

Science 10-Biology

Activity 1

Worksheet on Cell Structure and Organelles



20

Name \_\_\_\_\_

Date \_\_\_\_\_

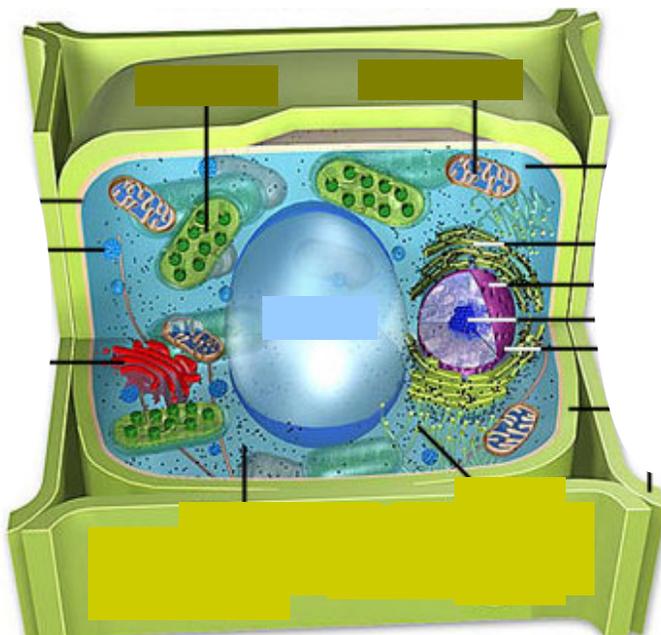
Due Date \_\_\_\_\_

Show Me  Hand In

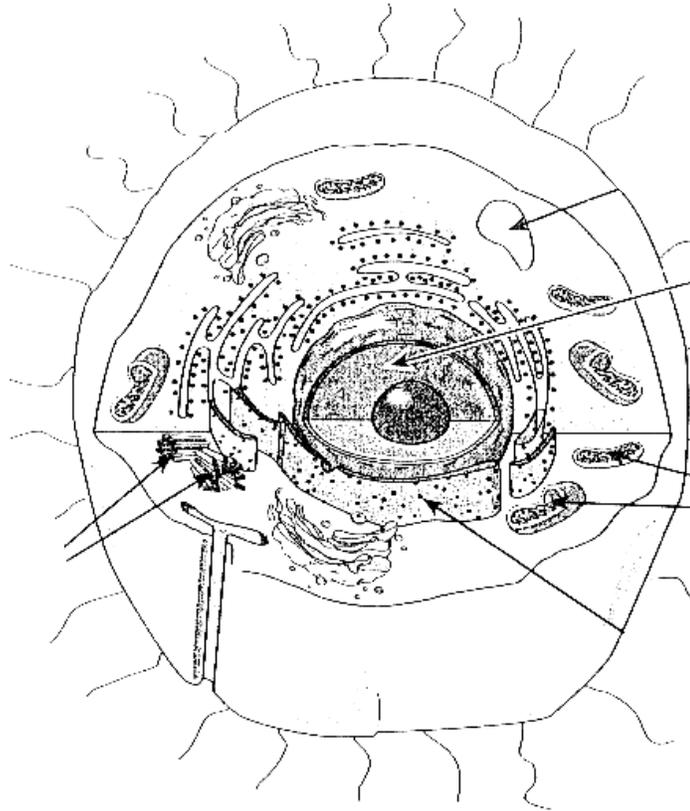
Correct and Hand In by \_\_\_\_\_

This worksheet is based on the material on pages 328-331 of the Science Probe 10 Text, on the Power Point Presentation on Cells and the Flashcards on Cells.

- Label and show the locations of the following organelles on the diagram of a plant cell below:  
*Cell wall, cell membrane, cytoplasm, mitochondria, chloroplast, nucleus, vacuole, endoplasmic reticulum, golgi apparatus, lysosomes, nuclear membrane, ribosomes, nucleolus.*



2. Label and show the locations of the following organelles on the diagram of an animal cell below:  
*Cell membrane, cytoplasm, mitochondria, centrioles, nucleus, vacuole, endoplasmic reticulum, golgi apparatus, lysosomes, nuclear membrane, ribosomes, nucleolus, cilia.*



3. What organelle does an **animal** cell have that a **plant** cell doesn't? \_\_\_\_\_

What is the **function** of these organelles? \_\_\_\_\_

\_\_\_\_\_

4. How are the **vacuoles** in animal cells different from those in plant cells? \_\_\_\_\_

\_\_\_\_\_

5. What two organelles do **plant** cells have that **animal** cells don't? \_\_\_\_\_

& \_\_\_\_\_. Give the **functions** of these two organelles.

1. \_\_\_\_\_. Function \_\_\_\_\_

2. \_\_\_\_\_. Function \_\_\_\_\_

6. On the following table, for each organelle, draw a simple **diagram** and briefly outline its **function**.

Organelle	Diagram	Function
<i>Cell Wall</i>		Found only in _____ cells
<i>Cell membrane</i>		
<i>Nucleus</i>		
<i>Mitochondria</i>		
<i>Vacuole</i>		
<i>Endoplasmic Reticulum</i>		
<i>Ribosomes</i>		
<i>Centrioles</i>		Found only in _____ cells
<i>Chloroplast</i>		Found only in _____ cells
<i>Cilia</i>		
<i>Flagella</i>		
<i>Lysosomes</i>		
<i>Golgi Apparatus</i>		

7. Describe in detail how **lysosomes** help to clean up dead organelles and intruders like viruses from a cell. You can get help by looking at <http://www.maxanim.com/physiology/Lysosome/Lysosome.htm>.
8. What organelles produce **spindle fibres**. \_\_\_\_\_ . What will these spindle fibres eventually be used for? \_\_\_\_\_
9. Write the **chemical equation** for **photosynthesis**.  
\_\_\_\_\_
- What organelles does photosynthesis take place in? \_\_\_\_\_
- What substance (pigment) is necessary for this process? \_\_\_\_\_
- This process and these organelles are present only in \_\_\_\_\_ cells.
10. Write the **word equation** for **cellular respiration**.  
\_\_\_\_\_
- What organelles does cellular respiration take place in? \_\_\_\_\_
11. The job of **ribosomes** is to assemble \_\_\_\_\_ from their building blocks called \_\_\_\_\_. What makes the surface of the "*rough endoplasmic reticulum*", rough? \_\_\_\_\_
12. Which organelle contains **DNA** and uses it to control the rest of the cell? \_\_\_\_\_
13. Why do plant cells need **cell walls**? \_\_\_\_\_
14. What is meant by "**selectively permeable**" \_\_\_\_\_  
\_\_\_\_\_. The \_\_\_\_\_ is selectively permeable.
15. The contents of the cell between the **cell membrane** and the **nucleus** is collectively called the \_\_\_\_\_.