

**HOMEWORK #6**

This assignment is due at the start of the class band on \_\_\_\_\_.

A. Watch the following online video: “Vidcast 4 Life Functions”  
<https://www.youtube.com/watch?v=vfukSgD5OtA>

B. Answer the following questions in **complete sentences** on a **separate sheet of paper**. You may type or neatly handwrite your answers.

For each of the following statements, identify the life function (nutrition, transport, respiration, excretion, synthesis, regulation, reproduction, growth) being described. You may use an answer more than once.

**\*\*Write both the statement and the answer when you submit this assignment.\*\***

- (a) You are bigger than you were two years ago.
- (b) Many sugar molecules combine to form a molecule of starch.
- (c) A plant’s seeds contain baby plants.
- (d) Running helps burn energy from your food.
- (e) A blood cell moves from your foot to your heart.
- (f) You eat lunch from the cafeteria during your OPTA.
- (g) Your body maintains control over your blood pressure.
- (h) Energy is released from nutrients in our cells.
- (i) The only life function necessary for the survival of the species, but not the survival of the individual.
- (j) You sweat out excess water and salts.

**HOMEWORK #7**

This assignment is due at the start of the class band on \_\_\_\_\_.

The username for the BrainPOP video is \_\_\_\_\_ and password is \_\_\_\_\_.

A. Watch the following online video: “BrainPOP: Cell Structures” (see Mr. Sprague for password)  
<https://www.brainpop.com/science/cellularlifeandgenetics/cellstructures>

B. Read Miller & Levine (textbook) pp. 164–175 and complete the Cell Organelle Organizer worksheet. The job of each cell organelle can be found in the chart on p. 175 or online. Please make arrangements to obtain any necessary information before the due date. To determine the life function of each cell organelle, you will need to refer to your life functions notes from September (terms: nutrition, transport, respiration, excretion, regulation, synthesis, growth, and reproduction).

**\*\*Full credit will only be awarded if every blank box on the worksheet is completed.\*\***

**HOMEWORK #8**

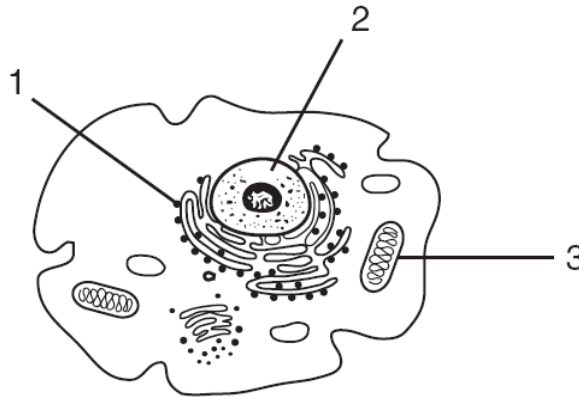
This assignment is due at the start of the class band on \_\_\_\_\_.

The username for the BrainPOP video is \_\_\_\_\_ and password is \_\_\_\_\_.

A. Rewatch the following online video: “BrainPOP: Cell Structures” (see Mr. Sprague for password)  
<https://www.brainpop.com/science/cellularlifeandgenetics/cellstructures>

B. Review Miller & Levine (textbook) pp. 164–175 and answer the following questions in **complete sentences** on a **separate sheet of paper**. You may type or neatly handwrite your answers.

- In a cell, organelles perform specific functions and interact to maintain homeostasis. The diagram below represents a typical cell with three cell structures labeled 1, 2, and 3.



Explain how the organelles help maintain homeostasis in the cell. In your answer, be sure to:

- define the term *homeostasis*
- identify whether this cell is a plant cell or an animal cell
- state the evidence from the diagram that tells you whether this is a plant or animal cell
- identify the organelles labeled 1, 2, and 3
- state the function of each cell structure (1, 2, and 3)
- identify the life functions that each cell structure (1, 2, and 3) perform

- Describe how the cell structures listed below interact to help maintain homeostasis.

mitochondria

ribosome

cell membrane

nucleus

In your answer, be sure to:

- sketch a diagram of a *plant cell* and label each of the five organelles listed above
- select *two* of these structures and describe how *each* structure you selected contributes to the functioning of the other (i.e., what does the first organelle do that helps the second organelle function and what does the second organelle do that helps the first organelle function)

Name \_\_\_\_\_ Date \_\_\_\_\_ Band \_\_\_\_\_

**CELL ORGANELLE ORGANIZER**

ORGANELLE	JOB IN THE CELL	LIFE FUNCTION(S) BEING DESCRIBED
<b>ORGANELLES FOUND IN BOTH PLANT AND ANIMAL CELLS</b>		
Cell membrane		
Cytoplasm		X
Nucleus		
Vacuoles		
Ribosomes		
Endoplasmic reticulum (ER)		
Golgi apparatus		
Mitochondria		
<b>ORGANELLES FOUND ONLY IN PLANT CELLS</b>		
Chloroplasts		
Cell wall		X