

Name _____

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 widgets are constructed, they are placed on special carts, which can deliver the widgets anywhere in the city. In order for a widget to be exported, the carts take the widget to the postal 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 underlined parts of the city 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 _____

Name _____

Name that Organelle!

Contains the DNA and manages all of the activities of the cell	1.
Releases energy from the nutrients taken into the cell	2.
Transport system within the cell	3.
Stores water, waste materials or food particles	4.
Storage and packaging of chemicals that will be secreted from the cell	5.
Region of the nucleus where ribosomes are made	6.
Support the shape of the cell and anchor organelles to fixed locations	7.
Site of photosynthesis in plants	8.
Encloses a cell and allows materials in and out	9.
Fluid inside the cell	10.
Digest large particles found in the cell	11.
Supports and protects the cell; not present in all cells	12.
Help move chromosomes during cell division	13.
Encloses the nucleus and allows materials in and out	14.
Sites of protein synthesis	15.

cell membrane

cell wall

centriole

chloroplast

cytoplasm

cytoskeleton

endoplasmic reticulum

Golgi apparatus

lysosome

mitochondrion

nuclear membrane

nucleolus

nucleus

ribosome

vacuole