

# 6-Corell/SCIENCE

**ALL ASSIGNMENTS ARE DUE BY MAY 22<sup>ND</sup>!**

**Science for weeks #7, #8 and #9 ...**

**Week #7 ( May 4<sup>th</sup> – 8<sup>th</sup>)**

Read the science textbook pages 40 – 46.

Complete the study guide for Chapter 1 Lesson 2

Complete the online Chapter 1 Lesson 2 quiz (Google Classroom)

Begin the Gizmo for *Cell Structure* – due May 15<sup>th</sup> (2 weeks to complete)

**Week #8 – (May 11<sup>th</sup> – 15<sup>th</sup>)**

Read the science textbook pages 50-56

Complete the study guide for Chapter 1 Lesson 3

Complete the online Chapter 1 Lesson 3 quiz (Google Classroom)

Finish up the Gizmo for Cell Structure – due this Friday (May 15<sup>th</sup>)

**Week #9 – (May 18<sup>th</sup> – 22<sup>nd</sup>)**

Read the science textbook pages 60-64

Complete the study guide for Chapter 1 Lesson 4

Complete the online Chapter 1 Lesson 4 quiz (Google Classroom)

**ALL ASSIGNMENTS ARE DUE BY MAY 22<sup>ND</sup>!**



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

## Student Exploration: Cell Structure

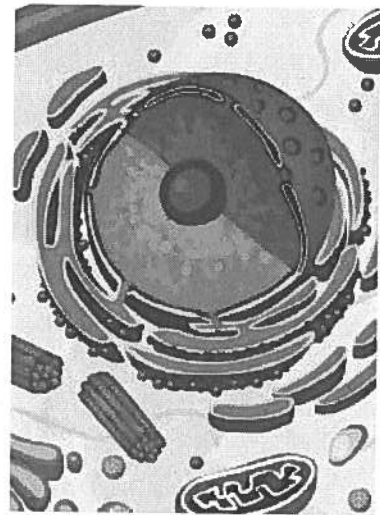
**Vocabulary:** cell membrane, cell wall, centriole, chloroplast, cytoplasm, endoplasmic reticulum, Golgi apparatus, lysosome, mitochondria, nuclear membrane, nucleolus, nucleus, organelle, plastid, ribosome, vacuole, vesicle

**Prior Knowledge Questions** (Do these BEFORE using the Gizmo.)

1. What are some of the structures inside a cell that help it to live and perform its role in an organism? \_\_\_\_\_  
\_\_\_\_\_
2. How do you think plant cells differ from animal cells? (Hint: What can plants do that animals cannot?) \_\_\_\_\_  
\_\_\_\_\_

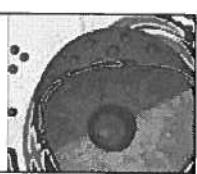
### Gizmo Warm-up

The *Cell Structure* Gizmo allows you to look at typical animal and plant cells under a microscope. On the **ANIMAL CELL** tab, click **Sample** to take a sample of an animal cell. Use the **Zoom** slider to see the cell at a magnification of 2000x (2000 times larger than normal). On the dropdown menu, select **Centrioles**.



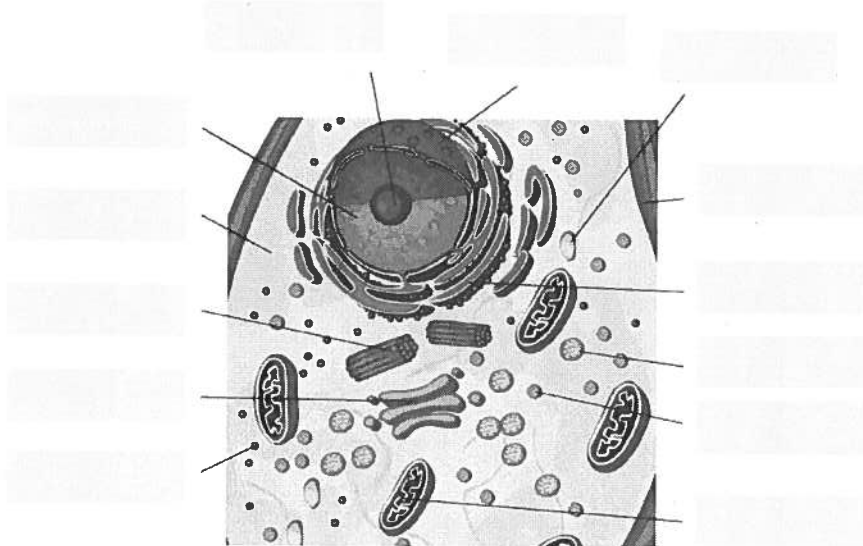
1. Use the up/down and left/right sliders to manipulate the cell. Find the red arrow pointing to the **centrioles**. Make a sketch of the centrioles in the space below.
2. Read the description of the centrioles. What is their function? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



<b>Activity A:</b> <b>Animal cells</b>	<u>Get the Gizmo ready:</u> <ul style="list-style-type: none"> <li>• Check that an <b>Animal cell</b> is mounted on the microscope.</li> <li>• Check that the <b>Zoom</b> is set to 2000x.</li> </ul>	
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**Question: Organelles are specialized structures that perform various functions in the cell. What are the functions of the organelles in an animal cell?**

1. Label: Locate each organelle in the animal cell. Label the organelles in the diagram below.



2. Match: Read about each organelle. Then match each organelle to its function/description.

- |                                  |   |
|----------------------------------|---|
| ___ <b>Cytoplasm</b>             | A. Structure that organizes motion of chromosomes.      |
| ___ <b>Lysosome</b>              | B. Stack of membranes that packages chemicals.          |
| ___ <b>Mitochondria</b>          | C. Membrane that protects the nucleus.                  |
| ___ <b>Centriole</b>             | D. Membrane that surrounds and protects the cell.       |
| ___ <b>Endoplasmic reticulum</b> | E. Sac filled with digestive chemicals.                 |
| ___ <b>Vacuole</b>               | F. Structures that converts nutrients to energy.        |
| ___ <b>Cell membrane</b>         | G. Passageways where chemicals are made.                |
| ___ <b>Nucleus</b>               | H. Jelly-like substance within the cell membrane.       |
| ___ <b>Ribosome</b>              | I. Structure that manufactures ribosomes.               |
| ___ <b>Nuclear membrane</b>      | J. Structure that contains DNA and regulates genes.     |
| ___ <b>Golgi apparatus</b>       | K. Package created by the Golgi apparatus.              |
| ___ <b>Vesicle</b>               | L. Small structure that synthesizes proteins.           |
| ___ <b>Nucleolus</b>             | M. Sac that stores water, nutrients, or waste products. |

**Activity B:**  
**Plant cells**

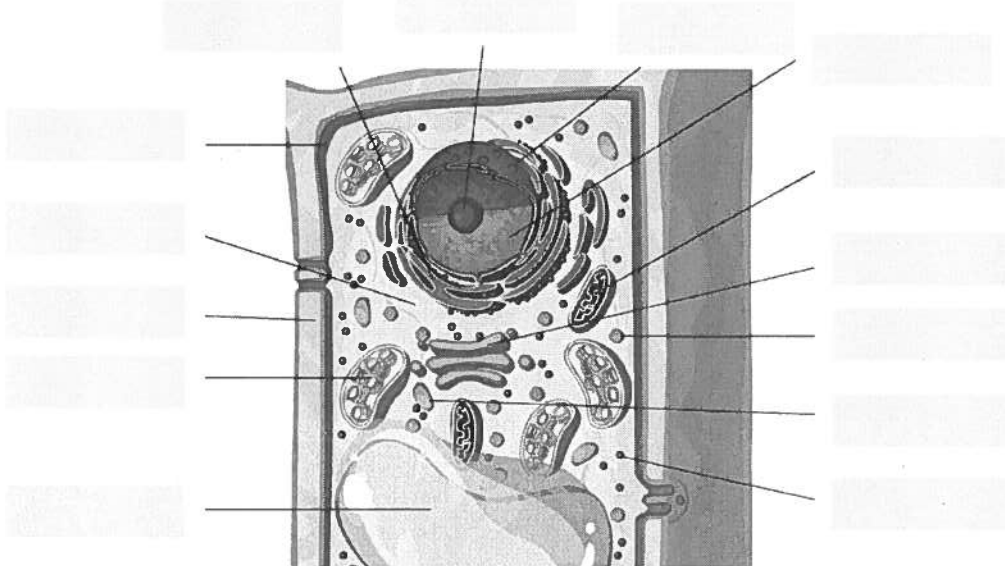
Get the Gizmo ready:

- Select the **PLANT CELL** tab, and click **Sample**.
- Set the **Zoom** to 2000x.



**Question: What functions do the organelles in a plant cell perform?**

1. Label: Locate each organelle in the plant cell. Label the organelles in the diagram below.



2. Compare: What structures are present in an animal cell, but not in a plant cell? \_\_\_\_\_

\_\_\_\_\_

What structures are present in a plant cell, but not in an animal cell? \_\_\_\_\_

\_\_\_\_\_

3. Fill in: Name the organelle or organelles that perform each of the following functions.

- A. \_\_\_\_\_ convert sunlight to chemical energy.
- B. The \_\_\_\_\_ and the \_\_\_\_\_ help to support the plant cell and help it to maintain its shape.
- C. \_\_\_\_\_ store food or pigments.
- D. The \_\_\_\_\_ converts food into energy. It is found in both plant cells and animal cells.



## Chapter 1 Lesson 2 pages 40 - 46

NAME: \_\_\_\_\_ Homeroom: \_\_\_\_\_

1. A \_\_\_\_\_ is the smallest unit of any organism.

2. Single celled organisms have how many cells? \_\_\_\_\_

3. In both plant and animals, what is considered the next level of organization above cells? \_\_\_\_\_

4. Digestion of food is completed in the \_\_\_\_\_

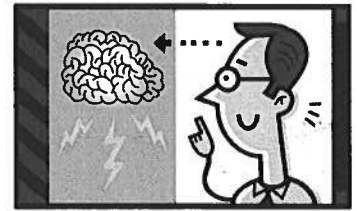
5. Name the four tissue types:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_



6. What does the villi provide in the small intestines? \_\_\_\_\_

7. Your skin is considered what type of tissue? \_\_\_\_\_

8. What type of tissue stores fat? \_\_\_\_\_

9. Name the three types of muscle tissue.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

10. Name the four places nerve tissue would be found.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_



11. An \_\_\_\_\_ is a structure made up of at least two types of tissues that work together to perform a specific job in the body.

12. Name your five sense organs.

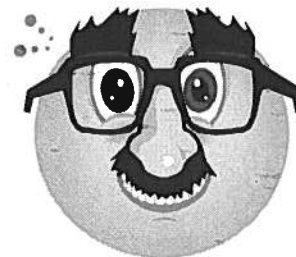
1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

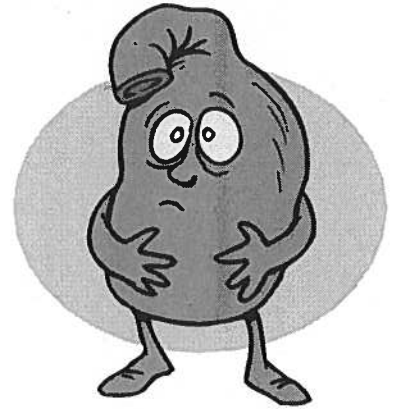


13. Name the organ that removes toxins from your blood. \_\_\_\_\_

14. \_\_\_\_\_ are organs that supply oxygen to and remove carbon dioxide from the blood.

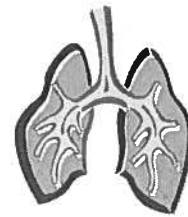
15. Name the six organs in the digestive system.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_



16. Name the five organs that make up the respiratory system.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_



17. What is another name for the larynx? \_\_\_\_\_

18. Each cell in your body needs \_\_\_\_\_ and \_\_\_\_\_

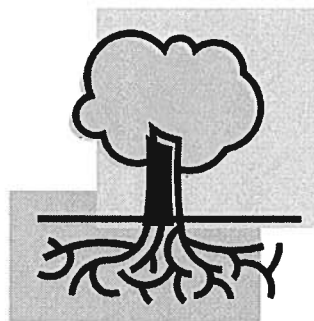
19. An \_\_\_\_\_ is a complete living thing that relies on cells for life functions.

20. The \_\_\_\_\_ system includes the skin, hair and nails, which cover and protect the body.

21. The endocrine system makes and sends chemicals called \_\_\_\_\_ to help control body activities.

22. Name the two plant tissues that transport water and nutrients.

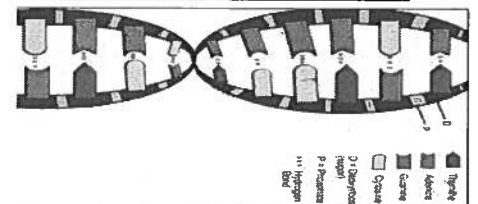
1. \_\_\_\_\_
2. \_\_\_\_\_



## Chapter 1 Lesson 3 pages 50 – 56

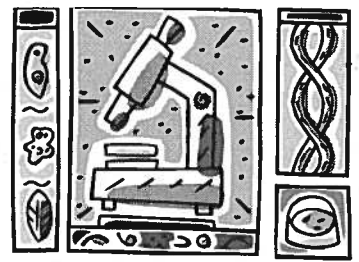
Name: \_\_\_\_\_ Homeroom: \_\_\_\_\_

1. \_\_\_\_\_ controls the way cells become specialized.
2. A \_\_\_\_\_ is a single-celled organism. It reproduces by making an exact copy of its \_\_\_\_\_ material and then dividing.
3. In \_\_\_\_\_, an egg cell and a sperm cell unite to form a single cell.
4. Humans have \_\_\_\_\_ **pairs** of chromosomes, or \_\_\_\_\_ in all.
5. An organism starts life as \_\_\_\_\_ cell.
6. Most of an organism's cells continue to divide over its \_\_\_\_\_.
7. Every cell in your body has a copy of the \_\_\_\_\_ that was contained in your original cell.
8. DNA looks like a long, twisted \_\_\_\_\_. Scientists call its shape a \_\_\_\_\_.
9. Mitosis has \_\_\_\_\_ stages.
10. During the first stage of mitosis, each \_\_\_\_\_ in the \_\_\_\_\_ duplicates itself.
11. During the second stage of mitosis, the \_\_\_\_\_ coil and shorten into \_\_\_\_\_ structures.
12. At what stage does the nuclear membrane dissolve? \_\_\_\_\_
13. At what stage do the paired chromosomes line up along the center of the spindle? \_\_\_\_\_
14. At what stage does the new nuclear membrane form? \_\_\_\_\_
15. At what stage is mitosis complete? \_\_\_\_\_
16. At what stage does the plant cell wall begin to form? \_\_\_\_\_
17. Reproductive cells are produced by \_\_\_\_\_
18. Human reproductive cells have only \_\_\_\_\_ chromosomes.
19. In meiosis, one cell becomes \_\_\_\_\_ cells.
20. New cells produced by mitosis have genetic material that is \_\_\_\_\_ to that of the original cell. This means there is no \_\_\_\_\_ difference between a parent organism and its \_\_\_\_\_.
21. Asexual reproduction occurs through \_\_\_\_\_.
22. Genetic variation is a result of \_\_\_\_\_.
23. Which of the following is NOT true of a gene?
  - a. can't be copied
  - b. determines traits
  - c. comes from parents
  - d. is a piece of DNA

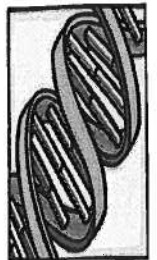


# Chapter 1 Lesson 4 Reading Review Questions

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



- \_\_\_\_\_ is considered the father of genetics.
- Gregor Mendel wondered how traits are passed on from one \_\_\_\_\_ to another.
- Mendel chose \_\_\_\_\_ plants to study.
- Mendel cross pollinated pea plants for \_\_\_\_\_ years.
- \_\_\_\_\_ is the study of heredity.
- Name the only two colors that Mendel's pea plant experiment produced.  
1. \_\_\_\_\_ 2. \_\_\_\_\_
- What was the ratio that Mendel discovered during the second generation of his pea plant experiment? \_\_\_\_\_
- A "stronger" trait is called the \_\_\_\_\_ trait.
- A "weaker" trait is called the \_\_\_\_\_ trait.
- The trait that needs two factors for it to be expressed is \_\_\_\_\_.
- Mendel's "factors" for inheritance are what we now call \_\_\_\_\_.
- \_\_\_\_\_ have instructions for making specific proteins.
- There are about \_\_\_\_\_ genes on human DNA.
- Write **dominant** or **recessive** for the following traits:



Cleft chin \_\_\_\_\_

Dimples \_\_\_\_\_

Attached earlobes \_\_\_\_\_

Brown hair \_\_\_\_\_

Red hair \_\_\_\_\_

Brown eyes \_\_\_\_\_





# Science Chapter 1 Lesson 2 Quiz

Life Science textbook pages 40-46

\* Required

1. Email address \*

\_\_\_\_\_

2. A \_\_\_\_\_ is the smallest unit of any organism. \*

Mark only one oval.

- cell
- organ
- organ system
- tissue

3. The endocrine system makes and sends chemicals called \_\_\_\_\_ to help control body activities. \*

Mark only one oval.

- hormones
- sensory receptors
- nerves
- blood

4. Select the two plant tissues that transport water and nutrients. \*

Check all that apply.

- xylem
- phloem
- pine cones
- seeds
- photosynthesis

5. Single-celled organisms have how many cells? \*

Mark only one oval.

- one
- two
- three
- four

6. In both plants and animals, what is considered the next level of organization above cells? \*

Mark only one oval.

- cells
- tissue
- organ
- organ system

7. What does the villi provide in the small intestines? \*

Mark only one oval.

- surface area
- cell wall
- sensory receptors
- hormones

8. Select each type of muscle tissue (select 3) \*

Check all that apply.

- cardiac
- skeletal
- smooth
- spinal cord
- skin
- xylem

9. Select the places nerve tissue would be found (select 4) \*

Check all that apply.

- brain
- spinal cord
- nerves
- sensory receptors
- skin
- lungs
- eyes
- skeletal

10. An \_\_\_\_\_ is a structure made up of at least two types of tissues that work together to perform a specific job in the body. \*

Mark only one oval.

- cell
- tissue
- organ
- organ system

11. Select your sense organs (select 5) \*

Check all that apply.

- ears
- skin
- eyes
- nose
- tongue
- brain
- cardiac
- liver
- skeletal

12. What is the name of the organ that removes toxins from your blood? \*

Mark only one oval.

- liver
- brain
- heart
- tongue

13. Name the organ that supplies oxygen to and removes carbon dioxide from the blood. \*

Mark only one oval.

- lungs
- liver
- kidneys
- heart
- brain

14. What is another name for the larynx? \*

Mark only one oval.

- voice box
- brain
- stomach
- liver

15. Each cell in your body needs these items to survive. (select 2) \*

Check all that apply.

- nutrients
- oxygen
- cell walls
- chloroplasts

16. A \_\_\_\_\_ is a complete living thing that relies on cells for life functions. \*

Mark only one oval.

- organism
- organ
- cell
- tissue

17. What is the correct order. \*

Mark only one oval.

- cells -> tissue -> organ -> organ system -> organism
- cells -> organ -> tissue -> organism -> organ system
- cells -> organism -> organ system -> tissue -> organ
- cells -> organ system -> tissue -> organ -> organism

18. Select the human tissue types (select 4) \*

Check all that apply.

- epithelial
- connective
- muscle
- nerve
- smooth
- cardiac
- skeletal

19. Your skin is considered what type of tissue? \*

Mark only one oval.

- epithelial
- connective
- nerve
- muscle

20. Select the correct type of tissue based on the clue. Every row will have ONE tissue selected. \*

Check all that apply.

	Epithelial	Muscle	Nerve	Connective
Lining of your air passages	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lines your internal organs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cells are tightly packed together	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stores fat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bone and blood are examples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cartilage & fat cells are examples	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Elastic!	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are 3 types of this tissue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Moves bones and blood around the body	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Found in the brain & spinal cord	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Send messages from the brain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. The \_\_\_\_\_ system includes the skin, hair, and nails. \*

Mark only one oval.

- digestive
- integumentary
- respiratory
- circulatory

# Science Chapter 1 Lesson 3 Quiz

Life Science Chapter 1 textbook pages 50-56

\* Required

1. Email address \*

\_\_\_\_\_

2. This controls the way cells become specialized. \*

Mark only one oval.

- DNA
- single-celled
- multi-celled

3. A paramecium is a \_\_\_\_\_ - celled organism. \*

Mark only one oval.

- single
- multi

4. In \_\_\_\_\_, an egg cell and a sperm cell unite to form a single cell. \*

Mark only one oval.

- sexual reproduction
- asexual reproduction
- single-celled

5. Humans have \_\_\_\_\_ pairs of chromosomes. \*

Mark only one oval.

- 23
- 46
- 92
- 1

6. An organism starts life as \_\_\_\_\_ cell. \*

Mark only one oval.

- one
- two
- three
- four

7. Most of an organism's cells continue to divide over its \_\_\_\_\_.

Mark only one oval.

- lifetime
- cells
- deoxyribonucleic acid
- one

8. Every cell in your body has a copy of the \_\_\_\_\_ that was contained in your original cell. \*

Mark only one oval.

- DNA
- mitosis
- meiosis

9. This looks like a long twisted ladder. Scientists call its shape a double helix. \*

Mark only one oval.

- DNA
- Chromosomes
- Mitosis
- Meiosis

10. \_\_\_\_\_ are pieces of DNA that carry all the information passed from parents to their offspring. \*

Mark only one oval.

- Genes
- DNA
- Mitosis
- Meiosis

11. Mitosis has \_\_\_\_\_ stages. \*

Mark only one oval.

- 1
- 2
- 3
- 4
- 5
- 6

12. Reproductive cells are produced by \_\_\_\_\_.

Mark only one oval.

- Meiosis
- Mitosis

13. Human reproductive cells have only \_\_\_\_\_ chromosomes. \*

Mark only one oval.

- 23
- 46
- 92
- 4

14. In meiosis, one cell becomes \_\_\_\_\_ cells. \*

Mark only one oval.

- 1
- 2
- 3
- 4

15. Asexual reproduction occurs through \_\_\_\_\_.\*

Mark only one oval.

- mitosis
- meiosis
- DNA
- chromosomes

16. Genetic variation is a result of \_\_\_\_\_.\*

Mark only one oval.

- sexual reproduction
- asexual reproduction

17. When an egg and sperm unite to form a single cell, this is called \_\_\_\_\_.\*

Mark only one oval.

- fertilization
- DNA
- chromosomes
- mitosis

18. All cells divide at the same rate over their lifetime. \*

Mark only one oval.

- True
- False

19. These control the way you look, how you grow and how your body functions. You got them from your parents!

Mark only one oval.

- Genes
- Chromosomes
- Mitosis
- Meiosis

20. The \_\_\_\_\_ contains the chromosomes. \*

Mark only one oval.

- nucleus
- DNA
- cell membrane
- chloroplast

21. The threadlike packages of DNA and protein are called \_\_\_\_\_.\*

Mark only one oval.

- chromosomes
- DNA
- genes

22. Body cells make more body cells by \_\_\_\_\_.\*

Mark only one oval.

- mitosis
- meiosis

# Science Chapter 1 Lesson 4 Quiz

Textbook page 60-64 How Trait's are Inherited

\* Required

1. Email address \*

\_\_\_\_\_

2. He is considered the father of genetics. \*

Mark only one oval.

- Gregor Mendel
- William Nye
- Robert Hooke

3. Gregor Mendel, the Austrian monk, chose this type of plant to study. \*

Mark only one oval.

- pea
- tomato
- bean
- corn

4. Most flowers have both a male and female \_\_\_\_\_ cells. \*

Mark only one oval.

- reproductive
- leaf
- stem
- root

5. The study of heredity is called \_\_\_\_\_.\*

Mark only one oval.

- genetics
- cross pollination
- heredity
- Mendel

6. What is the ratio that Mendel discovered during the second generation of his pea plant experiment? \*

Mark only one oval.

- 3:1
- 1:1
- 2:1
- 4:1

7. Select either dominant or recessive for each clue. You may NOT select both for the same clue. \*

Mark only one oval per row.

	Dominant	Recessive
"Stronger" trait	<input type="radio"/>	<input type="radio"/>
"Weaker" trait	<input type="radio"/>	<input type="radio"/>
Brown hair (humans)	<input type="radio"/>	<input type="radio"/>
Brown eyes (humans)	<input type="radio"/>	<input type="radio"/>
Red hair (humans)	<input type="radio"/>	<input type="radio"/>
Blonde hair (humans)	<input type="radio"/>	<input type="radio"/>
Needs 2 factors to be expressed	<input type="radio"/>	<input type="radio"/>
Needs only 1 factor to be expressed	<input type="radio"/>	<input type="radio"/>
Cleft chin	<input type="radio"/>	<input type="radio"/>
Dimples	<input type="radio"/>	<input type="radio"/>
Attached earlobes	<input type="radio"/>	<input type="radio"/>
Purple pea flowers	<input type="radio"/>	<input type="radio"/>
White pea flowers	<input type="radio"/>	<input type="radio"/>
Short pea plants	<input type="radio"/>	<input type="radio"/>
Tall pea plants	<input type="radio"/>	<input type="radio"/>

8. Mendel's "factors" for inheritance are what we now call \_\_\_\_\_.\*

Mark only one oval.

- genes
- offspring
- recessive
- dominant