Meiosis – Webquest!

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block\_\_\_\_\_\_\_\_\_\_ Date\_\_\_\_\_\_\_\_\_\_

In this investigation, you will view sites that illustrate the process of meiosis. For each site answer the questions associated. Remember that url's must be typed in exactly as they appear.

**Site 1 - Sumanas Inc., Animation of Meiosis**  
[http://www.sumanasinc.com/](http://www.sumanasinc.com/webcontent/anisamples/majorsbiology/) ---> go to animation gallery --> go to general biology --> Meiosis

12. Read the introduction. Explain how sexual reproduction results in unique offspring. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Click the "STEP THROUGH" button)  
13. DNA replication takes place when? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
14. Meiosis consists of two cell divisions: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ &\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
15. Centrosomes (aka centrioles) migrate to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
16. The pairing of homologous chromosomes is called: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
17. Crossing over points are called \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
18. What happens in metaphase I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
19. What happens during anaphase I \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
20. What is interkinesis? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
21. In prophase II, each cells is [ diploid / haploid ] (circle one)   
22. In metaphase II, chromosomes line up in [ single / double ] file.   
23. What happens during telophase II? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
24. (Click to Conclusion).

Each of the four daughter cells produced by meiosis is [ identical / unique ].

**(Click to Quiz)**

25. With respect to meiosis, when does DNA replication occur? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
26. When does crossing over occur? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
27. During which phase do chromosomes line up along the equator? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   
28. During which phase does the nuclear membrane form around the chromosomes? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Site 2: PBS: Mitosis vs. Meiosis**  
<http://www.pbs.org/wgbh/nova/baby/>--> Click "How Cells Divide" -->"Mitosis vs. Meiosis"

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

|  |  |  |
| --- | --- | --- |
|  | Meiosis | Mitosis |
| Two cell divisions |  |  |
| Centrioles appear |  |  |
| Chromosomes pair up |  |  |
| Spindle fibers form |  |  |
| Two cell divisions |  |  |
| Cytokinesis |  |  |
| Four daughter cells |  |  |