

Name _____

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CP Biology

Meiosis Web Quest

In this web quest, you will view sites that illustrate the process of meiosis. Answer the questions associated with each site.

Site 1: Lew-Port's Meiosis Page

Go to <http://www.lew-port.com/10712041113402793/lib/10712041113402793/animations.htm> . Click on "Meiosis." (Or Google "Lewport biology animations.")

1. How many chromosomes does the cell in this animation start with? _____
2. The homologous pairs are represented by similar _____
3. When the chromosomes make copies of themselves, they _____
4. Copies of chromosomes are held together by the _____
5. Each chromosome finds its _____
6. Draw "crossing over" – shade in the areas that exchange parts.

7. How many chromosomes are at each pole of the cell? _____
8. During meiosis II, chromosomes line up again along the cell's _____
9. Only _____ copy of each chromosome moves toward the poles. Which 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

Go to <http://www.sumanasinc.com/> . Click on Animation Gallery. Go to General Biology → Meiosis.

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

13. Click the “Step Through” button. 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 cell 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].

25. Click to quiz. 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 3: Biology in Motion – Meiosis

Go to www.biologyinmotion.com . Click “Cell Division Exercise.” Click “Practice Meiosis.”

29. There are two ways in which the chromosomes can end up after meiosis. Sketch the two ways and indicate by color the chromosomes (use the following color codes: Purple, Dark Purple, Green, Dark Green).

Site 4: PBS – Mitosis v. Meiosis

Go to <http://www.pbs.org/wgbh/nova/baby/> . Click “How Cells Divide.” Click “Launch Interactive.”

30. 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		
Cytokinesis		
Four daughter cells		