Name _____ Core _____

8th grade Science Assignment

Hello to our favorite science students!

We hope you, your family, and your friends are all staying healthy and getting rest! Remember, lots of rest is one of the keys to strengthening your immune system!

We have attached several pages of REVIEW material from the chapter on "Cell Division" that we were just finishing up before we left. The pages are an official assignment, will be taken for a grade, and will replace the chapter test that we were supposed to have on March 17.

You may use lots of resources to help you answer the questions:

- Your book (if you brought it home)
- The online book (see how to access the online book at the bottom of this page)
- The internet
- Your note packet

As of now, packets will be due the day we return to school. If anything changes with the due date the school will contact you probably through an ECS message.

In the meantime, if you have any questions or concerns feel free to email us. We will be checking our email daily.

Mrs. Haselrig – ahasel@sasd.us Miss. Hogan – bwatki@sasd.us

You can access your book online by going to:
www.pearsonrealize.com
Username: somerset (all lowercase)
Password: eagles20 (all lowercase)

We look forward to hearing from all of you and seeing you once again!

Sincerely,

Mrs. Haselrig and Miss. Hogan

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Cell Organelles Review

1. **Which cell feature is responsible for making proteins?**
   A: lysosomes
   B: ribosomes
   C: mitochondria

2. **What is the name of the jelly-like substance that is inside the cell?**
   A: cytoplasm
   B: ectoplasm
   C: cytokinesis

3. **What cell feature is responsible for powering the cell?**
   A: endoplasmic reticulum
   B: golgi apparatus
   C: mitochondria

4. **Where in the cell does chromatin (DNA) found?**
   A: ribosomes
   B: nucleus
   C: nucleolus

5. **What are two features that plant cells have that animal cells do not?**
   A: lysosome and cell walls
   B: cell wall and chloroplasts
   C: cell membrane and nucleolus

6. **What cell feature contains digestive enzymes which breaks things down?**
   A: lysosomes
   B: ribosomes
   C: vacuoles

7. **Which cell feature packages and moves things around the cell?**
   A: endoplasmic reticulum
   B: chloroplasts
   C: Golgi apparatus

8. **Which cell organelle does not exist?**
   A: smooth endoplasmic reticulum
   B: tough endoplasmic reticulum
   C: rough endoplasmic reticulum

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9. The plant cell structure where photosynthesis takes place is called...

A: chloroplast
B: chlorophyll
C: vacuole

10. What cell feature is responsible for storing water?

A: mitochondria
B: lysosome
C: vacuole

11. What is the main function of the cell wall?

A: to protect and provide support for the cell
B: builds proteins
C: convert solar energy to chemical energy

12. ***Which organelle controls what enters and leaves the cell and provides protection and support?***

A: nucleus
B: cell membrane
C: ribosomes

13.***You will <u>NOT</u> find a cell wall in which of these kinds of organisms?***

A: fungi
B: animal
C: plants

14. **Which organelle would you expect to find in a plant cell but not an animal cell?**

A: mitochondria
B: ribosome
C: chloroplast

15. What do animal cells have that plant cells do not have?

A: centrioles
B: cell Membrane
C: endoplasmic reticulum

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Cell Division – Key Terms

Select the term from the following list that matches each description.

asexual	***chromosome***	***diploid***	***DNA***	***eggs***
genes	***haploid***	***meiosis***	***mitosis***	***mutation***
RNA	***sexual***	***sperm***	***zygote***	***fertilization***

_____ 1. Many cells in your body grow and divide every day by what process?

_____ 2. What structure in a cell's nucleus hold the heredity information?

_____ 3. Term for joining of an egg and sperm cell

_____ 4. The sections of DNA that contain instruction for producing specific proteins

_____ 5. What are the male sex cells?

_____ 6. What cell forms when an egg and a sperm join?

_____ 7. The term for any permanent change in a gene or chromosome

_____ 8. The type of reproduction that produces a new organism; with identical chromosomes to those of the parent organism.

_____ 9. The process that produces haploid sex cells

_____ 10. An organism grows and functions by following the information code

_____ 11. Term for female sex cells

_____ 12. Cells with pairs of chromosomes are this

_____ 13. Type of reproduction that requires the joining of two sex cells

_____ 14. This type of nucleic acid carries the information needed to make proteins

_____ 15. Cells that do not have pairs of chromosomes (sex cells)

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Cell Division Review

Name the phases of mitosis described below. Write the terms in blanks at the left.

_____ 1. nucleolus and nuclear membrane disappear, spindle fibers and centrioles appear

_____ 2. duplicated chromosomes (pairs of chromatids) line up in the center of the cell and attach to spindle fibers at centromere

_____ 3. centromere divides, chromatids split, and identical chromosomes move to opposite sides of the cell

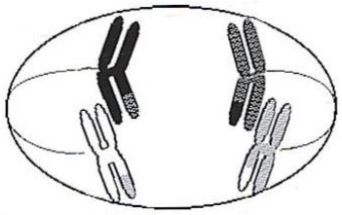
_____ 4. spindle fibers disappear, new nucleus forms at each end of the cell

Answer the following questions on the lines provided.

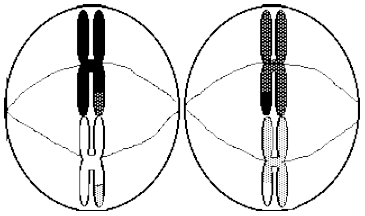
5. Name two examples of asexual reproduction.

a. _____ b. _____

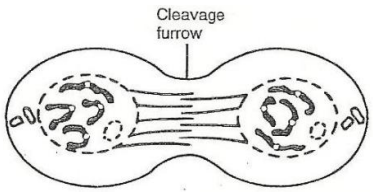
6. Name the steps of meiosis



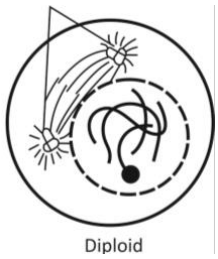
a. _____



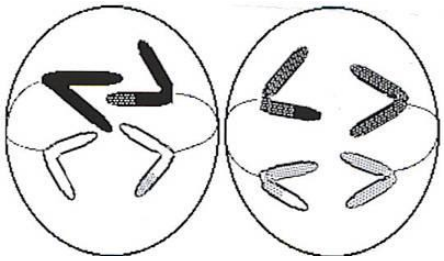
b. _____



c. _____



d. _____



e. _____

7. List three differences between mitosis and meiosis.

a. _____

b. _____

c. _____

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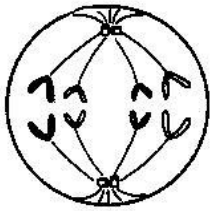
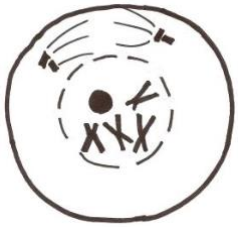
Mitosis

Study the following diagrams. Label the appropriate steps of mitosis.

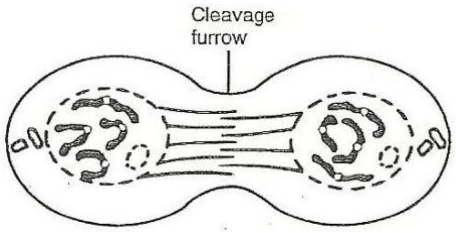


1. _____

2. _____



3. _____



4. _____

Answer the following questions on the lines provided.

5. Once chromosomes have been copied during interphase, the cell is ready to begin what process?
_____

6. During metaphase, the centromeres attach to what structures? _____

7. Why doesn't the cell membrane pinch in to divide the cytoplasm during telophase in plant cells?
_____

8. How many chromosomes does each new cell contain after mitosis if the original cell had 52 original chromosomes? _____

9. Why is mitosis a form of asexual reproduction? _____

10. What are the three types of asexual reproduction? _____

11. Why are skin cells undergoing mitosis continuously? _____

12. What types of cells in your body are no longer undergoing mitosis? _____

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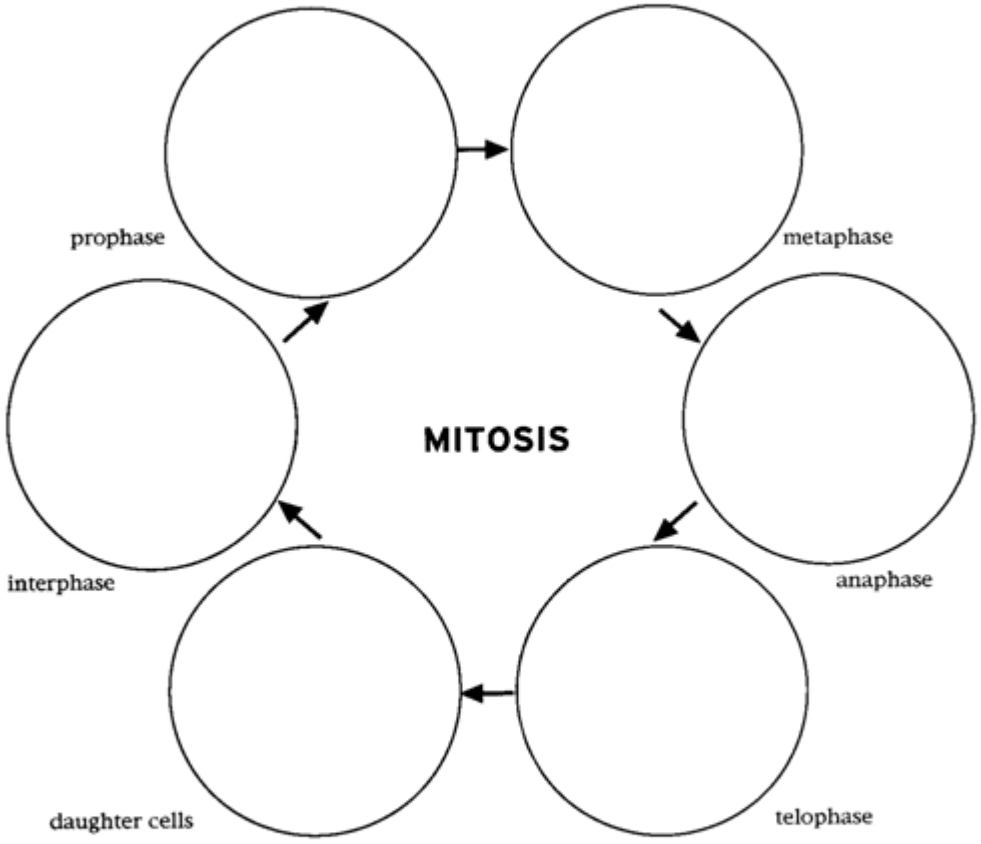
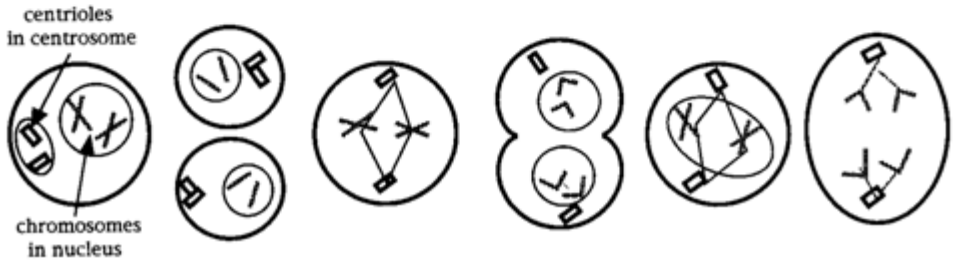
Student Handout-Lesson 12 *(Continued)*

Observations & Analysis

1. Examine the diagrams representing different phases of mitosis.
2. Redraw the diagrams in their correct sequence.





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Meiosis Practice!

Fill in the blank with the answer choice that best completes the statement.

1. During sexual reproduction, 2 parents create a fusion of gametes resulting in offspring that are **_____.**
2. Sex cells that have a haploid number of chromosomes are called **_____** cells.
3. Sex cells all have _____ the number of chromosomes compared to the parent cell.
4. In humans, sex cells have _____ chromosomes.
5. The result of fertilization, in humans, creates a zygote that contains **_____** chromosomes.

Indicate whether the statement is True or False by writing the word on the line. There are 6 true and 4 false.

1. _____ The male chromosome is recognized as XY.
2. _____ The final products of meiosis are 2 haploid gametes.
3. _____ We write diploid cells as 2N and haploid cells as N.
4. _____ Egg production in females is called oogenesis.
5. _____ Meiosis undergoes 3 different cycles to produce the final products.
6. _____ Meiosis creates variety in a species.
7. _____ Chromosome pairs separate during Anaphase 1.
8. _____ Chromosomes line up in pairs durning Metaphase 2.
9. _____ The nuclear envelope always reforms during Telophase 1.
10. _____ The final products in Mitosis and Meiosis are called daughter cells.