

Name: \_\_\_\_\_

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

## **Meiosis - Internet Lesson**

*(Adapted from biologycorner.com)*

In this investigation, you will view sites that demonstrate the process of meiosis. For each site, answer the questions that are listed. Remember that URLs must be typed in exactly as they appear. Please follow all instructions!

### **Site 1 - Lew-Port's Meiosis Page**

Go to Lew-Port's Biology Place: <http://www.lpscience.fatcow.com/jwanamaker/animations.htm> and click on Meiosis (also try Googling "lew-port biology animations" for shortcut)

1. How many chromosomes does the cell in this animation start with?  
\_\_\_\_\_.
2. The homologous pairs are represented by similar \_\_\_\_\_.
3. When chromosomes make copies of themselves, they  
\_\_\_\_\_.
4. Copies of chromosomes are held together by the \_\_\_\_\_.
5. Each chromosome finds its \_\_\_\_\_.
6. Draw "crossing over" - use your pencil to shade in the areas that exchange parts.
  
7. How many chromosomes are at each pole of the cell? \_\_\_\_\_
8. During meiosis 2, chromosomes line up again along the cell's  
\_\_\_\_\_.
9. Only \_\_\_\_\_ copy of each chromosome moves toward the poles. This means only  
\_\_\_\_\_ chromosomes of the original six.
10. New membranes form around each \_\_\_\_\_.
11. Each cell divides, forming a total of \_\_\_\_\_ cells.

### **Site 2 - Sumanas Inc., Animation of Meiosis**

<http://www.sumanasinc.com/> ---> go to animation gallery --> go to general biology --> Meiosis

1. Read the introduction. **Explain** how sexual reproduction results in unique offspring.

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(Click the "STEP THROUGH" button)

2. DNA replication takes place when? \_\_\_\_\_
3. Meiosis consists of two cell divisions: \_\_\_\_\_ & \_\_\_\_\_
4. Centrosomes (aka centrioles) migrate to \_\_\_\_\_
5. The pairing of homologous chromosomes is called: \_\_\_\_\_
6. Crossing over points are called \_\_\_\_\_
7. What happens in metaphase I \_\_\_\_\_
8. What happens during anaphase I \_\_\_\_\_
9. What is interkinesis? \_\_\_\_\_
10. In prophase II, each cells is [ diploid / haploid ] (circle)
11. In metaphase II, chromosomes line up in [ single | double ] file.
12. What happens during telophase II? \_\_\_\_\_

(Click to Conclusion)

13. Each of the four daughter cells produced by meiosis is [ identical / unique ]
14. With respect to meiosis, when does DNA replication occur? \_\_\_\_\_
15. When does crossing over occur? \_\_\_\_\_
16. During which phase do chromosomes line up along the equator? \_\_\_\_\_
17. During which phase does the nuclear membrane form around the chromosomes?  
\_\_\_\_\_

**Site 3 - PBS: Mitosis vs. Meiosis**

Go to: <http://www.pbs.org/wgbh/nova/baby/> --> Click [How Cells Divide](#) --> [Mitosis vs. Meiosis](#)

After viewing the animation, fill out the chart below, by placing a check in the box or boxes to indicate which process the event occurs in (some events might have checks for both mitosis and meiosis).

	Meiosis	Mitosis
<b>Two cell divisions</b>		
<b>Centrioles appear</b>		
<b>Chromosomes pair up</b>		
<b>Spindle fibers form</b>		
<b>Two cell divisions</b>		
<b>Cytokinesis</b>		
<b>Four daughter cells</b>		