



Bacteria

Bacteria are small microbes that often eat and recycle dead matter and turn it into food. They are also a source of infection.

A bacterium is a very simple creature. It has a single cell surrounded by a thick wall made of a type of sugar. This lets liquid food in and liquid waste out. Many bacteria have a long tail which spins, or thrashes about, and helps them to move.

Bacteria are often no more than one thousandth of a millimetre long (Picture 1).

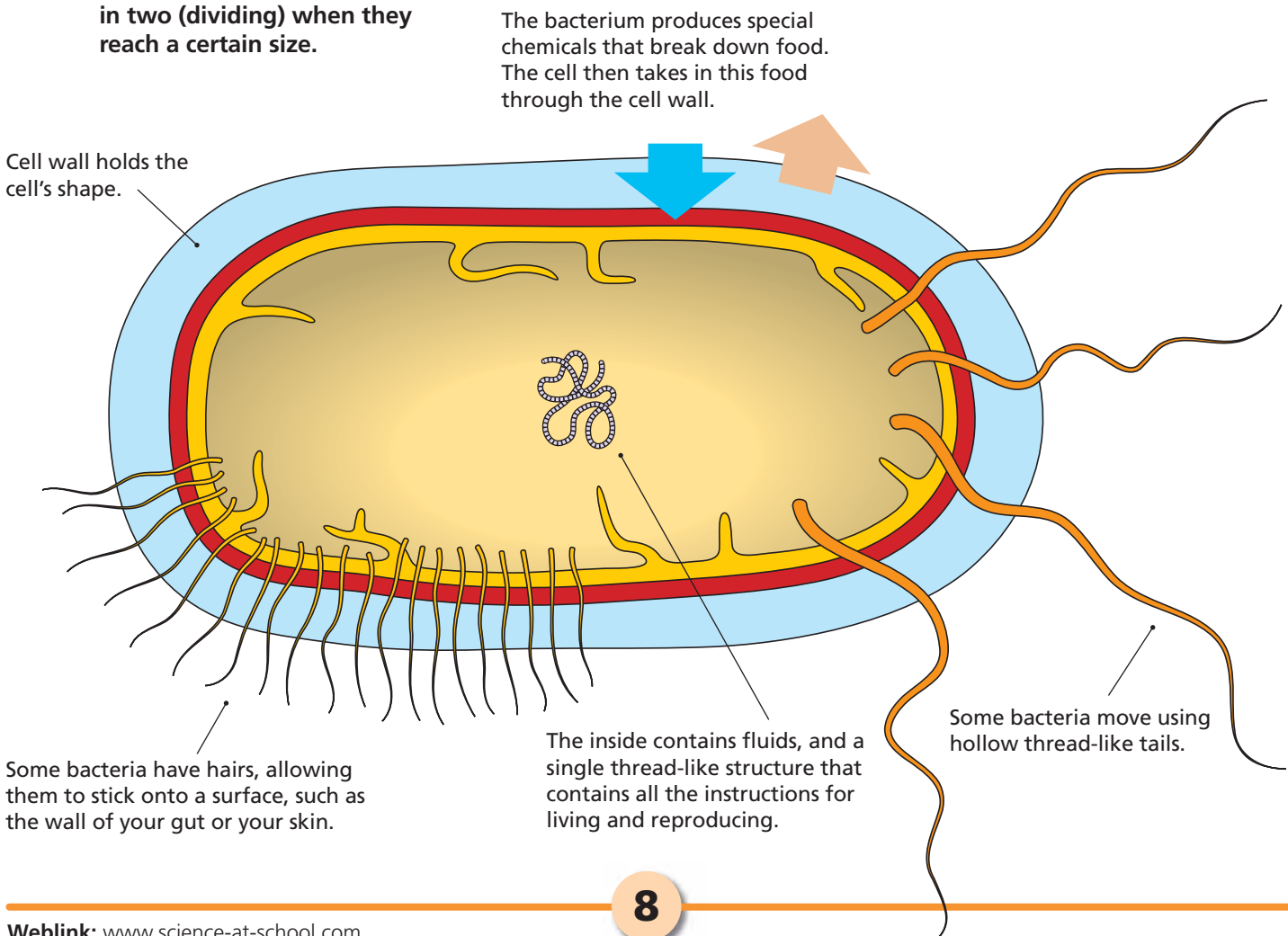
▼ (Picture 1) This is a simple rod-shaped bacterium. Bacteria breed by splitting in two (dividing) when they reach a certain size.

Bacteria names and shapes

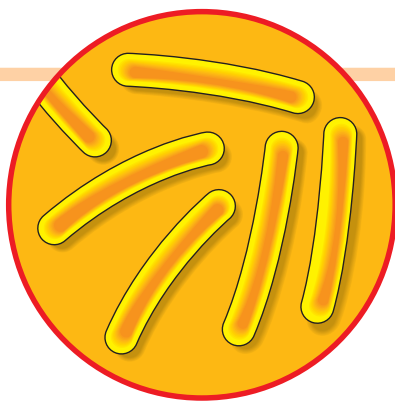
Bacteria come in three common shapes (Picture 2): rods, balls and corkscrews. The rod-shaped ones are called bacillus, the ball-shaped ones are called coccus and the corkscrew ones are called spiral.

How bacteria live

Some bacteria make their own food from sunlight, or from chemicals found in air, soil or water. Most bacteria feed on



► (Picture 2) The three main shapes of bacteria.



Rod-shaped
Bacillus bacteria.

chemicals made by other living things. These types of bacteria grow on dead plants and animals. They dissolve the dead cells and take out the chemicals they need.

Helpful bacteria

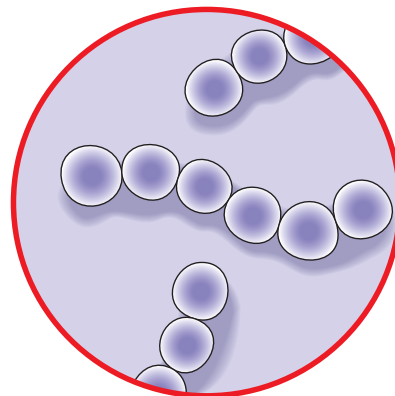
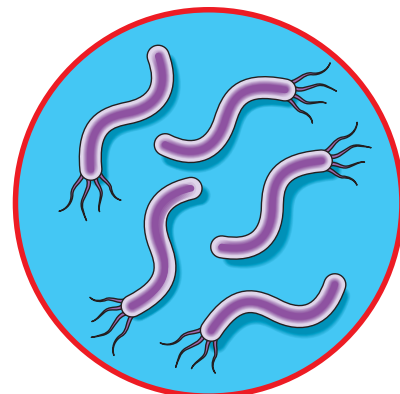
The chemicals that bacteria release as they dissolve dead plants and animals are used as nourishment by other microbes, and by plants and animals. For example, humans have important bacteria in their guts which help to digest food. They also make certain vitamins your body needs.

Bacteria are particularly important in recycling. For example, bacteria are responsible for breaking down dead plants and releasing the nourishment that living plants need. They do the same with human waste in sewage plants.

Harmful bacteria

As you can see, without bacteria, many other living things would not get the nourishment they need to live. But some bacteria also release chemicals that can be harmful, and even cause life-threatening **DISEASE**. Indeed, bacteria are an important cause of **INFECTIOUS DISEASES** in humans.

Corkscrew-shaped
Spirillum bacteria.



Ball-shaped
Streptococcus bacteria.

Various types of bacteria are found in foods and can cause **FOOD POISONING** in humans. This is one reason why we cook food. For example, pasteurisation (heating food to a high enough temperature to kill the bacteria) is used to kill the bacteria in milk.

Chemicals called antiseptics and germicides are used to kill harmful bacteria on the skin.

Summary

- Bacteria are among the tiniest microbes.
- Bacteria dissolve dead matter and release nourishment.
- Bacteria are a very common source of disease.