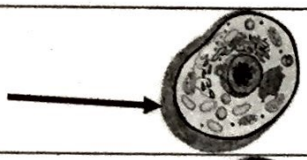
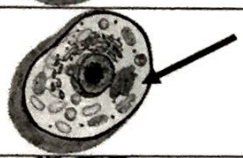
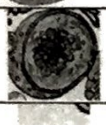
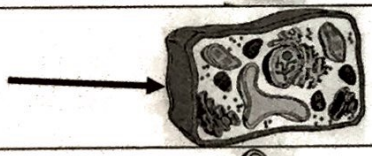
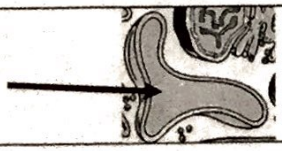
Name: Key Test Date: 10/13

Study Guide – Cell Organelles and their Functions

Part 1: Identify Each Organelle from its Picture

	Cell membrane
	cytoplasm
	Nucleus
	Ribosome
	Endoplasmic Reticulum (ER)
	Mitochondria
	Golgi Apparatus/Body
	Lysosome
	Cell Wall
	Chloroplast
	Vacuole

Part 2: Identify Each Organelle from Its Description:

1. The cell wall is found in plants, and is a rigid structure that **supports** and **protects** the cell.
2. The nucleus controls many functions of the cell, and contains DNA.
3. The endoplasmic reticulum (ER) packages and distributes proteins out of the cell.
4. The cell membrane encloses, protects and controls movement in and out of the cell.

5. The cytoplasm is a gel-like material that fills the cell and holds organelles in place.

6. The mitochondria is the main power source of the cell that produces energy from sugar.

7. The chloroplasts, found in cells, is where photosynthesis occurs, and light is converted to energy.

8. The Golgi apparatus transports materials, and breaks down toxic materials that could harm the cell.

9. The vacuole is a large sac-like organelle that contains water and food inside the cell.

10. The lysosome contains digestive enzymes that digest food and get rid of waste.

11. The ribosomes are small organelles that make protein, lipids and help break down toxins.

Part 3: Comparisons of Organelles

1. How do the Cell Wall and Cell Membrane work together in plant cells to:

Help the cell get energy:	Defend the cell:
Allow nutrients into the cell	Keep out invaders (such as bacteria) and support the cell's shape

2. How do the Nucleus and the Endoplasmic Reticulum (ER) work together in cells to:

Help the cell get energy: When the cell is low on energy, the nucleus directs the ER to package and distribute more proteins

3. How do Mitochondria and Chloroplasts work together in plant cells to:

Help the cell get energy:
Chloroplasts convert sunlight to sugars, which the Mitochondria turn into energy for the cell

4. How do the Golgi Apparatus and the Ribosomes work together in cells to:

Help the cell get energy: The ribosomes make protein, and the Golgi Apparatus transports the protein through the cell.