

Name \_\_\_\_\_

Teacher \_\_\_\_\_

### Cellular Organelles (Due 3/1)

<http://www.backpack.tv/video/biology/bozeman-science/paul-andersen/cellular-organelles>

1. The Nucleus serves as the \_\_\_\_\_.
2. All \_\_\_\_\_ cells have organelles.
3. Explain the relationship between the nucleus, rough ER, ribosomes and smooth ER.
4. What is the relationship between the rough ER and the Golgi?
5. Why are vacuoles important? (2 reasons)
6. Why does Mr. Anderson group mitochondria and chloroplasts together?
7. Describe the structure of the ribosome.
8. Why does it make sense that the rough ER is attached to the nucleus? (Hint: think of the function of the rough ER and what info is in the nucleus)
9. What is the function of the Golgi? (Don't say "UPS guy")
10. Why are lysosomes important?

### Transport Across Membranes (Due 3/13)

<http://www.backpack.tv/video/biology/bozeman-science/paul-andersen/transport-across-cell-membranes>

1. Define Diffusion and give an example.
2. Osmosis is the \_\_\_\_\_. This process is an example of \_\_\_\_\_ transport.
3. When a cell is surrounded by a liquid that has a higher solute concentration then you have a \_\_\_\_\_ solution. What happens to the cell? \_\_\_\_\_
4. When a cell is surrounded by a liquid that has a lower solute concentration then you have a \_\_\_\_\_ solution. What happens to the cell? \_\_\_\_\_
5. When a cell is in an isotonic solution what happens to the cell? Why?
6. Describe the process of facilitated diffusion?
7. Active Transport is the movement of particles from an area of \_\_\_\_\_ to an area of \_\_\_\_\_ across the \_\_\_\_\_. This process involves the use of \_\_\_\_\_.
8. Give the last two examples of Active Transport and describe how they move materials into and out of the cell.

### Carbohydrates (Due 3/27)

[http://www.youtube.com/watch?v=\\_zm\\_DyD6FJ0&list=PL7A750281106CD067&index=72](http://www.youtube.com/watch?v=_zm_DyD6FJ0&list=PL7A750281106CD067&index=72)

1. Name three types of carbohydrates mentioned in the first 40 seconds. \_\_\_\_\_
2. Carbohydrates give us \_\_\_\_\_ and \_\_\_\_\_.
3. One sugar molecule is called a \_\_\_\_\_. An example is \_\_\_\_\_.
4. A whole bunch of sugar molecules is called a \_\_\_\_\_. An example is \_\_\_\_\_.
5. What is the simplest carbohydrate? \_\_\_\_\_
6. Glucose is used in \_\_\_\_\_ produced by \_\_\_\_\_ by \_\_\_\_\_.
7. If someone is lactose intolerant, what is there body lacking? \_\_\_\_\_
8. Why do plants make large starch molecules? \_\_\_\_\_
9. What type of starch is found in our liver that can be broken down quickly for energy? \_\_\_\_\_
10. Why do we need sugar? \_\_\_\_\_

Name \_\_\_\_\_

Teacher \_\_\_\_\_

### Mitosis: (Due 4/10)

<http://www.youtube.com/watch?v=1cVZBV9tD-A&list=PL7A750281106CD067&index=47>

1. Mitosis is making \_\_\_\_\_ copies of \_\_\_\_\_.
2. Meiosis makes \_\_\_\_\_.
3. Name three ways organisms use mitosis.
  - a.
  - b.
  - c.
4. A \_\_\_\_\_ cell has 1 copy of each chromosome.
5. A \_\_\_\_\_ cell has 2 copies of each chromosome.
6. What is the haploid number for our cells?  $n =$  \_\_\_\_\_
7. What is the diploid number for our cells?  $2n =$  \_\_\_\_\_
8. The cell starts as 1 cell and ends with \_\_\_\_\_ cells.
9. What three phases occur during INTERPHASE? \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_.
10. What happens during the "S" phase?
11. What do chromosomes make? \_\_\_\_\_
12. What happens during prophase?
13. What happens during metaphase?
14. How does Mr. Anderson remember what happens during metaphase?
15. What happens in anaphase?
16. How does Mr. Anderson remember what happens during anaphase?
17. What happens in Telophase?
18. What is the last step?
19. What is cancer?

### DNA Replication: (Due 4/24)

[http://www.youtube.com/watch?v=FBmO\\_rmXxlw&list=PL7A750281106CD067&index=45](http://www.youtube.com/watch?v=FBmO_rmXxlw&list=PL7A750281106CD067&index=45)

1. What is DNA replication?
2. In what part of the cell cycle does DNA replication take place?
3. Explain the semiconservative method of DNA replication.
4. What are the 3 parts of a DNA molecule?
5. What are the 4 nitrogen bases found in DNA?
6. What does the enzyme helicase do in DNA replication?
7. What does the enzyme DNA polymerase do?

### Transcription and Translation: (Due 5/8)

<http://www.youtube.com/watch?v=h3b9ArupXZg&list=PL7A750281106CD067&index=46>

1. The cook book is represented by \_\_\_\_\_.  
The chef is represented by several \_\_\_\_\_.  
The recipe is represented by the \_\_\_\_\_.  
The ingredients are \_\_\_\_\_.
2. The process in #1 above is called the \_\_\_\_\_.
3. Transcription takes place in the \_\_\_\_\_, while translation takes place in the cell's \_\_\_\_\_.
4. mRNA moves through a \_\_\_\_\_.
5. What is the job of tRNA?
6. Every 3 letters in mRNA is called a \_\_\_\_\_.
7. Groups of 3 letters in tRNA are called a \_\_\_\_\_.
8. Ultimately a \_\_\_\_\_ is produced.