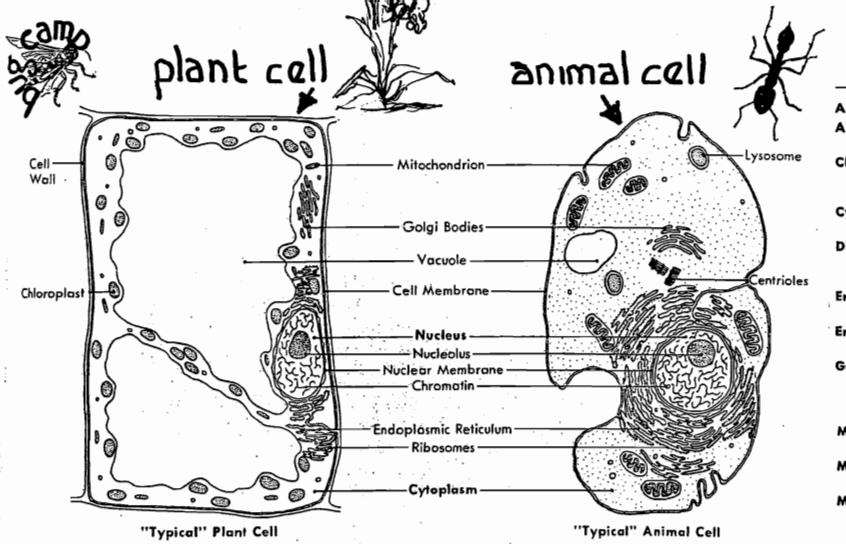
parts of a cell

Our goal is to find out about the parts of the cell and what they do

	STRUCTURE	PLANT	ANIMAL	FUNCTION
1	NUCLEUS	✓	✓	Controls activities of the cell. Contains material which determines heredity and the NUCLEOLUS.
2	CYTOPLASM	✓	✓	Thick fluid that contains all the inner cellular material, except the NUCLEUS. Various activities & life processes take place here.
3	CELL MEMBRANE	✓	✓	Outer boundary of the CYTOPLASM. It regulates digested food & oxygen entering the cell & wastes leaving.
4	CELL WALL	✓		A tough rigid material which gives plant cells a definite shape. This outer boundary of a plant cell is composed of cellulose.
5	VACUOLE	✓	✓	Cellular bubbles or spaces containing fluid. Very large in plants & small or absent in animals. They are storage places of water, food, & other material.
6	CHLOROPLAST	✓		Small body which contains the green pigment Chlorophyll. Green plants need chlorophyll to make food.
7	CENTROSOME CENTRIOLE		✓	The CENTRIOLES are contained in the CENTROSOME located just outside the NUCLEUS. They play an important role in cell division.
8	NUCLEOLUS	✓	✓	One or more (NUCLEOLI(pl)) may be found in the NUCLEUS. Involved with interactions between NUCLEUS & CYTOPLASM
9	MITOCHONDRIA	✓	✓	Large granules that release energy (in chemical form) to the cell when needed. Known as the "power house" of the cell.
10	ENDOPLASMIC RETICULUM	✓	✓	Network of membrane enclosed channels which may connect the CELL MEMBRANE with the NUCLEAR MEMBRANE & function in the transport of many substances.
11	RIBOSOMES	✓	✓	Particles found in clusters or lining the outside of the ENDOPLASMIC RETICULUM. They are sites of protein synthesis (they make protein).
12	LYSOSOMES	✓	✓	Bodies slightly smaller than MITOCHONDRIA. They store powerful digestive enzymes.
13	GOLGI BODY	✓	✓	Folded channels that appear stacked up parallel to each other. May connect to ENDOPLASMIC RETICULUM. Plays an important role in the secretory process.
14	CHROMOSOMES	✓	✓	They are found in the NUCLEUS & are made up of Genes, which determine heredity by means of a substance called DNA.



"Typical" Plant Cell — "Typical" Animal Cell

parts of the cell found in

both animal and plant	only animal	only plant

right there questions

vocabulary

TERMS USED IN THE STUDY OF CELLS

Amino Acids are the building blocks of proteins.

ATP (adenosine triphosphate) is a compound produced in a cell that supplies energy for all the cell's activities.

Chromatin is a substance containing DNA, a cell's hereditary material. It is scattered throughout the nucleus, but gathers into chromosomes when a cell reproduces.

Cytoplasm is all the material inside the cell membrane except the nucleus.

DNA (deoxyribonucleic acid) is the substance within the chromosomes that carries hereditary instructions and directs the production of proteins.

Endoplasmic Reticulum is a system of deep channels that winds throughout the cytoplasm.

Enzymes are proteins that speed up chemical reactions in a cell.

Genes are units of heredity that determine particular characteristics, such as height and hair color. Each gene is a section of a DNA molecule and carries instructions for making a specific protein.

Meiosis is the process of division in sex cells that reduces the chromosomes to half the normal number.

Mitochondria are a cell's power plants, which produce most of its energy.

Mitosis is the process of cell division in which two identical daughter cells are produced, with each containing a full set of chromosomes.

Molecule is the smallest unit into which a substance can be divided and still keep the properties of the original substance. Molecules are made up of atoms.

Nucleus is the structure, usually near the center of a cell, that contains the cell's hereditary material.

Proteins are substances made up of amino acids. A cell's structures are built chiefly of proteins. Proteins called enzymes speed up chemical reactions in a cell.

Ribosomes are tiny, round bodies that border the endoplasmic reticulum. A cell produces proteins on the ribosomes.

RNA (ribonucleic acid) is a substance similar to DNA. It carries out DNA's instructions for making proteins.

Somatic Cells are all the cells in a multicellular plant or animal except the sex cells. Somatic cells contain a full set of chromosomes. Sex cells contain half the number found in the somatic cells.

what do you feel are the "3" most important parts of a cell and why?

name _____	name _____	name _____
why	why	why

& these are in my head questions

sally

Standards S2a, S4a, S6d, S7c, S7e

Pages 229 to 238 of your textbook will help you with this work chapter 8 section 3

use our web site

sally