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| **Structure & Function of Organelles** |
| **Directions:** Identify the cell organelle that is described in the statement. Some organelles may be used more than once. |
| **Word Bank:**

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| --- | --- | --- | --- |
| * Cell Membrane
 | * Nuclear Envelope
 | * Golgi Apparatus
 | * Central Vacuole
 |
| * ER
 | * Mitochondria
 | * Chloroplasts
 | * Microtubules
 |
| * Nucleus
 | * Lysosomes
 | * Ribosomes
 | * Centrioles
 |
| * Nucleolus
 | * Vacuole
 | * Cytoplasm
 | * Cell Wall
 |

 |
|  | 1. Substances such as proteins are transported within the cell through this cellular “highway”
 |
|  | 1. Contains digestive enzymes
 |
|  | 1. Composed of a phospholipid bilayer and embedded proteins
 |
|  | 1. May appear green due to chlorophyll
 |
|  | 1. Cylinder-shaped, come in a pair
 |
|  | 1. Contains the genes that control the functions of the cell
 |
|  | 1. Portion of the cell where all organelles are suspended
 |
|  | 1. 3 parts found only in PLANT cells
 |
|  | 1. Site of protein synthesis
 |
|  | 1. There are more of these organelles than any other
 |
|  | 1. Cells that require a lot of energy (i.e. muscle) have many of these
 |
|  | 1. Damaged or old parts of the cell are broken down here
 |
|  | 1. Its surface may be covered with ribosomes
 |
|  | 1. In plant cells, it is made of a carbohydrate called cellulose
 |
|  | 1. A prokaryote lacks this control center
 |
|  | 1. Compose the skeleton of a cell
 |
|  | 1. Involved in cell division (mitosis)
 |
|  | 1. Excess water can be stored in this organelle
 |
|  | 1. Controls the passage of materials into and out of the cell
 |
|  | 1. The fluid portion is called the cytosol
 |
|  | 1. Stack of membranes that finalize proteins and package them for transport
 |
|  | 1. Strengthens and supports a plant cell
 |
|  | 1. Surrounds the nucleus
 |
|  | 1. Chromosomes with DNA are found here
 |
|  | 1. Outermost boundary of an animal cell
 |
|  | 1. Nicknamed the “powerhouse” of the cell
 |
|  | 1. Where ribosomes are made, the nucleus may have more than one of these
 |
|  | 1. May store water, waste, and food
 |
|  | 1. These tiny organelles have their own RNA
 |
|  | 1. These organelles have their own DNA (there are 2)
 |
| **Diagnostic Test: Cell Organelles** |
| **Multiple Choice: Choose the best answer for each of the questions below.**

|  |  |
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| 1. Cells that do not have a distinct nucleus are called…
2. Eukaryotic
3. Prokaryotic
4. Multicellular
 | 1. Small organelles that are responsible for protein synthesis are…
2. Ribosomes
3. RNA
4. Genes
 |
| 1. Cells that have internal membranes surrounding their specialized organelles are…
2. Eukaryotic
3. Prokaryotic
4. Unicellular
 | 1. The system of membranes which transport proteins through the cell is the…
2. Golgi Body
3. Ribosome
4. Endoplasmic Reticulum
 |
| 1. The controlling organelle within a cell is the…
2. Nucleolus
3. Gene
4. Nucleus
 | 1. The organelles responsible for collecting, sorting, processing, & distributing carbs & proteins are the…
2. Golgi bodies
3. Ribosomes
4. Plastids
 |
| 1. The nucleolus is made of single stranded nucleic acids called…
2. DNA
3. RNA
4. ATP
 | 1. The organelle found in both plants & animals which stores dissolved nutrients is the…
2. Vacuole
3. Cytoplasm
4. Centriole
 |
| 1. The jellylike fluid that contains macromolecules and suspends organelles in a cell is the…
2. Cytoplasm
3. Vacuole
4. Nucleus
 | 1. The “powerhouse” of the cell that generates energy-rich ATP molecules is the…
2. Mitochondrion
3. Chloroplast
4. Nucleus
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| **True/False:** If the statement is correct, write “true.” If the statement is incorrect, write “false” & correct the statement.

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| 1. The mitochondrion is responsible for **photosynthesis**.
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| 1. **Chloroplasts** contain green chlorophyll & are responsible for photosynthesis.
 |  |
| 1. All cells have a **cell wall** but only plant cells have a **cell membrane**.
 |  |
| 1. **Metabolism** is all of the chemical reactions occurring in an organism.
 |  |
| 1. An **electron microscope** can be used to view cell organelles.
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| **Short-Answer**1. What are the main differences between plant and animal cells?
2. What organic macromolecules are found in the cytoplasm?
3. List the 8 levels of organization from smallest to largest.
4. What is the main difference between prokaryotes and eukaryotes?
5. How has technology advanced our knowledge of cells?
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