**Cell Organelles Guided Notes**

**Overview**

Why do cells have organelles or “tiny organs”?

**What organelles can be found in plant and animal cells?**

* **Cell wall**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ found outside of the cell membrane
  + Helps to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the cell
  + Gives the cell its \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Found ONLY in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Cells might get \_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ without it
* **Cell Membrane**
  + The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that surrounds the cell and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the cell
  + Establishes an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ environment
  + Determines what is allowed to \_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_ the cell
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - To maintain \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    - \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ can come in, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_ can go out
* **Nucleus**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the cell’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (brain)
  + Contains \_\_\_\_\_\_\_\_ (genetic information)
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Something needs to \_\_\_\_\_\_\_\_\_\_\_\_\_\_cells’ activities
    - Similar to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ running a state or country
* **Cytoplasm**
  + The living material \_\_\_\_\_\_\_\_\_\_\_ the \_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the \_\_\_\_\_\_\_\_\_\_\_\_\_
  + Clear, thick, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Makes sure all of the organelles are in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ spot
    - Similar to our \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and body cavities keeping our organs in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ places
* **Mitochondria**
  + The organelles that \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + “\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_” of the cell
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - All living things require \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to survive
    - Similar to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ plant supplying energy for a city or town
* **Endoplasmic Reticulum**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ that run through the cytoplasm
  + Carry \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and other materials from one part of the cell to another
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Proteins are like the \_\_\_\_\_\_\_\_\_\_\_\_ that help build cells
    - These tools need to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_around to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_ of the cell so that they can do their jobs
* **Ribosome**
  + The organelles that \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Used to make the “tools” or \_\_\_\_\_\_\_\_\_\_\_\_ that build things in the cell
* **Chloroplasts**
  + Large, \_\_\_\_\_\_\_\_\_\_\_, oval shaped organelles in which \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ takes place
  + Found ONLY in \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Photosynthesis means making \_\_\_\_\_\_\_\_\_ (energy) from \_\_\_\_\_\_\_\_\_\_\_\_\_
    - Plants use chloroplasts like we use \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Vacuole**
  + Large, round, ­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ floating in the cytoplasm
  + The \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ area of the cell (stores food, water, and other materials)
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - The cell needs \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of different things
    - Much like we have \_\_\_\_\_\_, \_\_\_\_\_\_\_\_, and \_\_\_\_\_\_\_\_ reserves
* **Golgi Apparatus**
  + \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ materials for \_\_\_\_\_\_\_\_\_\_\_\_\_ from the cell
  + Found in BOTH \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cells
  + Why cells need it?
    - Cells need to export things from its \_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ environment
    - Much like how we use \_\_\_\_\_\_\_\_ to ship things from one \_\_\_\_\_\_\_\_\_\_\_\_\_ to another

**What two organelles are only found in plants?**



**List the organelles that are found in BOTH plants and animals from the above notes**



