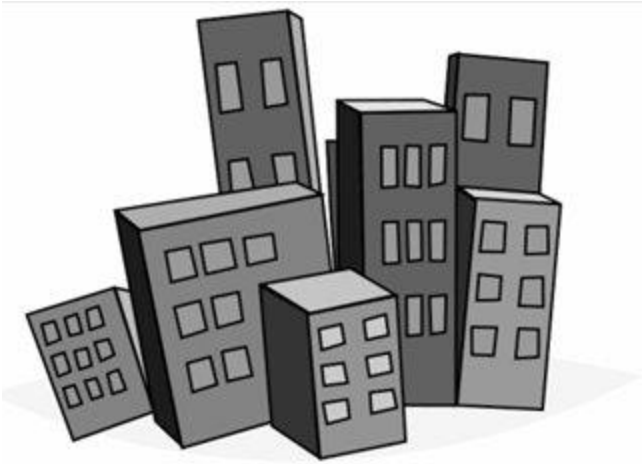


Cell City

Think of a City

- How does it operate?
- Who protects the city?
- Who runs the city?
- How does the city manage its trash?
- How does the city get food?
- How does the city get its power?
- How do you know when you are in the city limits?

Now think of a Cell

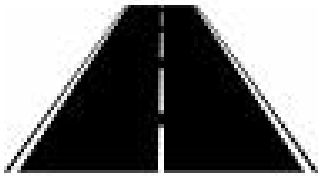
- What cell parts do you remember?
- Do the parts of the cell compare to any parts of a city?
- How many can you relate to the parts of a city?
  - Cell Nucleus?
  - Mitochondria??

A cell can be compared to a city!

- Each part of the cell has its own function or purpose.
- The parts of the cell can be compared to the parts of a city based on their similar purpose.

Cell City Analogies

- An analogy is a similarity between *like* features of two things, on which a comparison may be based.



= **Endoplasmic Reticulum**

The road represents the endoplasmic reticulum because they are both transportation systems

Cell Part	City Analogy	Purpose
A. Cell	City	Area with fixed boundary
B. Cell Membrane	City Limits	Surrounds & border
C. Cytoplasm	Environment	Inner space
D. Nucleus	City Hall	Controls the activities
E. Nuclear Membrane	Police Force	Protects
F. Ribosomes	Farm or Factory	Makes products
G. Endoplasmic Reticulum	Roads or Highways	Transportation system
H. Golgi Bodies	Post Office or UPS	Packs & carries
I. Mitochondria	Power Plant or solar panels or windmills	Provides power
J. Lysosomes	Recycling Plant or Waste Management	Recycle & waste disposal
K. Vacuole	Storage Facility – boxes, crates, and plastic bags	Stores food and waste
L. Chloroplast	Green grass within the city	Where photosynthesis takes place
M. Cell Wall	Brick wall surrounding city	Gives shape, structure, support, and protection

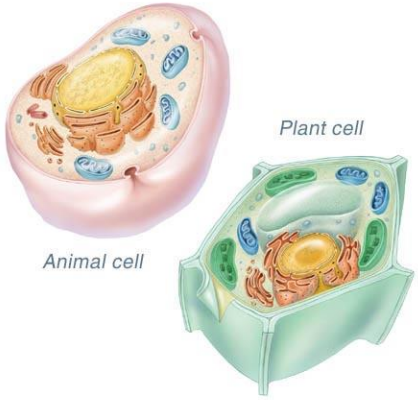
is like

because

Creating your own Cell = City

- You are going to create your own real or imaginary city.
- Each part of your city will correspond to a part of the cell.
- Look at your worksheet from last week.
  - You must include all the parts needed for your cell (animal or plant).
  - 11 parts for animal cell
  - 13 parts for plant cell

Choose an Animal Cell City or a Plant Cell City



The plant cell will have two extra parts:

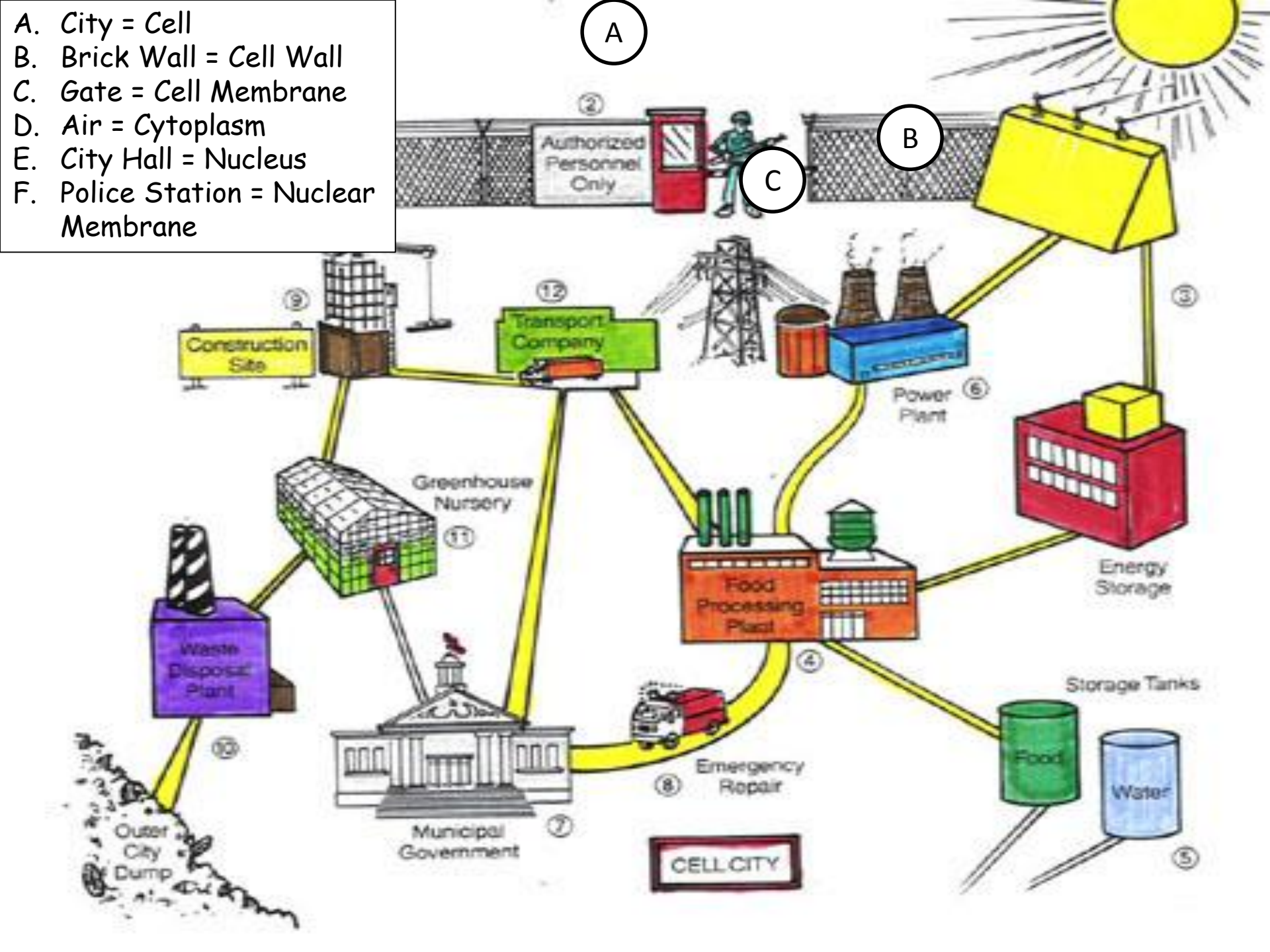
Cell Wall

Chloroplasts

You will receive an extra 2 points if you choose the plant cell.

1. Sketch your city in pencil on large computer paper.
2. Label and circle each part of the city
    1. A-K for animal cell
    2. A-M for plant cell
3. Create a legend in the corner of your city.
4. Color your city completely and neatly

A. City = Cell
B. Brick Wall = Cell Wall
C. Gate = Cell Membrane
D. Air = Cytoplasm
E. City Hall = Nucleus
F. Police Station = Nuclear Membrane



Legend

A: Far Far Away
B: Brick Wall
C: Environment
D: Shrek's Castle
E: Puss-n-boots Security Service
F: Gingerbread Man's Cookie Factory
G: Roads
H: 3 Blind Mice Delivery Service
I: Dragon Power Service (DPS)
J: Donkey Recycling

Final Product

- Your map/picture must be neat, colorful, correctly labeled, and have a legend or key.
- Use pencil first then color (no markers).
- Be creative! Have fun with it.
- Past examples included
  - underwater cities, prehistoric cities, skate parks, amusement parks
  - 11 parts for animal cell
  - 13 parts for plant cell

Animal Cell City

A. Cell
B. Cell Membrane
C. Cytoplasm
D. Mitochondria
E. Nucleus
F. Lysosome
G. Ribosome
H. Vacuole
I. Golgi body
J. Endoplasmic reticulum
K. Nuclear membrane

Plant Cell City

A. Cell
B. Cell Wall
C. Cell Membrane
D. Cytoplasm
E. Chloroplast
F. Mitochondria
G. Nucleus
H. Lysosome
I. Ribosome
J. Vacuole
K. Golgi body
L. Endoplasmic reticulum
M. Nuclear membrane

Grading

Name _____ Period ____

Cell=City Grade Sheet

- City
- Cell wall
- Cell membrane
- Chloroplast
- Cytoplasm
- Mitochondria
- Nucleus
- Lysosome
- Ribosome
- Vacuole
- Golgi body
- Endoplasmic reticulum
- Nuclear membrane

	_____ / 13
Legend	_____ / 5
Neatness	_____ / 5
Creative	_____ / 2
Total	_____/23