

Name: \_\_\_\_\_ Period: \_\_\_\_\_ Date: \_\_\_\_\_

### Cell City Analogy 2012



A cell is very much like a **city** because, like a city, each cell has a **purpose** and **components** that are needed by other cells or communities. In this activity, you will read the **Cell City Analogy**, and identify the **cell parts** that are similar to the underlined parts of the city story (use page 274-275).

In a far away city called Cell City, the main export and production product is the steel **bolt**. Everyone in the town has something to do with steel bolt making and the entire town is designed to build and export bolts. The **town hall library** has the instructions for bolt making. Bolts come in many shapes and the citizens of Cell City can get the **instructions** and begin making their own bolts, although the instructions can't leave the library. A **Photocopy Center** makes it possible to copy the instructions if you want to create another Sister Cell City. Bolts are generally produced in **small shops** around the **city**. After the bolts are constructed, they are placed on **special carts** which can deliver the bolts anywhere in the city. These carts are transported on **roads** that connect the entire city together. In order for a bolt to be exported, the carts take the bolts to the **postal office**, where they are packaged and labeled for export. Sometimes bolts don't turn out right, and the "rejects" are sent to the **scrap yard/recycling center** where they are broken down for parts or destroyed altogether. The town powers the bolt shops and carts from a **hydraulic dam** that is the city's power station. A large wooden **fence** encloses the entire city, and only the postal trucks (and citizens with proper passports) are allowed outside the city. The city is held together by **bridges and buildings** that give the city its shape. The city itself has nice fresh **air** flowing in and around the streets and buildings.

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

Cell Part	Function	Analogy to City
Cell Membrane	Encloses the cell and acts like a <b>gatekeeper</b> regulating what goes in and out.	<b>Fence</b>
Nucleus		
Cytoskeleton		
Lysosomes		
Centrioles		
Mitochondria		
Endoplasmic Reticulum		
Golgi Apparatus		
Cytoplasm		
Vacuole		
DNA		
Protein		
Ribosome		

