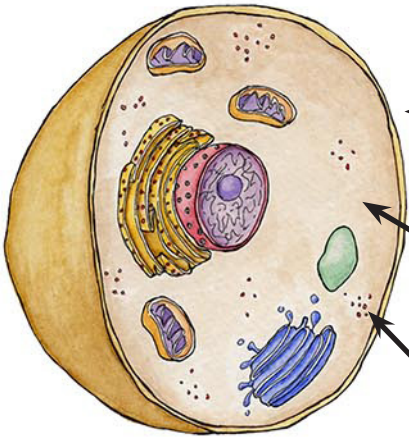


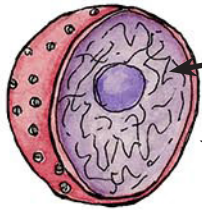
Animal Cell Organelles



← 1. Each cell has a protective outer layer – the plasma membrane. The plasma membrane lets certain things into the cell that it needs, but keeps other things out. This is called semipermeable.

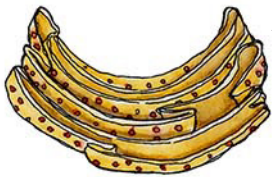
← 2. Inside the cell is a watery medium that everything floats in called cytoplasm. The cytoplasm contains all the working parts of the cell, the organelles.

← 3. Little grains floating around inside the cell are ribosomes, where proteins are made.



← 4. The nucleus has our DNA that contains all our genetic information. The DNA is found on structures in the nucleus called chromosomes. There are 23 pairs (46 total) of chromosomes in each nucleus of each cell.

← 5. The nucleus is surrounded by a nuclear membrane, which controls what goes in and out.



← 6. Rough endoplasmic reticulum (rough ER) is a series of folded membrane pathways spotted with ribosomes. Together the ribosomes and the rough ER make new proteins and new membranes that the cell needs.



← 7. Smooth Endoplasmic Reticulum (smooth ER) has no ribosomes on it and forms containers called transport vesicles that are used to move things around inside the cell.



← 8. Golgi apparatus are made up of sacculi that package up things to be transported around the cell or that need to leave the cell, like hormones.



← 9. Lysosomes are vesicles that have digestive enzymes inside them and break down the things that the cell doesn't need. They also kill bacteria that invades the body.

← 10. Vacuoles are membrane large membranous sacs for storing things. Vesicles are smaller sacs.



← 11. Mitochondria have a double membrane that folds in on itself forming little finger-like projections called cristae. Inside is a gel-like matrix with enzymes that break down sugars to make ATP, which is used by the cell as energy. These very important organelles contain their own DNA and ribosomes, reproduce by division and can even produce some of their own proteins.