

Bacteria Comic Strip Project

Biology/Ms. O'Connor

Quick Review of Bacteria

- Bacteria are the oldest, the simplest, and the most numerous forms of life.
- Bacteria were here 3.5 billion years ago.
- A bacterium's structure is quite simple. From the outside in, there is the capsule, the cell wall, and then the cell membrane. Inside is the cytoplasm, which holds the hereditary material, and at times the endospore. There are no intracellular organelles.

Even though bacteria are so tiny, they play a very large role in their ecosystem.

- By decomposing the dead organisms, the bacteria release essential nutrients into the air and soil. The simpler material made by decomposition can be used by both autotrophic and heterotrophic organisms.
- Another very important job of bacteria is something called nitrogen fixing, or nitrogen cycling.
- Green plants cannot use the nitrogen in the air, or atmospheric nitrogen. Nitrogen-fixing bacteria change atmospheric nitrogen into simpler substances called nitrites. Nitrites are needed by green plants.

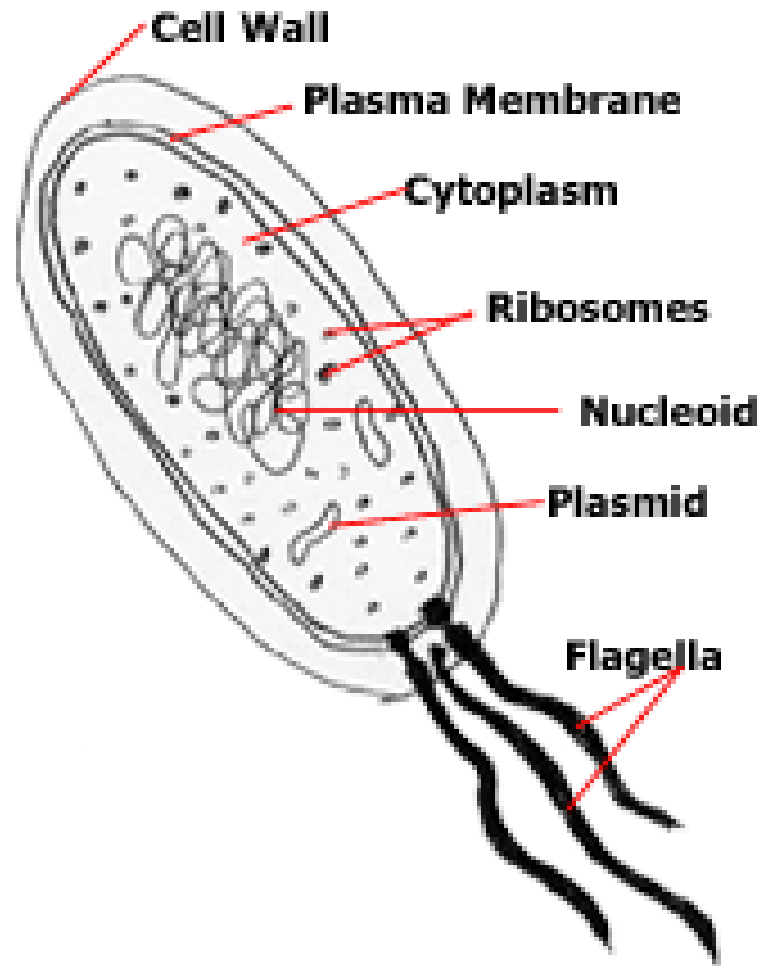
- Vast numbers of bacteria live in our bodies. One ex. is found in the intestine. This bacteria & humans have formed a symbioses with each other. The bacteria help us with digestion & to produce vitamins.
- Most dairy products are made by or with the help of bacteria.
- Some other kinds of foods that involve bacteria in their production are pickles & high fructose corn syrup.

- Bacteria help in the production of fuel in 2 major ways. Some bacteria decompose compost, garbage & sewage & help make methane.
- Bacteria is very important in medicine. Bacteria can actually help to fight themselves. Drs & scientists have figured out how to use dead or weakened bacteria to prevent other bacterial diseases. This process is called vaccination.
- Bacteria can even help to break down oil to make clean-up after an oil spill easier. This is a big plus for the environment. Scientists are even looking for a use for bacterial-made plastics.

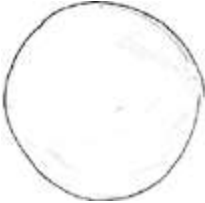
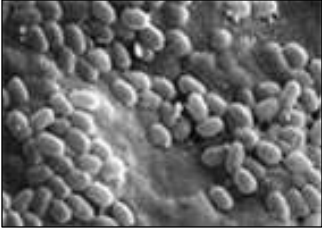




Pathogenic “bad” bacteria

- Bacteria can cause diseases in humans, in other animals, & also in plants. Some bacteria can only make one particular host ill; others cause trouble in a number of hosts, depending on the host specificity of the bacteria.
- The diseases caused by bacteria are almost as diverse as the bugs themselves & include food poisoning, tooth ache, anthrax and even certain forms of cancer.

Bacteria Structure



Bacteria can occur in three basic shapes:

Name	Basic Shape	Example
(electron micrograph) Name Basic Shape Example		
Coccus (sphere) <i>Staphylococcus aureus</i>		
Spirillum (spiral)		

Project directions

- Using your notes and text book for reference you will create a new bacteria.
- Your bacteria can be “good” or “bad”.
- It must follow patterns for structure and naming.
- It will become either the “hero” or “villain” in a comic strip you will create.
- The comic must show how your bacteria is either good or bad & be at least 5 scenes long.
- Do a good job & be creative!