

Cell City Assignment
Grade 8 Answer Key

Name _____
Date _____
Block _____

Read pages 24 – 30, find the following words, and fill in the chart...

| Name of Organelle | What does it do in a cell? | What part of a 'city' can this be compared to? |
|-----------------------------|--|---|
| Cell Membrane | The outside of the cell – controls what goes in/out of the cell. Has nuclear 'pores' where substances go through. | The border – the 'pores' would be the border crossings |
| Cytoplasm | The gel-like substance where all the organelles are suspended. Chemical reactions take place. | The atmosphere around the earth |
| DNA (deoxyribonucleic acid) | The molecule in the nucleus that has all the information passed down from generation to generation. The 'Blueprint' of the organism | A museum or library |
| Mitochondria | The energy producers. Cellular respiration take place here. Oxygen and sugar are converted to carbon dioxide and energy. | A power plant or hydro-electric dam. |
| Proteins | The building blocks – these molecules make up our structure. | Bricks |
| Ribosomes | Where the proteins are assembled | Factories |
| Endoplasmic Reticulum | The 'transport' system in the cell – a network of tunnels and tubes that allow substances to go from one part of the cell to another | Subway/road system |
| Golgi Body | Where proteins are sorted and packaged | Post office/Fed-ex |
| Vesicles | The packages of proteins that come from the golgi body | Mail parcels |
| Vacuoles | Storage spaces Animal cells store waste and other nutrients – several vacuoles in a cell Plant cells have one large vacuole that holds water | In an animal cell – storage depot Plant cell – water tower |

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|--------------|--|----------------------|
| Lysosomes | Where old organelles and cell parts are recycled | Recycling depot |
| Cell Wall | The firm outside part of the plant cell – not found in animal cells | A wall around a city |
| Chloroplasts | In plant cells only – take solar energy and convert it to chemical energy | Solar panels |
| Nucleus | The control center of the cell – where all the cell activities are managed | City Hall |