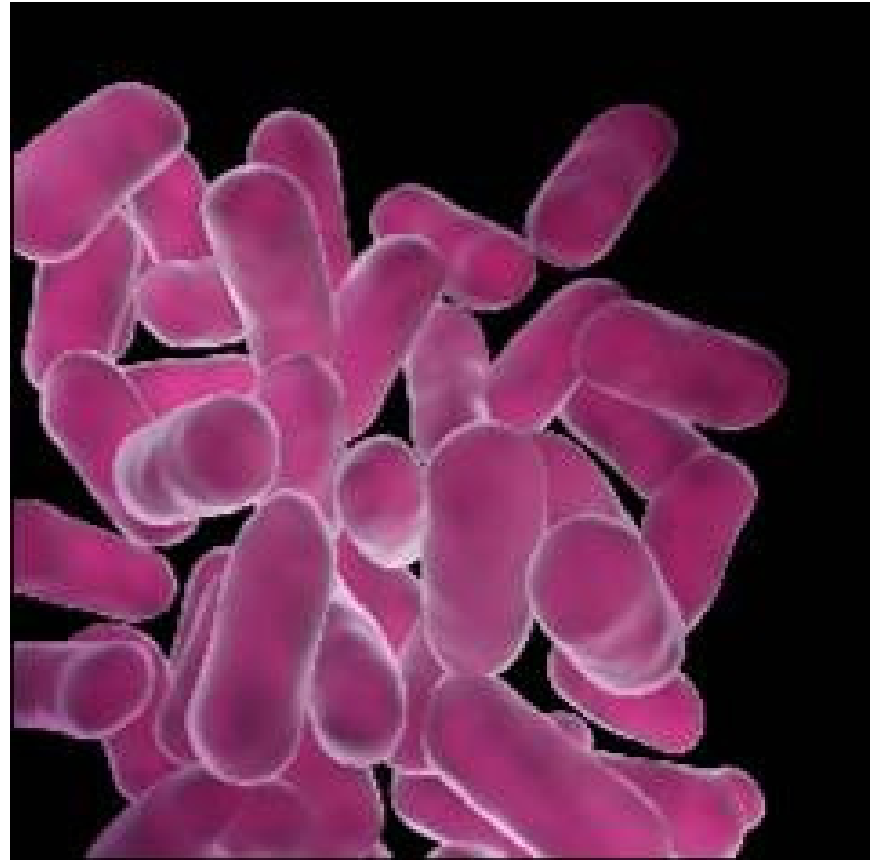


‘We’re going to find out as much as we can about bacteria and the medicines which make us better.’

Microbes – good and bad!

Look around you. There are bacteria everywhere – but you can't see them.

Bacteria are tiny living things, so small that billions of them would fit in a teaspoon!



Most bacteria are harmless, and some of them are really useful.

They help us to make medicines. We also use them to make food like cheese and yoghurt. They help to make cattle food (silage) from grass as well.



Bacteria break down sewage (the waste from our toilets), which is a very important job.

They are also involved in decay - the break down of dead leaves, animals and plants



Some bacteria can make you ill. Diseases like tonsillitis are not too serious, but millions of people around the world have died from diseases like diphtheria, TB and pneumonia – all caused by bacteria.



Bacteria can also cause infections after having a baby, or getting a cut, or even having an operation.

Diseases caused by bacteria are **infectious** – this means they can be passed from one person to another.

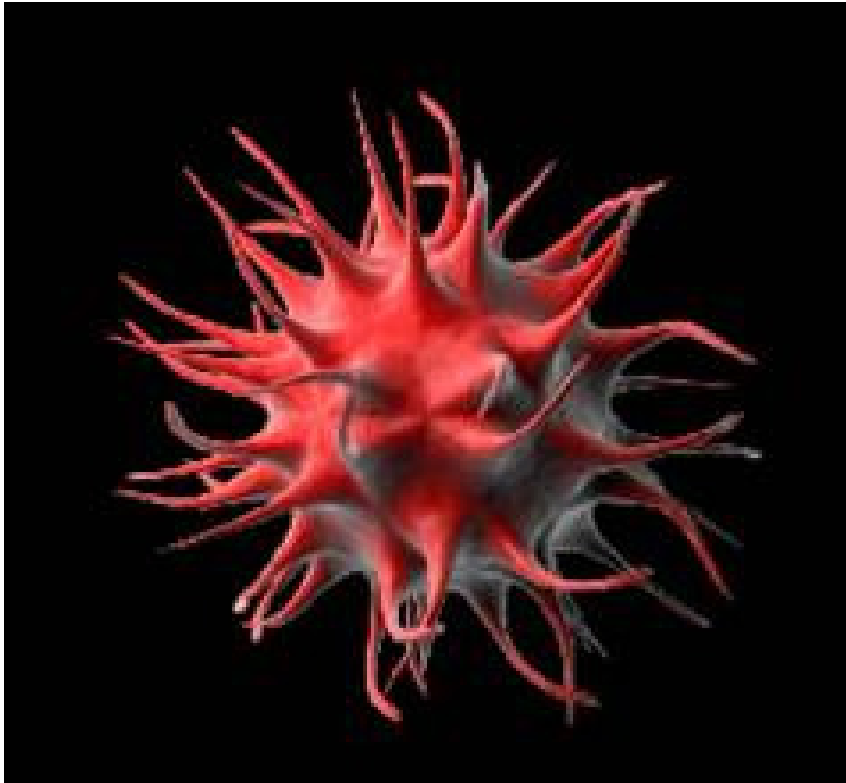
Disease-causing bacteria can be passed on through the air we breathe, the things we touch and even the water we drink and the food we eat.



Bacteria are part of a group of tiny organisms called **microorganisms** or **microbes**. Microorganisms include fungi, like the mould on this orange. Although some fungi cause illnesses like athlete's foot, many do no harm at all.



Some fungi are really helpful – we eat mushrooms and we use yeast, another fungus, to make bread, wine and beer.



Viruses are another type of microbe. They all cause disease.

For thousands of years people had no way of defending themselves against diseases caused by bacteria and other microbes.

If someone got ill, they had to be looked after until they got better or died.

Everyone just had to hope for the best.

About a hundred years ago, things started to improve. Now we have some very good medicines to defend us against bacteria – special chemicals we call **antibiotics**, which kill bacteria and make us better.

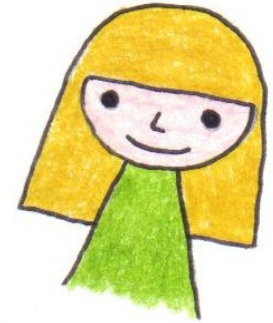


OUR BATTLE AGAINST BACTERIA ...

the story of antibiotics



'Have a look at these stories. We've discovered there are lots of medicines which can cure the diseases caused by bacteria - but we still need to find out some more!'



- [Fighting disease through the ages](#)
- [Chemicals to kill bacteria](#)
- [Penicillin - the story of a medicine](#)
- [Medicines for the future - the search for new antibiotics](#)

