NAME _____ **DATE** _____ **HR** _____

MEIOSIS INTERNET ACTIVITY

LINK #1 = Go to: http://www.biology.arizona.edu/cell_bio/tutorials/meiosis/main.html

Click on Reproduction

1. Give an example of asexual reproduction

2. What is a clone?

3. Name the two type of gametes produced by meiosis

4. How are the genetics of the offspring different in asexual and sexual reproduction?

Click NEXT

5. What is the diploid chromosome number for humans?

6. Egg and sperm cells are (haploid/diploid)

Click NEXT

7. What is Meiosis I?

8. Name the stage of meiosis I where each of the following occur:

Homologous chromosomes pair and form synapses _____

Bivalents align at metaphase plate _____

Two complete daughter cells form _____

Nuclear membrane reforms _____

Chromosomes move to separate poles _____

9. What is one main difference between Meiosis I and Meiosis II?

LINK #2 = Go to: http://www.johnkyrk.com/meiosis.html

Click on the cell and view the animation of meiosis.
Scroll down and click on mitosis. View the mitosis video.

10. What differences did you observe between meiosis and mitosis?

LINK #3 = Go to http://www.biology.arizona.edu/cell_bio/tutorials/meiosis/page4.html

Read the section: Comparing Meiosis and Mitosis

11. Did you miss some of the differences between meiosis and mitosis in the animations? Make sure you write them down here.

Click NEXT

Click on problem one and answer the question. Write out the correct answers to the questions below (NOT JUST THE CORRECT LETTER) Answer all ten questions.

1. A human cell has 46 total or 23 pairs of chromosomes. Following mitosis, the daughter cells would each have a total of _____ chromosomes. After meiosis I, the two daughter cells would have _____chromosomes, and after meiosis II _____ chromosomes.

2. The process of meiosis produces four cells with non-identical chromosomes. This diversification occurs during:

3. Which of the following is unique to mitosis and not a part of meiosis?

4. The Thompson seedless grape is triploid, with three copies of each chromosome. Which phase of the cell cycle would you expect triploid cells to be unable to complete.

5. Some organisms are capable of asexual or sexual reproduction. Under favorable conditions, reproduction proceeds asexually. When conditions become more stressful reproduction switches to a sexual mode. Why?

6. The stage of meiosis where cells become haploid.

7. One of the earliest events that distinguishes meiosis occurs in prophase I and involves:

8. Coral in the ocean grows by budding, where the new organism grows out of the old one by mitosis. This form of replication is an example of:

9. _____ most closely resembles events of mitosis except that the cells are _____.

10. During anaphase, a free kinetochore formed by disrupting an attached spindle fiber results in an immediate block to the process. This result shows that:

LINK #4

http://www.pbs.org/wgbh/nova/baby/ → Click on "How Cells Divide" → Read the Introduction and then Click on "Mitosis vs. Meiosis"

29. After viewing the animation. Fill out the chart below, by placing a check in the box or boxes.

Event	Mitosis Only	Meiosis Only	Both
Two cell divisions			
Centrioles appear			
Chromosomes pair up			
Spindle fibers form			
Cytokinesis			
Four daughter cells			

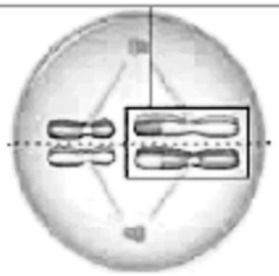
Phases of Meiosis

Name of Phase	Description
1.	Homologous chromosomes pair up and form tetrad
2.	Spindle fibers move homologous chromosomes to opposite sides
3.	Nuclear membrane reforms, cytoplasm divides, 4 daughter cells formed
4.	Chromosomes line up along equator, not in homologous pairs
5.	Crossing-over occurs
6.	Chromatids separate
7.	Homologs line up alone equator
8.	Cytoplasm divides, 2 daughter cells are formed

1.

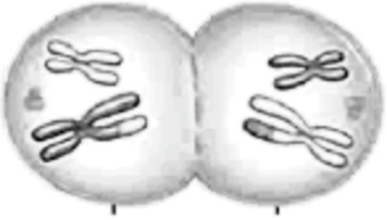
2.

3.



4.

5.



6.

7.

8.