AP Biology

Name: _____

Date: _____

Period: _____

Cell Organelles Worksheet

Complete the following table by writing the name of the cell part or organelle in the right hand column that matches the structure/function in the left hand column. A cell part may be used more than once.

Structure/Function	Cell Part
Stores material within the cell	
Closely stacked, flattened sacs (plants only)	
The sites of protein synthesis	
Transports materials within the cell	
The region inside the cell except for the nucleus	
Organelle that manages or controls all the cell functions in a eukaryotic cell	
Contains chlorophyll, a green pigment that traps energy from sunlight and gives plants their green color	
Digests excess or worn-out cell parts, food particles and invading viruses or bacteria	
Small bumps located on portions of the endoplasmic reticulum	
Provides temporary storage of food, enzymes and waste products	
Firm, protective structure that gives the cell its shape in plants, fungi, most bacteria and some protists	
Produces a usable form of energy for the cell	
Packages proteins for transport out of the cell	
Everything inside the cell including the nucleus	

Site where ribosomes are made	
The membrane surrounding the cell	
Provides support for the cell, has two “subparts”	
Name for the collection of DNA in the nucleus of eukaryotic cells	
Consist of hollow tubes which provide support for the cell	
Small hair-like structures used for movement or sensing things	
Composed of a phospholipid bilayer	
Longer whip-like structures used for movement	

Put a check in the appropriate column(s) to indicate whether the following organelles are found in plant cells, animal cells or both.

Organelle	Plant Cells	Animal Cells
Cell Wall		
Vesicle		
Chloroplast		
Chromatin		
Cytoplasm		
Cytoskeleton		
Endoplasmic reticulum		

Golgi apparatus		
Lysosome		
Mitochondria		
Nucleolus		
Nucleus		
Plasma membrane		
Central vacuole		
Ribosome		
Vacuole		

Cell City Analogy

In a far away city called Grant City, the main export and production product is the steel widget. Everyone in the town has something to do with steel widget making, and the entire town is designed to build and export widgets. The town hall has the instructions for widget making. Widgets come in all shapes and sizes, and any citizen of Grant can get the instructions and begin making their own widgets. Widgets are generally produced in small shops around the city. These small shops can be built by the carpenter's union (whose headquarters are in town hall).

After the widget is constructed, they are placed on special carts which can deliver the widget anywhere in the city. In order for a widget to be exported, the carts take the widget to the post office, where the widgets are packaged and labeled for export. Sometimes widgets don't turn out right, and the "rejects" are sent to the scrap yard where they are broken down for parts or destroyed altogether. The town powers the widget shops and carts from a hydraulic dam that is in the city. The entire city is enclosed by a large wooden fence. Only the postal trucks (and citizens with proper passports) are allowed outside the city.

Match the parts of the city (underlined) with the parts of the cell.

1. Mitochondria _____

2. Ribosomes _____

3. Nucleus _____

4. Endoplasmic Reticulum _____

5. Golgi Apparatus _____

6. Protein _____

7. Cell _____

Membrane

8. Lysosomes _____

9. Nucleolus _____

** Create your own analogy below of the cell using a different model. Some ideas might be: a school, a house, a factory, or anything you can imagine**