

# Bacteria

1. Bacteria are \_\_\_\_\_

1. Bacteria live almost everywhere, even in extreme environments like thousands of meters underground, hot springs with temperatures over 100°C, and very acidic water.

2. Bacteria can be:

Shape	Scientific name for shape	Picture
sphere-shaped		
rod-shaped		
spiral-shaped		

a. They are smaller than plant or *animal* cells.

b. They are prokaryotic since they do not have a \_\_\_\_\_.

3. Some bacteria have a capsule around the cell wall while others have an outer slime layer.

4. Many have whiplike tails called \_\_\_\_\_ to help them move.

5. Most bacteria reproduce by \_\_\_\_\_ creating two new identical cells; some bacteria exchange genetic material before dividing.

6. Bacteria can be \_\_\_\_\_ that make their own food, \_\_\_\_\_ that break down dead organisms, or parasites in living organisms that absorb nutrients from their host.

a. Most bacteria are \_\_\_\_\_ which use oxygen during respiration.

b. Some bacteria are \_\_\_\_\_ which do not need oxygen.

## Bacteria in Your Life

A. Most bacteria are \_\_\_\_\_ rather than harmful.

1. Bacteria are necessary for human \_\_\_\_\_.

a. Many bacteria aid \_\_\_\_\_ and some produce \_\_\_\_\_.

b. Some bacteria produce \_\_\_\_\_, which are used to treat diseases.

2. Bacteria help keep nature in \_\_\_\_\_.

  - a. Bacterial \_\_\_\_\_ use dead organisms as food and energy sources, thus recycling nutrients for use by other organisms. (Decomposers)
  - b. \_\_\_\_\_ in the soil and plant roots change nitrogen from the air to a form that plants and animals can use.

3. Bacteria can be used to clean up environmental pollution through \_\_\_\_\_.

  - a. Some bacteria break waste down into \_\_\_\_\_ compounds.
  - b. Certain bacteria can be pollutants.

4. Many \_\_\_\_\_ are made using bacteria.

  - a. Bacteria are used in dairy products such as \_\_\_\_\_ and \_\_\_\_\_.
  - b. \_\_\_\_\_ and \_\_\_\_\_ are also among foods made with bacterial help.

5. Bacteria are used in industry.

  - a. Bacteria grown in large, carefully controlled containers called bioreactors are used to make medicines and many other products.
  - b. \_\_\_\_\_ bacteria can digest wastes and provide a source of fuel.

B. Bacteria that cause disease are called bacterial \_\_\_\_\_

1. \_\_\_\_\_, or poisons, are made by some bacterial pathogens
2. Some pathogens form thick walled structures called \_\_\_\_\_ when environmental conditions are unfavorable; thus, they can survive for very long time periods.
3. \_\_\_\_\_, a process of limited heating, can kill most harmful bacteria in food.

