CELL PARTS!
CELL WALL
**Location:** Plants

**Description:**
- Outer most layer of a plant cell.
- Rigid and Strong
- Made of Cellulose

**Function:**
- Support (grow tall)
- Protection
- Allows for Water, Oxygen, and CO$_2$ to pass through to the cell.
**CELL MEMBRANE**

**Location:** BOTH

**Description:**
- **PLANT** – Inside Cell Wall
- **ANIMAL** – Outer most layer; Contains cholesterol
  Selectively Permeable

**Function:**
- Support
- Protection
- Controls movement in/out
- Maintains Homeostasis
- Barrier Between Cell and Environment
Nucleus

Location: BOTH
Description: Large, Oval
Function: CONTROLS CELL ACTIVITY
Nuclear Membrane

**Location:** BOTH

**Description:**
- Surrounds Nucleus
- Selectively Permeable

**Function:**
- Controls movement in and out of the nucleus.

**AKA:** NUCLEAR ENVELOPE
Cytoplasm

Location: BOTH

Description:
Clear, Thick, jellylike material that contains the organelles found inside the cell membrane

Function:
Supports and protects the organelles
ENDOPLASMIC RETICULUM (ER)

Location: BOTH

Description:
  Network of folded membranes

Function:
  Carries Material through Cell
  Helps in the production of Proteins
RIBOSOME
RIBOSOME

Location: BOTH

Description:
Proteins and rRNA that form a small structure that is either free floating or attached to the ER.

Function:
Translates DNA into Amino Acid sequences for proteins.
MITOCHONDRIUM

Location: Both

Description:
Bean shaped organelle with interior membranes

Function:
Breaks down sugar into energy during cellular respiration. Power Plant of the Cell.
VACUOLE

Location: BOTH

Description:
- *Plants* – Few/Large
- *Animals* – Small
- Fluid – Filled Sacs

Function:
- Storage. Stores food, water, and waste.
  (In plants mainly food)
Location: Animal

Description:
Small and Round. May look like a vesicle

Function:
Breaks down large molecules into smaller
Digests/destroys old cell parts
Think of as a processing/recycling plant.
**Location:** PLANTS ONLY

**Description:**
Green, oval shaped filled with lamellae (thylakoid disks), usually contains chlorophyll.

**Function:**
Converts light energy from the sun into sugar for the plant to use as energy.