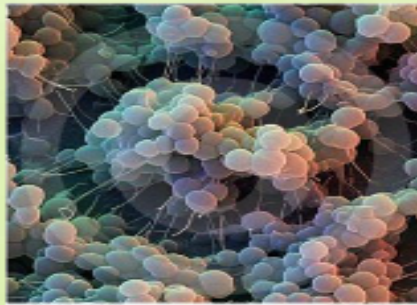


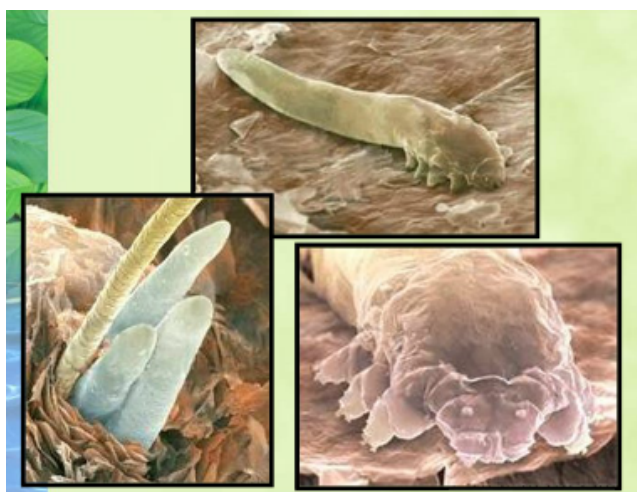
<http://www.ducksters.com/science/bacteria.php>



Microorganisms

- Microorganisms are living things you cannot see without a microscope.
- Some are helpful while others are harmful.





Microorganisms come in many different shapes, sizes and varieties. They can work alone or in colonies.

For example, [an amoeba](#) can live alone in solitary bliss, while fungi help each other survive, by working in colonies.

Most importantly, microbes make up the largest number of living organisms on the planet. There are a million upon billion upon trillion microbes around the world.

Some of them can make their own food and are called autotrophic.

Some depend on other living organisms for food and are called heterotrophic.

Microorganisms can reproduce sexually or asexually.

<http://mocomi.com/microorganisms/>



Helpful Bacteria

- Bacteria are used to make **cheese** and **yogurt**!
- Different types of bacteria cause different tastes!



Helpful Fungus

- Mold is a type of fungus.
- A mold called **penicillin** is an antibiotic (medicine) we take to kill bad bacteria.



Helpful Fungus

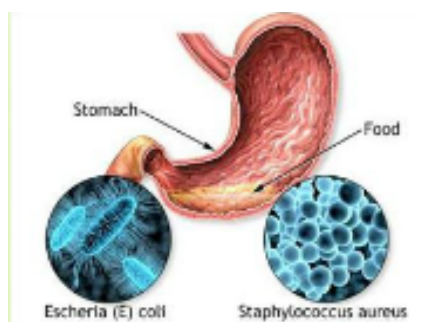
- Yeast is another type of fungus.
- We use yeast when baking bread (releases CO_2) and to make wine (creates ethanol).



Harmful Microorganisms

- Some microorganisms make us very sick and destroy our food.





Harmful Fungus

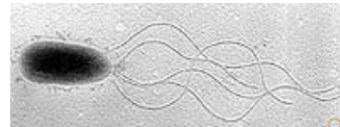
- Fungus can cause things such as:
 - Mold on food
 - Athlete's Foot
 - Dandruff



How they eat

Some bacteria are photosynthetic (*foe-toe-sin-theh-tick*)—they can make their own food from sunlight, just like plants. Also like plants, they give off oxygen. Other bacteria absorb food from the material they live on or in. Some of these bacteria can live off unusual "foods" such as iron or sulfur. The microbes that live in your gut absorb nutrients from the digested food you've eaten.

How they Move



Some bacteria have whip-like appendages called flagella used to ‘swim’ around.

Others produce thick coats of slime and ‘glide’ about. Some stick out thin, rigid spikes called fimbriae to help hold them to surfaces.

Some have hair like appendages that are called cilia

Some bacteria move about their environment by means of long, whip-like structures called flagella. They rotate their flagella like tiny outboard motors to propel themselves through liquid environments. They may also reverse the direction in which their flagella rotate so that they tumble about in one place.

Other bacteria secrete a slime layer and ooze over surfaces like slugs. Others are fairly stationary.