

## BACTERIA JUNIOR

Bacteria, also known as prokaryotes, are the most widespread living organisms on Earth: in just a spoonful of soil, for example, up to 10,000 billion bacteria can be found. They are unicellular organisms. Studying them under a microscope, different types of bacteria can be found. The **cocci**, for example, have a spherical shape; when they bunch into clusters they are called *staphylococci*, when they are arranged in chains they are called *streptococci*. Bacteria with a rod shape are called **bacilli**. They are usually found as single cells but at times they join to form pairs (*diplobacilli*) or chains (*streptobacilli*). Some bacteria are comma shaped and others have a thick spiral shape. The former are called **vibrios**, while the latter are called **spirilla**. Lastly, there are bacteria with a long, flexible spiral shape called **spirochetes**. Within this bacterial group, some long “giant” forms can be found that can measure 0.5mm, which is 500 times bigger than a common bacterial cell.

Bacteria can live in every environment, even in the most extreme, where no other form of life could possibly survive. They can be found on the ocean floor, in deserts, in the boiling water of volcanic springs, within rocks, in the frozen permafrost soil and even in environments that are so acid that all other forms of life have been destroyed. Many bacterial species live within or on the surface of other organisms as symbionts or parasites. Symbiosis is an association between two or more species which benefits each member; on the contrary, in parasitism, only one organism (the parasite) benefits from the relationship, while the other (the host) is harmed. Even our bodies are inhabited by many species of bacteria. Thousands of bacterial cells that keep on reproducing live on each square centimetre of our skin. Our gastrointestinal apparatus contains up to 500 different bacterial species, mainly situated in the colon.