

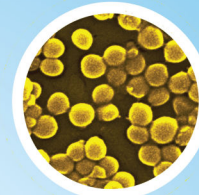
# Microbe Mania!

## Microbes!

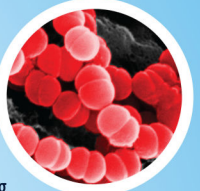
- Microbes appeared on earth about 3.5 billion years ago.
- There are more microbes than all other animals and plants in the world.
- Some microbes live in places where nothing else can live.
- If there were no microbes, there would be no people!
- Microbes come in all shapes and sizes



Salmonella typhi (typhoid fever) - Bacteria



MRSA - Bacteria



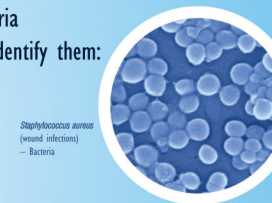
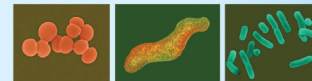
Streptococcus (sore throat) - Bacteria

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## 3: Bacteria

- Bacteria are found EVERYWHERE including all over our bodies.
- There are three different shapes of bacteria and scientists use these shapes to help identify them:

Balls (Staphylococcus) Spirals (Campylobacter) Rods (Lactobacillus)



Staphylococcus aureus (wound infections) - Bacteria

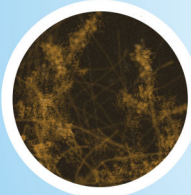
## Microbe Types

### 1: Fungi

- The giants of all microbes!
- Fungi can be good and bad — good fungi can be used to make bread (yeast) or antibiotics. Bad fungi can cause mould on bread or diseases such as athletes foot!



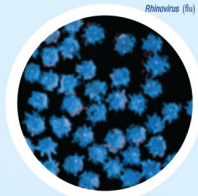
Stachybotrys chartarum (toxic mould) - Fungi



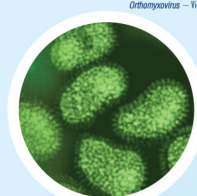
Trichophyton mentaophytons (athlete's foot) - Fungi



Saccharomyces cerevisiae (bread and brewers yeast) - Fungi



Rhinovirus (flu) - Virus



Orthomyxovirus - Virus



Epstein Barr (kissing disease) - Virus



Streptococcus pneumoniae (pneumonia) - Bacteria

### 2: Virus

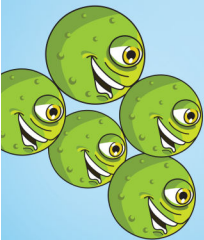
- Viruses are parasites - they need to live inside the cells of animals, plants and even other microbes to live!
- There are very few good viruses and most viruses make us ill!

## Good Microbes

- Most microbes are good for us and do **not** cause disease.
- Microbes generate at least half the oxygen we breathe.
- Microbes live on the roots of plants and help them absorb food and water.
- Microbes are responsible for creating foods such as wine, cheese, vinegar, yogurt, and chocolate!

## Bad Microbes

- Some microbes can be harmful to humans and cause disease or illness.
- The bad microbes are known as **pathogens** but are sometimes called bugs or germs.
- Pathogens spread by close contact, coughs, sneezes, food water and animals.
- Disease causing microbes that spread from person to person are known as infectious.
- Bad microbes love it when you, your home, school or environment is unhygienic or dirty.
- Remember, microbes multiply very fast so it only takes one bad microbe to get inside your body and make you sick!
- Many of our everyday illnesses are caused by viruses e.g. ear ache, colds, flu, most coughs and sore throats!



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