

# Important Cell Facts

1. Below is a chart describing different organelles. Put the correct number that corresponds to the diagram of the cell used in the “Pop” quiz.

Organelle name	Drawing Number	Description of structure	Description of role	Plant or animal?
Nucleus		-diameter of 5µm (round) -large and easy to see -double membrane	-contains DNA -“command center”/controls cell functions	BOTH
nucleolus		- inside nucleus - made of chromatin (genetic material) - looks like “a spot”	- produces chemical compounds used for making ribosomes	BOTH
ribosome		- tiny 2-part structure - found in cytoplasm - no membrane	- put together PROTEINS	BOTH
ER		- folded membranes - membranous sacs and tubes - Two Types: Smooth ER, Rough ER (rough ER has ribosomes on it)	- chemical reactions - makes molecules (eg lipids) and enzymes	BOTH
Golgi apparatus		- stack of flattened membrane-bound sacs	- Modifies proteins etc. - makes vesicles to carry things in and out of cell	BOTH
mitochondria		double membrane inner membrane has many folds bean-shaped	“powerhouse” - produces energy by “cellular respiration” (using food and O <sub>2</sub> )	BOTH
lysosomes		small round vesicle (“bubble”) filled with digestive enzymes	- break down worn-out cell parts or materials.	ANIMAL
cytoskeleton		3 kinds of fibers	- maintains cell shape - allows movement for parts of cell - organizes organelles	BOTH
cell wall		- made of cellulose - outside layer of plant (and fungal) cells - found outside of cell membrane	- adds strength and rigidity (hardness) to the cell - helps the cell maintain shape - is NOT selectively permeable (like cell membrane is)	PLANT
vacuole		- large, fluid-filled sac - round - VERY LARGE in plant cell	- stores food, water, wastes	BOTH
chloroplast		- green - double membrane - contains stacked internal membrane sacs	- performs PHOTO-SYNTHESIS (captures light to make food) - also stores nutrients	PLANT
cell membrane		- surrounds the cell - is a double layer - is selectively permeable	- controls the movement of materials into and out of the cell	BOTH

2. How are plant cells different from animal cells?

**3. Cell Theory States:**

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**4. Label the following on the diagram below:**

- cell
- Organ
- Organ system
- Organism
- Tissue

