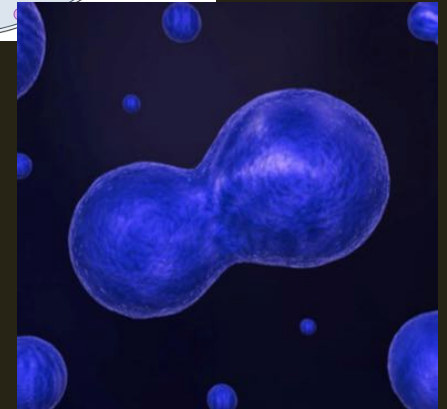
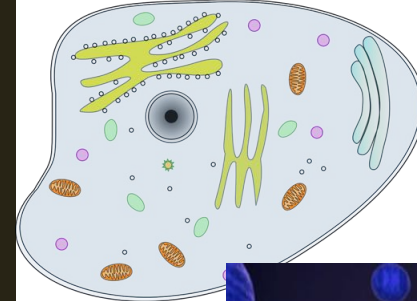


Unicellular and Multicellular Organisms

- Cells
- Unicellular Organisms
 - ✓ Bacteria, Protozoa, Fungi and Amoeba
- Multicellular Organisms
 - ✓ Plants, Animals and some Fungi and algae
- How They Meet Their Needs
 - ✓ How Feeding
 - ✓ Movement
 - ✓ Reproduction
 - ✓ Gas Exchange



TeachWithFergy

Preview File

Please enjoy this preview of your Student Version of the lesson. I've created this PDF for ease of viewing and to decrease the file size but of course, your lesson will be in PowerPoint format.

- Some slides appear blank because they have been removed.
- Student versions have portions of the text removed which is given in the teacher version and appear as _____
- Other slides may have on them, this represents writing that has been removed.

Cells

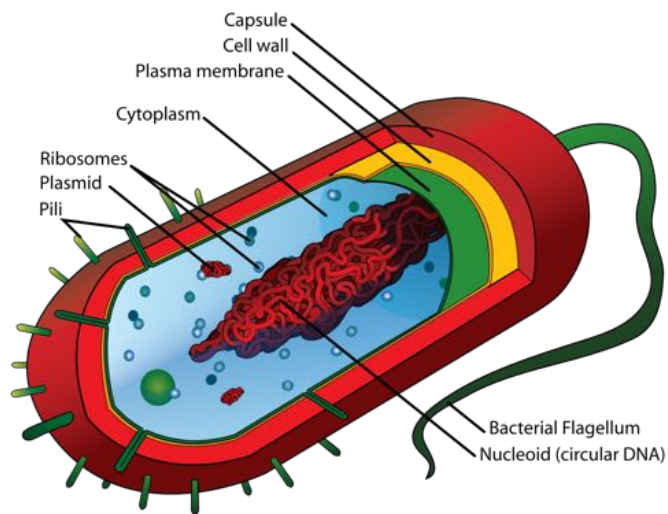


IN SLIDESHOW MODE, CLICK THE IMAGE
TO SEE HOW VIDEOS ARE EMBEDDED
INTO YOUR LESSONS

Recall:

- Cells make up all living things from simple bacteria or complex humans and plants

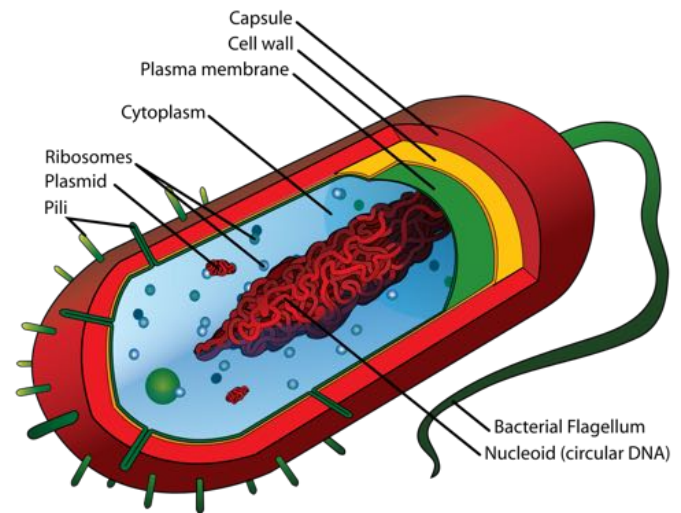
- _____



Unicellular Organisms

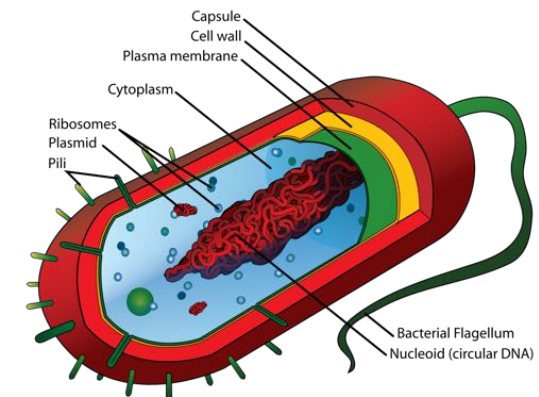
- A unicellular organism (a.k.a. a single-celled organism) is an living thing that only has one cell
- They are the oldest form of life having evolved about 3.5 billion years ago
- They can be prokaryotic (no nucleus) or eukaryotic (has a nucleus)
- There are 3 main types

1. _____
2. _____
3. _____



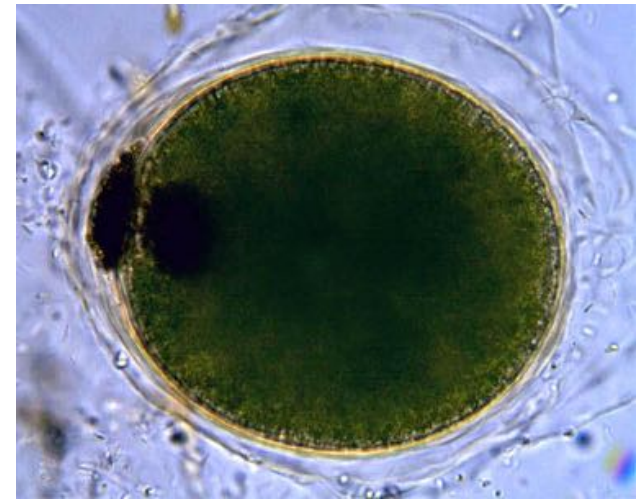
Bacteria

- _____
- You have bacteria in your intestines that help break down food. Without it, you couldn't survive
- There's also the bacteria that will make you sick like E. coli, listeria and salmonella
-



Protozoa

- A group of eukaryotic unicellular organisms
- _____
- Behaves like an animal as it can easily move and is thought to hunt for its food
- Ranges in size from 10 micrometers to 20 cm!



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Amoeba

- A type of unicellular organism which can alter its shape
- Amoebas can found in the protozoa, fungi, algae and animal groups
- _____



1755 - The first record and illustration of an amoeba from Roesel von Rosenhof's *Insecten-Belustigung*

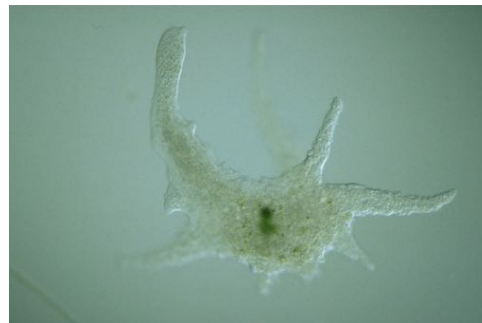


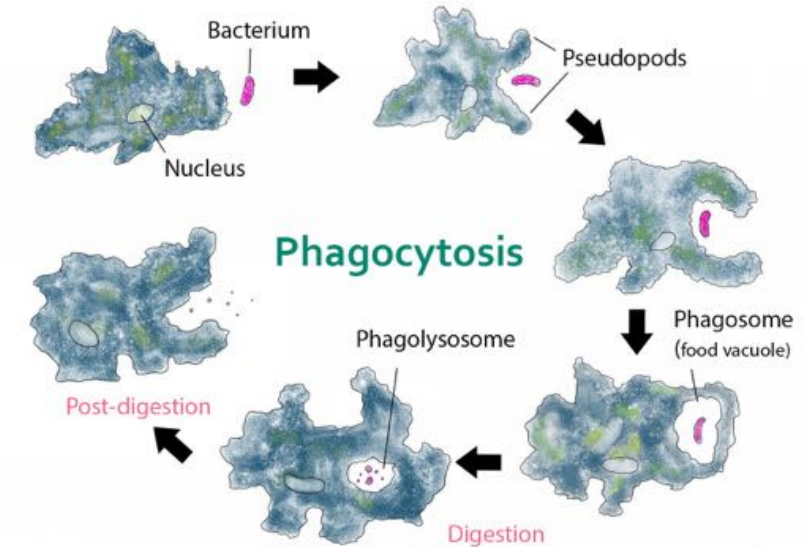
Photo credits: dr.Tsukii Yuuji - <http://protist.i.hosei.ac.jp/PDB2/PCD1761/D/79.jpg>

Frank Fox - <http://www.mikro-foto.de>

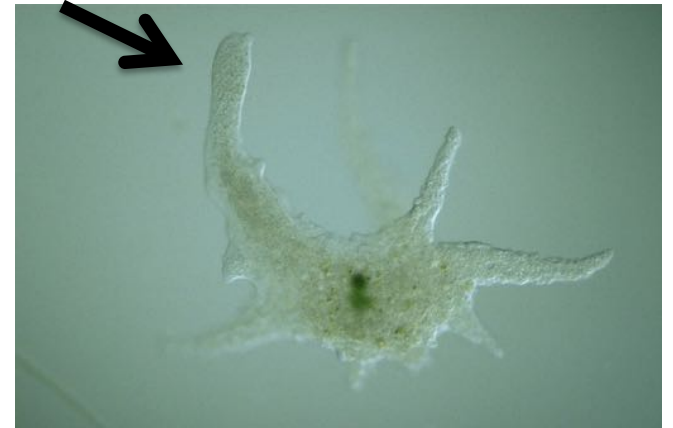
Unicellular Feeding

- Many unicellular organisms
-

- The organism extends pseudopods (body extensions) which surround their food, connect and bring the food inside the organism for digestion

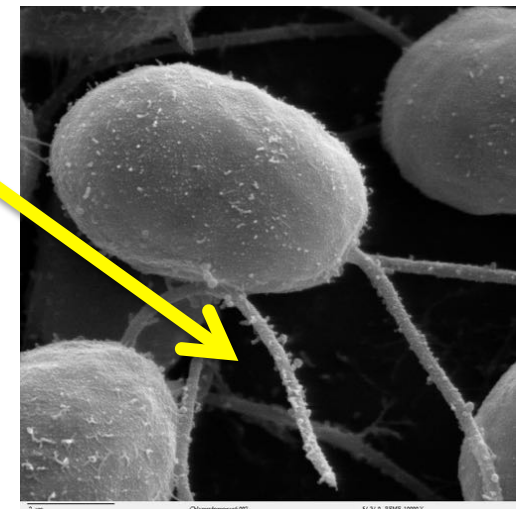
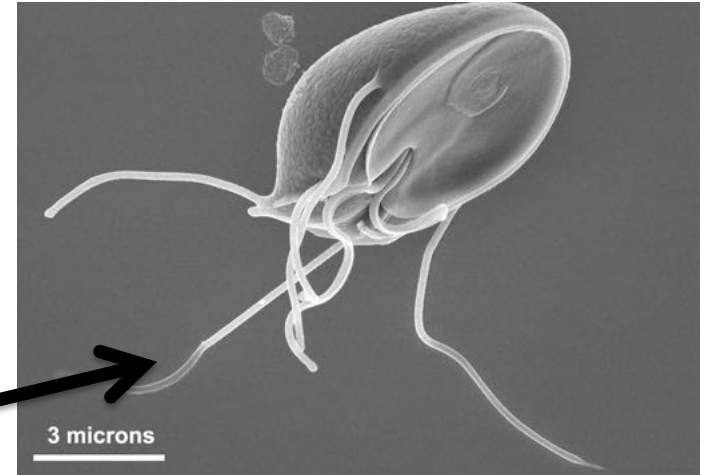


Pseudopod



Unicellular Movement

- Many unicellular organisms move by rapidly moving hair-like structures called flagella
- Similar to moving your arms



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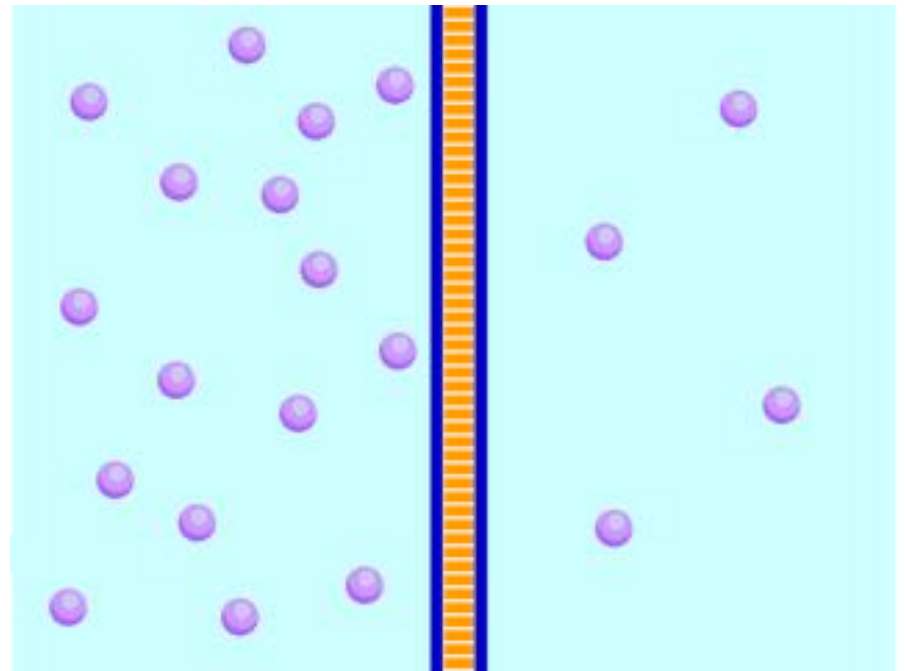
Unicellular vs. Multicellular Organisms



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Unicellular Gas Exchange (Breathing)

- Single-celled organisms are very small and so oxygen can move into, and wastes out of, the cell through diffusion (movement of a substance from high to low concentration)



Multicellular Organisms

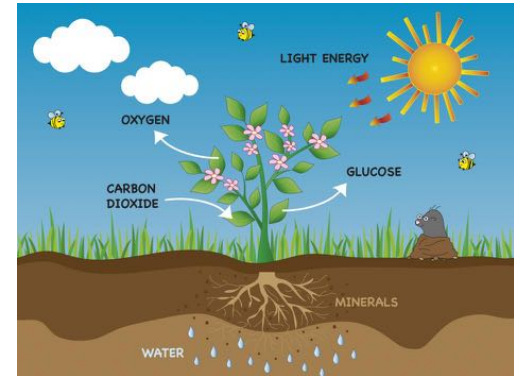
- _____
- Multicellular organisms are much more complex
- Multicellular organisms evolved from unicellular organisms about 600 million years ago
- All plants, animals and some fungi and algae are multicellular



Fungi

Multicellular Feeding

- Since multicellular organisms are more complex than unicellular ones, they have many ways of obtaining their energy
- Fungi eat by breaking down food outside themselves then absorbing the nutrients
- Plants get their energy through photosynthesis
- _____

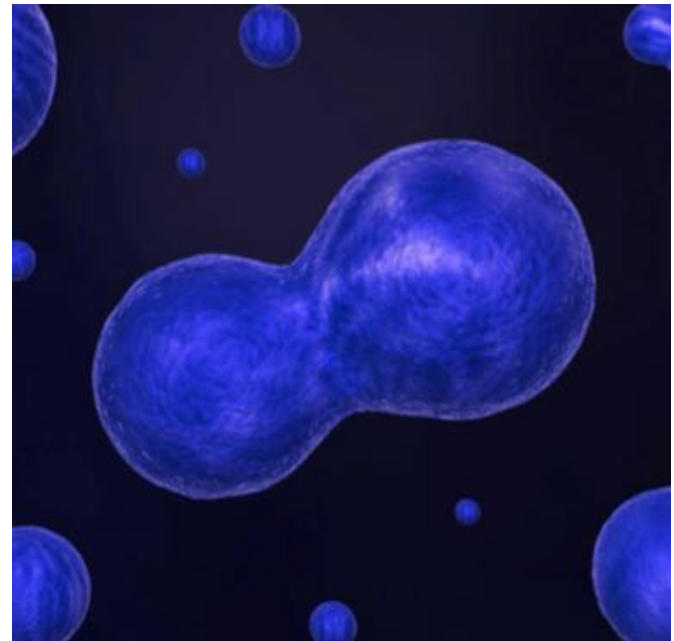


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Multicellular Reproduction

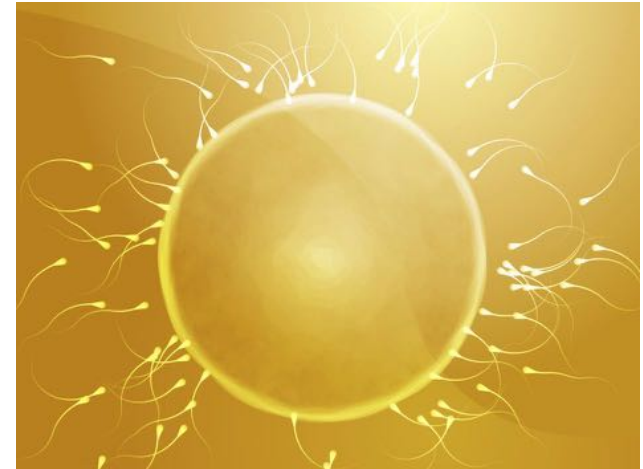
- Multicellular organisms can reproduce:
 - asexually (double everything inside the cell and then divide in half) producing a clone
 - Fungi produce asexually

—



Sexual Reproduction

- Sexual reproduction produces offspring that are similar to the parents but not identical
- Cells called _____



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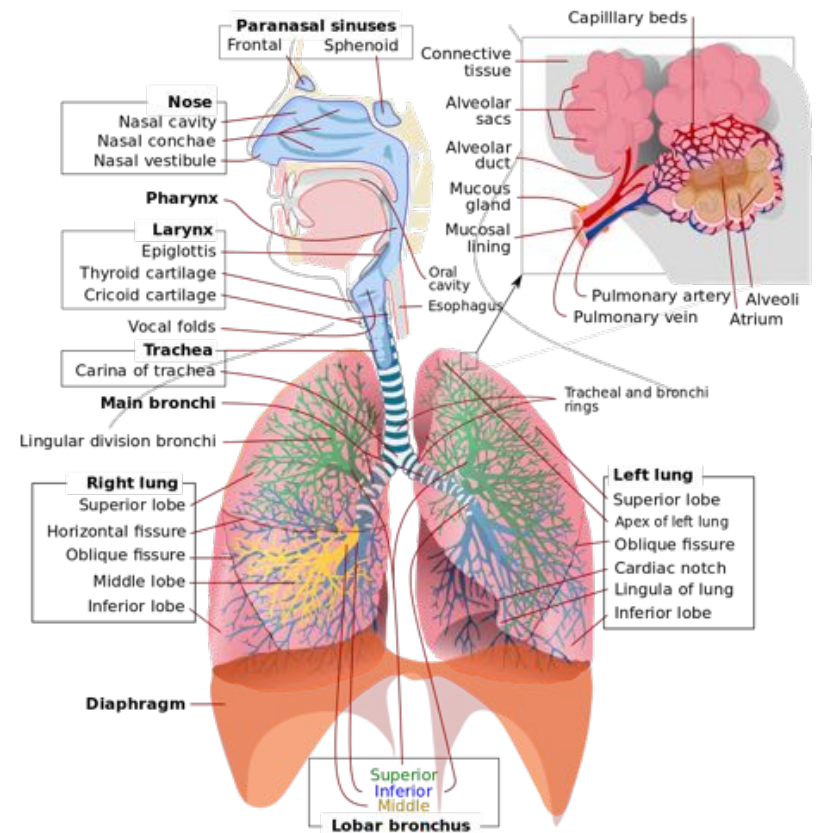
Multicellular Gas Exchange (Breathing)

- In simple multicellular organisms like algae, gas exchange can occur via diffusion
 - In larger organisms, their cells are too far from the
-



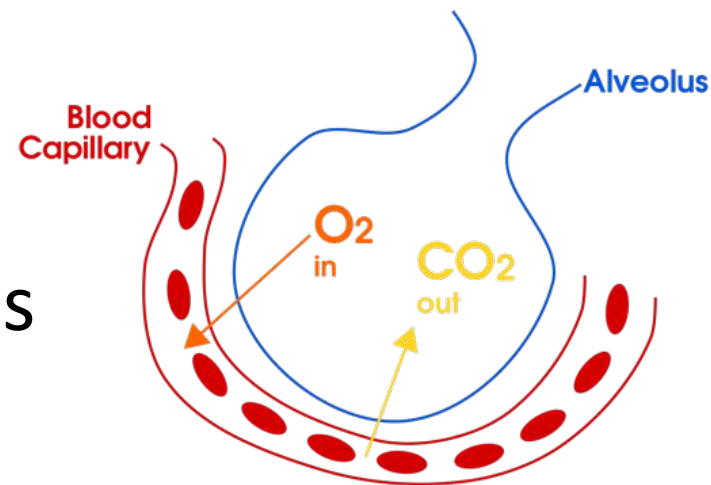
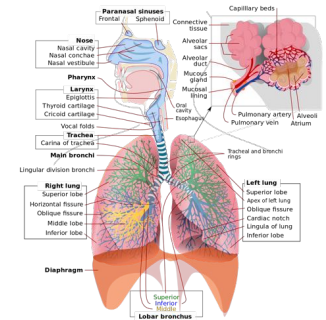
Multicellular Gas Exchange Animals

- Since getting oxygen and getting rid of carbon dioxide is so important for animals, we have a complex system for gas exchange



Multicellular Gas Exchange Animals

- Oxygen is brought in through the nose or mouth
- In the alveolus, oxygen is sent into the blood stream to be carried all through the body
- _____

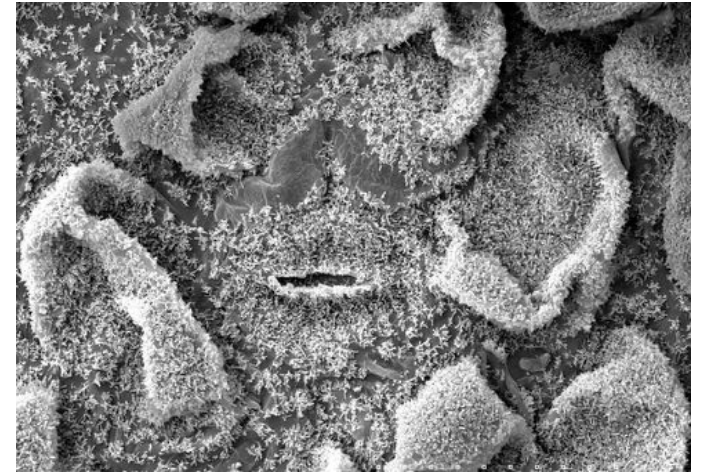


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Multicellular Gas Exchange

Plants

- In water plants, water passes over the plant and provides it with oxygen
- In land plants, oxygen enters and carbon dioxide exits _____



A leaf magnified 800 times in a electron microscope, the breathing organs of the leaf (stomata) are in the center of the picture.