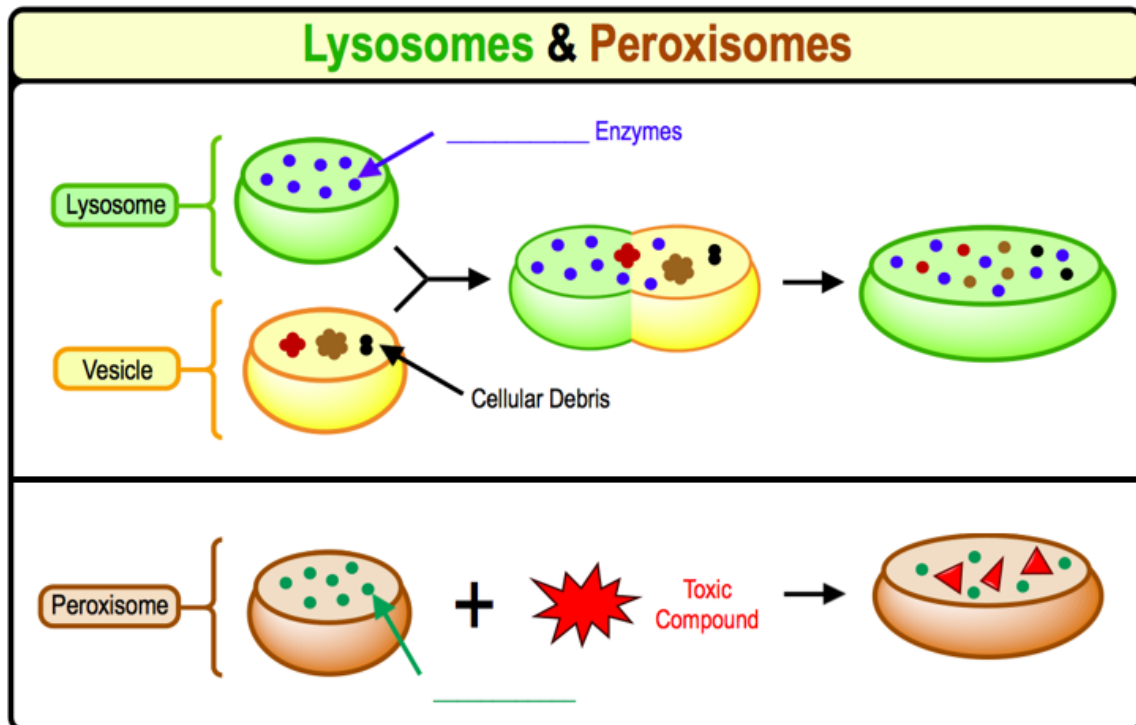


CONCEPT: ENDOMEMBRANE SYSTEM: DIGESTIVE ORGANELLES

- Recall: some of the organelles of the endomembrane system are more specialized for *cellular* _____.

Lysosomes & Peroxisomes

- _____: acidic vesicles of *digestive* enzymes that *breakdown & recycle* food, debris, bacteria, etc.
 - Primarily found *only* in _____ cells & originate at the _____ apparatus.
- _____: vesicles of enzymes that breakdown _____ compounds (ex. H_2O_2) & *fatty acids*.
 - Found in _____ eukaryotic cells & originate at the _____ endoplasmic reticulum (rER).



PRACTICE: Hydrolytic enzymes must be segregated and packaged to prevent general destruction of cellular components.

In animal cells, which of the following organelles contains these hydrolytic enzymes?

- a) Rough ER. b) Central vacuole. c) Smooth ER. d) Lysosomes. e) Golgi apparatus.

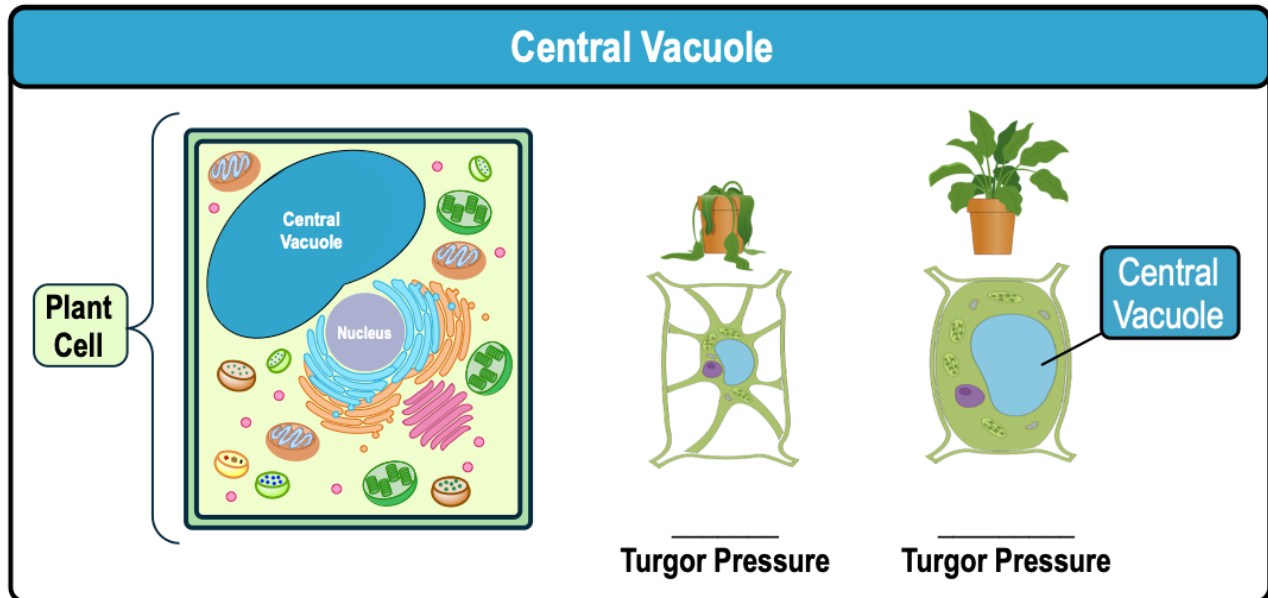
PRACTICE: Which of the following organelles are involved in cellular digestion?

- a) Golgi Apparatus & Vesicles.
b) Nucleus & Nucleolus.
c) Lysosomes & Peroxisomes.
d) Smooth & Rough Endoplasmic Reticulum.
e) Nucleus & Chloroplasts.

CONCEPT: ENDOMEMBRANE SYSTEM: DIGESTIVE ORGANELLES

Central Vacuole

- **Central** _____: large membrane-enclosed vesicle in _____ cells that *degrade & recycle* molecules.
 - Other functions include filling up with *water* to exert _____ *pressure* against cell membrane.



PRACTICE: Which are recycling centers for the cell?

- a) Ribosome and Golgi apparatus.
- b) Endoplasmic reticulum and chloroplast.
- c) Mitochondria and nucleus.
- d) Central vacuole and lysosome.
- e) All are correct.

PRACTICE: Which type of plant organelle often occupies the majority of the cell's volume?

- a) Food vacuole.
- b) Plant vacuole.
- c) Central vacuole.
- d) Contractile vacuoles.
- e) Chloroplasts.