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NEXT GENERATION SCIENCE STANDARDS For States, By States

New Vision International School

interactive SCIENCE

WORKBOOK

Grade 7

SEMESTER 1

Name: _____

Class: _____

Teacher: _____

PEARSON

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Chapter 4

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Lesson 1: Discovering Cells (use with pages 122– 129)

Fill in the blank to complete each statement.

1. *A cell's functions can include obtaining food and water and getting rid of _____.*

2. *Compound microscopes focus light through _____ to produce a magnified image.*

3. *A large organism is made up of many millions of _____.*

4. *A(n) _____lens has a center that is thicker than its edge.*

5. *The _____ describes how cells are related to living things.*

6. *The ability to distinguish between two nearby objects is called _____.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____1. ***Cells*** *are the basic unit of structure and function in living things.*

_____2. ***Telescopes*** *are instruments that can magnify very small objects.*

_____3. *Cells were first observed by* ***Robert Hooke****.*

_____4. ***Light*** *microscopes use beams of electrons to produce magnified images.*

_____5. ***Resolution*** *is the condition when objects appear larger than they really are.*

_____6. ***Magnification*** *is the ability to distinguish details on an object.*

_____7. *If a compound microscope has a 10× lens in its eyepiece and a 20× lens in its nosepiece, its total magnification is* ***100×****.*

Building Vocabulary: Write the definition of each of these terms in the spaces provided.

1. cell _____

2. microscope _____

3. cell theory _____

Answer the following questions.

1. Why would Hooke's discovery have been impossible without a microscope?

_____

_____

_____

_____

2. Use Virchow's ideas to explain why plastic plants and stuffed animals are not alive.

_____

_____

_____

_____

`

Name: _____ ***Date:*** _____

Lesson 2: Looking Inside Cells (use with pages 130– 139)

Fill in the blank to complete each statement.

1. The _____ *controls the materials that enter and leave the cell.*
2. *Ribosomes make* _____.
3. The _____ *is a large structure that directs the cell's activities.*
4. *The storage area of a cell is called a(n)* _____.
5. *A group of organs that work together to perform a major function is called a(n)* _____.
6. _____ *are tiny cell structures that carry out specific functions in the cell.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____ 1. ***Plant*** *cells have chloroplasts, but animal cells do not.*

_____ 2. *The cell's nucleus is filled with a substance called* ***protein****.*

_____ 3. *The specialized cells in a* ***unicellular*** *organism perform specialized jobs.*

_____ 4. *Ribosomes are made in a special region of the nucleus called the* ***nucleolus****.*

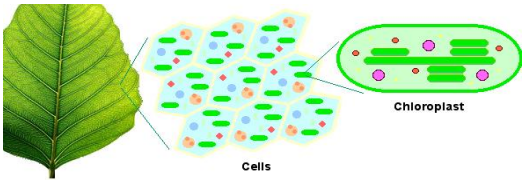
Answer the following questions.

1. *A solar panel collects sunlight and converts it to heat or electrical energy. How is a solar panel similar to chloroplasts?*

_____

_____

_____



2. *What are cells made of?*

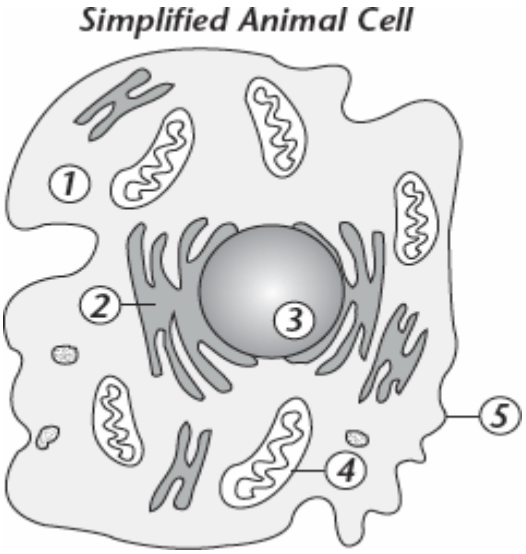
_____

_____

_____

Understanding Main Ideas: Identify each of the cell structures in the figure.

1. _____
2. _____
3. _____
4. _____
5. _____



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Lesson 3: Chemical Compounds in Cells (use with pages 140 – 145)

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

_____*1. carbohydrate*

_____*2. carbon*

_____*3. water*

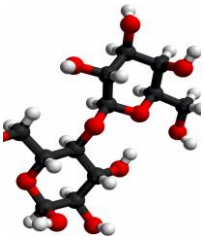
_____*4. oxygen*

a. inorganic compound

b. element found in water

c. energy-rich organic compound

d. element that is part of most organic compounds



Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. Sugars and starches are examples of **lipids**.*

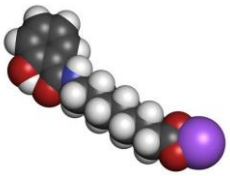
_____*2. **Proteins** are part of cell membranes and store energy.*

_____*3. A(n) **enzyme** helps speed a chemical reaction.*

_____*4. **Carbohydrates** direct cell functions.*

_____*5. Water makes up **one-third** of the human body.*

_____*6. Meat, dairy products, fish, nuts, and beans are all foods that are high in **protein**.*



Name the elements found in each of these compounds.

Nucleic acid	*Lipid*	*Protein*	*Carbohydrate*

Answer the following questions.

1. Explain why living things store energy in lipids instead of in carbohydrates.

_____

_____

_____

_____

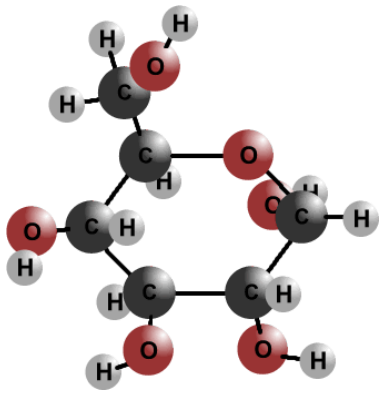
2. Describe one way a lack of water could affect cell functions.

_____

_____

_____

_____



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Lesson 4: The Cell In Its Environment (use with pages 146– 151)

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

_____1. *osmosis*

_____2. *exocytosis*

_____3. *diffusion*

_____4. *endocytosis*

a. *the process by which large molecules are engulfed by a cell*

b. *the process by which molecules tend to move from an area of higher concentration to an area of lower concentration*

c. *the process by which large molecules are expelled from a cell*

d. *the process by which water moves across a selectively permeable membrane*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

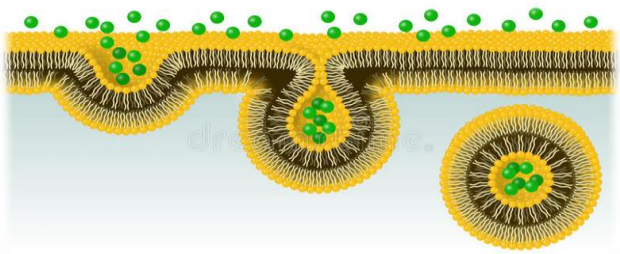
_____1. *Water diffusing through a semipermeable membrane is called **osmosis**.*

_____2. ***Exocytosis** occurs when a cell engulfs large food particles.*

_____3. *The cell membrane is built of a double layer **cell wall**.*

_____4. *The **cell membrane** controls the materials that move into and out of a cell.*

_____5. *The **active transport** use energy to pick up specific molecules and carry them across the cell membrane.*



Answer the following questions.

1. What makes the cell membrane selectively permeable?

_____

_____

_____

_____

2. Use diffusion to tell what happens when you drop a sugar cube into water.

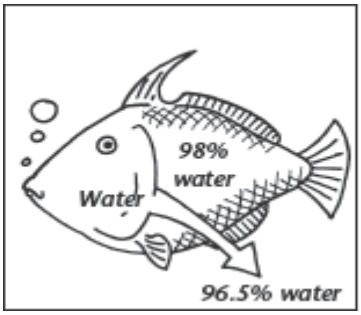
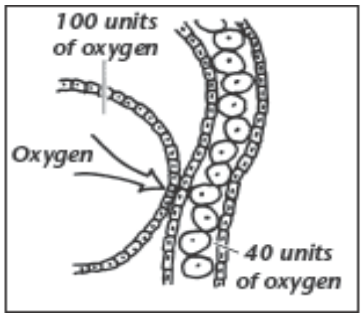
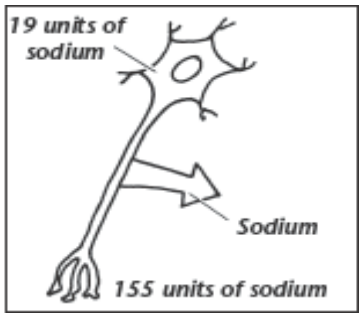
_____

_____

_____

_____

Complete the table to identify the process illustrated in each of the following figures.

		
Water moves out of the cells of a saltwater fish and into the ocean.	*Oxygen moves from the lungs into the bloodstream.*	*Sodium is pumped out of a nerve cell.*

Name: _____ ***Date:*** _____

Lesson 1: Photosynthesis (use with pages 166– 171)

Building Vocabulary: Fill in the blank to complete each statement.

1. The process by which a cell captures the energy of sunlight and uses it to make food is called

_____

2. _____are colored chemical compounds that absorb light.

3. The main pigment found in the chloroplasts of plants is _____.

4. An organism that makes its own food is a(n) _____.

5. A(n) _____ is an organism that cannot make its own food.

6. One sugar produced by photosynthesis is _____.

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. Autotrophs are also known as producers.*

_____*2. The ultimate source of energy for all living things is the* ***leaf.***

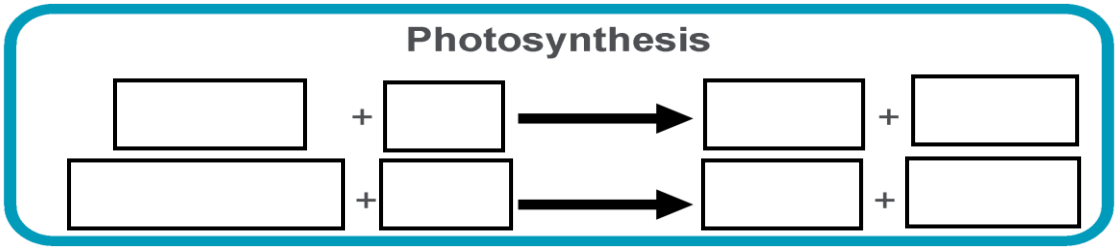
_____*3. Plants are able to carry out photosynthesis because they contain the organelle known as a(n)* ***mitochondrion****.*

_____*4. One important sugar that results from photosynthesis is* ***cellulose****.*

_____*5. Light energy is changed to cell energy in* ***Stage 1*** *of photosynthesis.*

_____*6. The green pigment that absorbs light energy is* ***chlorophyll****.*

Fill in the blanks in the photosynthesis equation below with the names and chemical formula of the missing elements or compounds.



a. What are the raw materials of photosynthesis? _____

b. What are the products of photosynthesis? _____

c. Why is light energy written on the left side of the equation? _____

d. Where does photosynthesis generally occur? _____

Answer the following question.

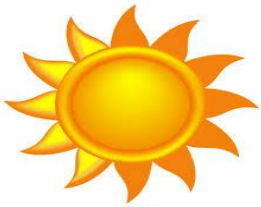
1. Would you expect a plant to produce more oxygen on a sunny day or cloudy day? Explain.

_____

_____

_____

_____



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Lesson 2: Cellular Respiration (use with pages 172– 177)

Fill in the blank to complete each statement.

1. *Pain and weakness in human muscles cells are often the result of the buildup of _____.*
2. *Plant and animal cells release energy from food as a result of the process of _____.*
3. *The energy-releasing process that does not require oxygen is _____.*
4. *_____are the powerhouses of the cell because they are the organelles in which the second stage of cellular respiration takes place.*
5. *The products of photosynthesis are the _____of cellular respiration.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____1. ***Fermentation*** *is the opposite process of cellular respiration.*

_____2. *Fermentation in yeast produces* ***lactic acid****.*

_____3. *In the first stage of respiration,* ***very little*** *energy is released.*

_____4. *Oxygen is a* ***product*** *of cellular respiration.*

_____5. *Glucose is a* ***product*** *of photosynthesis.*

Answer the following question.

1. *When a race ends, why do you think runners continue to breathe fast and deeply for a few minutes?*

_____

_____

_____

_____

2. Where in the cell does the first stage of cellular respiration take place?

_____

3. Where in the cell does the second stage of cellular respiration take place?

_____

4. Which type of fermentation occurs in yeast?

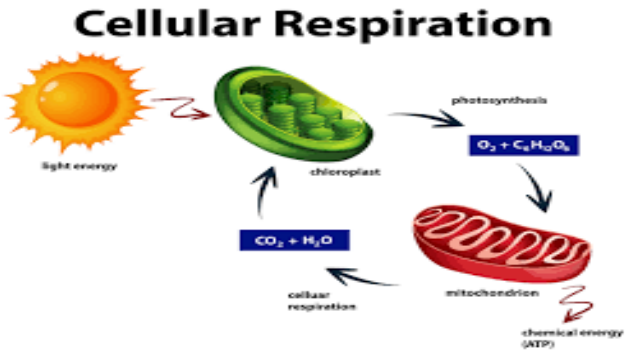
_____

5. Which type of fermentation sometimes occurs in human muscle cells?

_____

Complete the given table below.

CELLULAR RESPIRATION	
Raw Materials	***Products***
Glucose	*1.*
2.	*Water*
	3.



Name: _____ ***Date:*** _____

Lesson 1: What is Heredity? (use with pages 198 – 203)

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

_____1. genetics	a. the passing of traits from parents to offspring
_____2. allele	b. an organism with two different alleles for a trait
_____3. trait	c. a factor that controls traits
_____4. dominant allele	d. a physical characteristics of organisms
_____5. gene	e. an allele whose trait always shows up in the organism
_____6. hybrid	f. each different form of a gene
_____7. heredity	g. the scientific study of heredity
_____8. recessive allele	h. an allele whose trait is hidden in the presence of a dominant allele

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____1. The scientific study of heredity is called ***fertilization***.

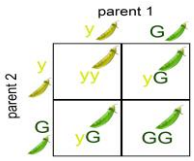
_____2. A ***hybrid*** organism is the offspring of many generations that have the same form of a trait.

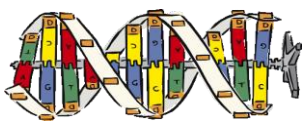
_____3. Capital letters are used to represent ***recessive*** alleles.

_____4. Mendel called an individual that has one dominant allele and one recessive allele for a trait a ***purebred***.

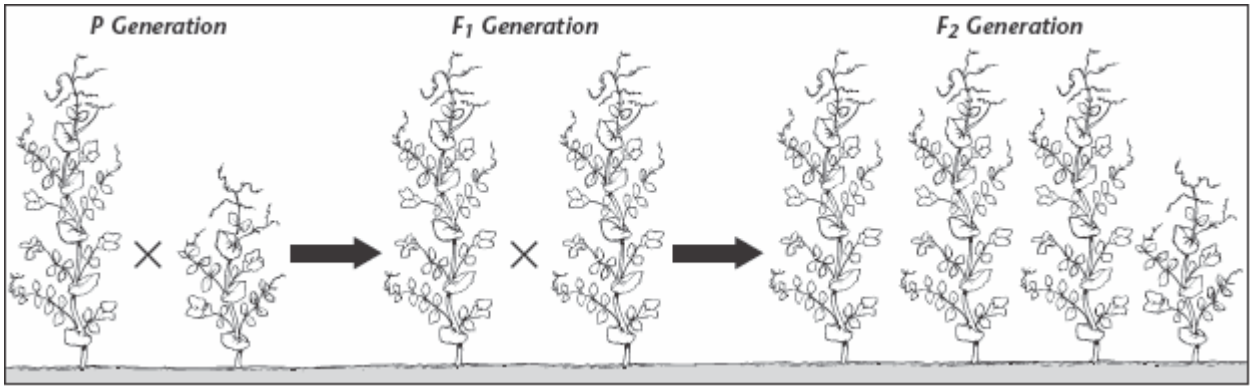
_____5. Mendel said that the factors that control a trait exist in ***pairs***.

_____6. Mendel's experiments showed that the traits of an offspring were not a ***blend*** of the characteristics of the parents.

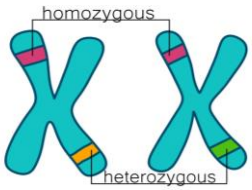




Study the diagram and answer the questions below.



1. *What trait in pea plants is being studied in the cross shown above?* _____
2. *What are the two alleles for this trait?* _____
3. *Which allele is the dominant allele?* _____
4. *Which allele is the recessive allele?* _____
5. *What alleles do the F_1 offspring have?* _____



Answer the following question.

1. *Can a short pea plant be a hybrid for the trait of stem height? Why or why not?*

_____

_____

_____

_____

Name: _____ ***Date:*** _____

Lesson 2: Probability and Heredity (use with pages 204– 209)

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

_____1. *heterozygous*

_____2. *genotype*

_____3. *probability*

_____4. *homozygous*

_____5. *phenotype*

a. *a number describing how likely an event is*

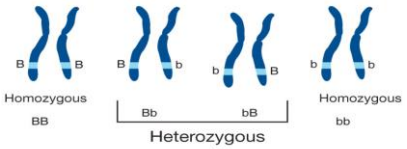
b. *an organism that has two identical alleles for a trait*

c. *an organism's physical appearance*

d. *an organism's genetic makeup, or allele combinations*

e. *an organism that has two different alleles for a trait*

Circle the letter of the correct answer.



1. Which of these genotypes is heterozygous?

a. AA *b. Bb* *c. Cd* *d. ee*

2. Which of these is NOT a phenotype?

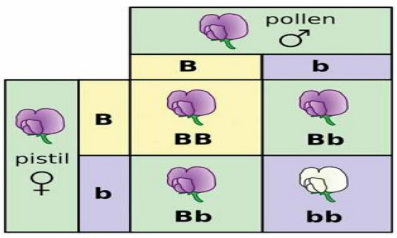
a. tall *b. short* *c. homozygous* *d. round*

3. In a cross between individuals that are Aa × Aa, how many boxes of the Punnett square will show an offspring that is AA?

a. 1 *b. 2* *c. 3* *d. 4*

4. Which of these is NOT a way to express probability?

a. 1 in 4 *b. 50 percent* *c.* $\frac{3}{4}$ *d. 25*



Complete the Punnett squares and answer the questions that follow.

Punnett Square A:

	B	***b***
B	_____	_____
b	_____	_____

Punnett Square B:

_____	_____
Bb	***bb***
Bb	***bb***

1. *Punnett Square A shows a cross between two black guinea pigs. What is the probability that an offspring will be black? White?*

   _____

   _____

2. *What color are the parents shown in Punnett Square B?*

   _____

   _____

3. *Which guinea pig parent(s) in Punnett Square B is homozygous? Which is heterozygous? Explain how you know?*

   _____

   _____

4. *What is the probability that an offspring will be black in the cross shown in Punnett Square B? What is the probability that an offspring will be white?*

   _____

   _____

Name: _____ ***Date:*** _____

Lesson 3: Patterns of Inheritance (use with pages 210– 215)

Fill in the blank to complete each statement.

1. A cow with a mix of red hairs and white hairs has the genotype H^RH^W. This is an example of _____.

2. Having pierced ears is an example of a(n) _____ trait.

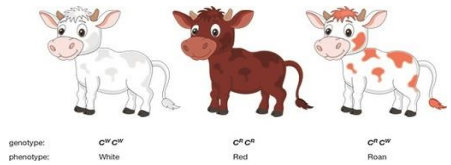
3. Four alleles determine if a rabbit is white, brown, or gray. This is an example of _____.

4. The pattern of inheritance in which more than one pair of genes affects a trait is _____.

5. If a plant with red flowers crossed with a plant with white flowers produces a plant with pink flowers, it is an example of _____.

6. Only changes in _____cells can be passed to offspring.

Circle the letter of the correct answer.



1. Height in humans is an example of _____.

a. incomplete dominance
b. codominance
c. polygenic inheritance
d. multiple alleles

2. The pattern of inheritance in which one allele is only partially dominant is _____.

a. incomplete dominance
b. codominance
c. polygenic inheritance
d. multiple alleles

3. The pattern of inheritance in which there are three or more possible alleles for a trait is _____.

a. incomplete dominance
b. codominance
c. polygenic inheritance
d. multiple alleles

4. The pattern of inheritance in which both genes are expressed equally is _____.

a. incomplete dominance
b. codominance
c. polygenic inheritance
d. multiple alleles

Answer the following questions.

1. *Andalusian chickens show incomplete dominance for feather color. A cross between a white bird and a black bird produces offspring that have blue feathers. A cross between two F1 blue chickens produces mostly blue chickens, but also some white chickens and some black chickens. Are the blue chickens purebred? Explain.*

_____

_____

_____

_____

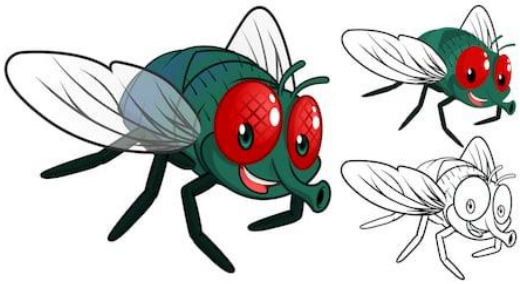
2. *One pair of alleles controls eye color in fruit flies. More than ten different eye colors are possible, ranging from bright red to apricot to tan to white. What kind of inheritance is this? How do you know?*

_____

_____

_____

_____



Name: _____ ***Date:*** _____

Lesson 4: Chromosomes and Inheritance (use with pages 216– 221)

Fill in the blank to complete each statement.

1. Walter Sutton investigated the number of _____ in grasshoppers.

2. The process that produces sex cells is _____.

3. Each chromosome contains two identical _____.

4. In the _____division of meiosis, chromosome pairs line up and then separate.

5. In the _____ division of meiosis, chromosomes split.

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. Body cells of humans have **46** pairs of chromosomes.*

_____*2. Sex cells have **twice** the number of chromosomes as body cells.*

_____*3. Genes pass from parents to offspring on **chromosomes**.*

_____*4. The two chromosomes in a pair have **the same** genes lined up in the same order.*

_____*5. A fertilized egg has **twice** the number of chromosomes as the body cells of the parent.*

Answer the following questions.

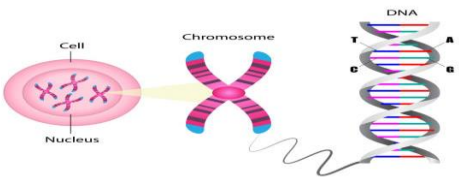
1. How do Sutton's observations support the chromosome theory of inheritance?

_____

_____

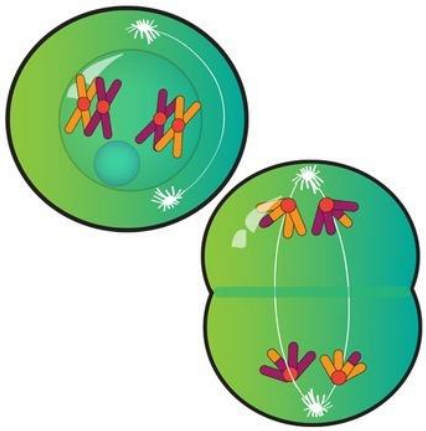
_____

_____



Complete the table below by filling in the spaces with the correct stage of meiosis—Beginning, First Division, Second Division, or End.

Event	*Stage of Meiosis*
The double-stranded chromosomes move to the center of the cell. The centromeres separate.	
Two cells form, each with half the number of chromosomes. Each chromosome still has two chromatids.	
Four sex cells form with half the number of chromosomes as the body cells.	
The chromosomes are copied.	

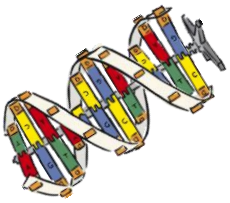


Name: _____ ***Date:*** _____

Lesson 1: The Genetic Code (use with pages 234– 239)

Fill in the blank to complete each statement.

1. *The sides of a DNA molecule are made up of sugar molecules alternating with _____molecules.*



2. *Chromosomes are made up mostly of _____.*
3. *In DNA, adenine always pairs with _____.*
4. *Each _____ on a chromosome contains the information to code for one specific protein.*
5. *Each group of three DNA bases on a gene codes for a single _____.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

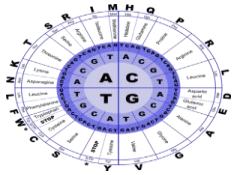
_____1. *Each gene is located at a specific place on a(n) **protein**.*

_____2. *DNA **synthesis** is the process by which DNA copies itself.*

_____3. *The process of DNA copying itself begins when the two sides of the DNA molecule unwind and **separate**.*

_____4. *The genetic code is determined by the **sizes** of the nitrogen bases.*

_____5. *Nitrogen bases are **molecules** that contain nitrogen and other elements.*



Answer the following questions.

1. *These letters represent the nitrogen bases on one strand of DNA: GGCTATCCA. What letters would form the other strand of the helix?*

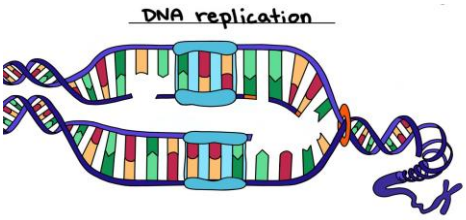
_____

_____

_____

_____

2. Why is DNA replication important?



_____

_____

_____

_____

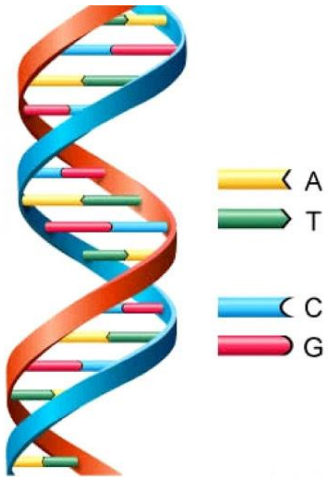
3. What do you think would happen if the DNA code in a daughter cell did not match the code in the parent cell?

_____

_____

_____

_____

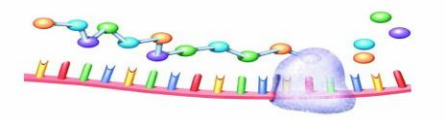


Name: _____ ***Date:*** _____

Lesson 2: How Cells Make Proteins (use with pages 240– 243)

Write a definition for each of these terms on the lines below.

1. Messenger RNA



_____

_____

2. Transfer RNA

_____

_____

Fill in the blank to complete each statement.

1. The process of making proteins is called protein _____.

2. Proteins are made of smaller molecules called _____.

3. In RNA, adenine pairs with _____.

4. The sides of RNA and DNA molecules are made up of different _____.

5. The genetic code in DNA is copied and carried to the ribosomes by _____.

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. After an amino acid is added to a protein, the **transfer** RNA picks up another amino acid.*

_____*2. RNA is a(n) **double** strand.*

_____*3. Changes to the type or **order** of amino acids can result in a different protein.*

_____*4. Amino acids are carried to a ribosome by **messenger** RNA.*

_____*5. A transfer RNA with the bases CGA will line up with a section of messenger RNA with the bases **CGU**.*

Answer the following questions.

1. *Why are there so many different kinds of proteins when there are only 20 different amino acids?*

_____

_____

_____

_____

2. *Describe the steps in protein synthesis.*

_____

_____

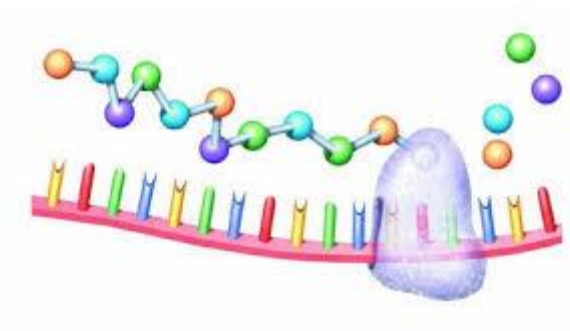
_____

_____

_____

_____

_____



Name: _____ **Date:** _____

Lesson 3: Mutations (use with pages 244– 249)

Fill in the blank to complete each statement.

1. *The use of drugs to treat disease is called _____.*
2. *A mutation can be passed to offspring only if it takes place in a(n_____cell.*
3. *A mutation is any change in the _____of a gene or chromosome.*
4. *Cancer is treated with surgery _____and drugs that destroy the cancer cells.*
5. *A mutation can occur if a base pair is _____, deleted, or substituted for another.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

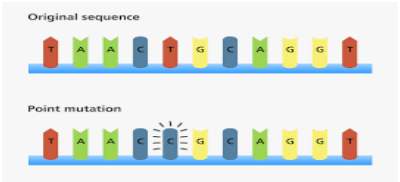
_____*1. Mutations are **sometimes** helpful to the organism.*

_____*2. Cancer is a disease in which cells divide **slowly**.*

_____*3. If chromosomes do not **separate** correctly during the formation of sex cells, the organism that forms can end up with too many or too few chromosomes.*

_____*4. Cancer causes the growth of **tumors**.*

_____*5. Scientists think that cancer begins when something damages a cell's **proteins.***



Answer the following questions.

1. How do mutations lead to cancer?

_____

_____

_____

2. How can cancer spread from a tumor to other parts of the body?

_____

_____

Fill in the blanks to complete the concept map below.

a. _____

cause

cancer

which leads to a cell mass called a

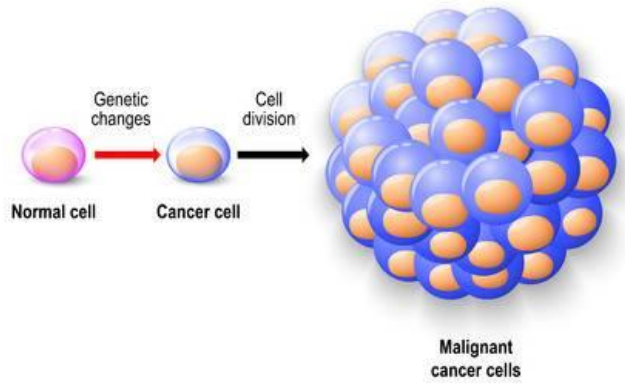
which can be treated by

b. _____

c. _____

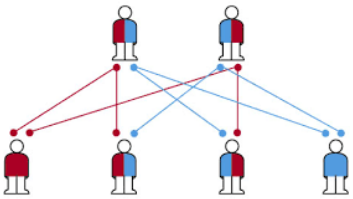
d. _____

e. _____



Name: _____ ***Date:*** _____

Lesson 4: Human Inheritance (use with pages 250– 255)



Fill in the blank to complete each statement.

1. *The sex chromosome carried by a human egg will always be a(n) _____chromosome.*

2. *A person who has one recessive and one dominant allele for a trait is called a(n) _____.*

3. *The only pair of human chromosomes that do not always match are the _____.*

4. *Genes found on the X and Y chromosomes are often called _____genes.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. The body cells of humans contain **46** pairs of chromosomes.*

_____*2. A widow's peak is a trait controlled by **many** genes.*

_____*3. In the case of sex-linked traits, only **females** can be carriers.*

_____*4. In **females**, a recessive allele on the X chromosome often has no matching allele on the Y chromosome.*

_____*5. **The only** thing determined by the genes carried on a sex chromosome is a person's gender.*

_____*6. Colorblindness is a trait controlled by a **dominant** allele on the X chromosome.*

Answer the following question.

1. Aaron has blood type O. Can either of his parents have blood type AB? Explain.

_____

_____

_____

Complete Punnett square A to show inheritance of dimples, a trait controlled by a dominant allele. Complete Punnett square B to show inheritance of colorblindness, a trait controlled by a recessive sex-linked allele. Then answer the questions that follow on a separate sheet of paper. (Note: the father's alleles are written across the top of each Punnett square. The mother's alleles are written on the left side.)

A: Dimples

	D	***d***
d		
D		

B: Colorblindness

	X^c	Y
X^C		
X^c		

1. *Does either the mother or the father in **A** have dimples?*

   _____

2. *What percentage of children are likely to have dimples?*

   _____

3. *Is either the mother or father in **B** colorblind?*

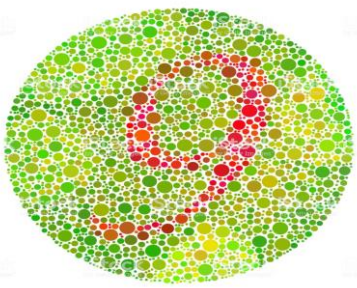
   _____

4. *What percentage of female children is likely to be colorblind?*

   _____

5. *What percentage of male children is likely to be colorblind?*

   _____



Name: _____ ***Date:*** _____

Lesson 5: Advances in Genetics (use with pages 256– 261)

Fill in the blank to complete each statement.

1. *Small rings of DNA called _____ are found in some bacterial cells.*
2. *Some people are concerned that _____ of crops may cause harm to the environment or health problems in humans.*
3. *By using a stem cutting from an African violet, it is easy to produce a new plant, which is a(n) _____.*
4. *A hybrid organism has two different _____ for a trait.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____ *1. In the process of **cloning**, breeders cross two genetically different individuals.*

_____ *2. Crossing two individuals that have similar desirable characteristics is called **genetic engineering**.*

_____ *3. In **selective breeding**, organisms with desired traits are chosen to be parents of the next generation.*

_____ *4. The process by which genes from one organism are transferred into the DNA of another organism is called **inbreeding**.*

_____ *5. Through **gene therapy**, a genetic disorder may be corrected by inserting copies of a gene directly into a person's cells.*

_____ *6. **Hybridization** results in an organism that has exactly the same genes as the organism from which it was produced.*

Answer the following question.

1. *Why are identical twins not clones according to the text definition?*

_____

_____

_____

_____

2. *Dana has a houseplant. Which method would be the best way of producing a similar plant for a friend? Explain your answer.*

_____

_____

_____

_____

Name: _____ ***Date:*** _____

Lesson 1: Body Organization (use with pages 274– 279)

Fill in the blank to complete each statement.

1. *The _____is the structure in a cell that contains information that controls a cell's function.*

2. *_____tissue makes up organs that are able to contract, or shorten.*

3. *The inside of the digestive system is lined with _____tissue.*

4. *A(n) _____is the basic unit of structure and function in a living thing.*

5. *_____ tissue makes up the organs that send messages to control the body.*

6. *_____ tissue provides support for the body and connects all its parts.*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. The skin is made up of* ***nervous*** *tissue.*

_____*2. The* ***endocrine*** *system removes waste products from the body.*

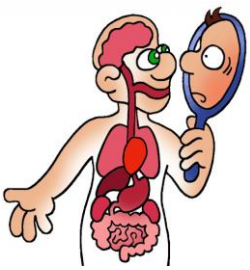
_____*3. The least complex level of organization of the human body is a(n)* ***cell****.*

_____*4. A group of similar cells performing the same function is a(n)* ***organ****.*

_____*5. Each organ in the body is part of a(n)* ***organ system*** *performing a major function.*

_____*6. As one moves from tissues to organs, the levels become* ***less*** *complex.*

Answer the following question.



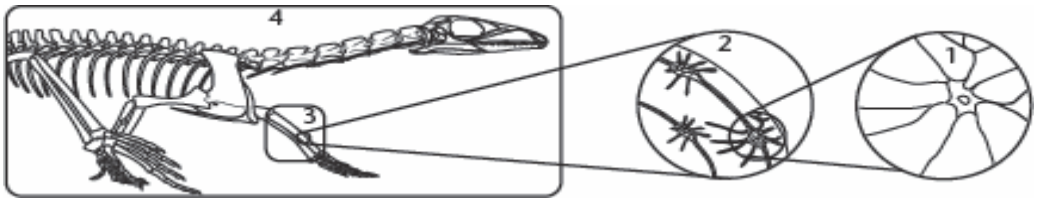
1. *How does learning about body systems help you make informed decisions about your health?*

_____

_____

_____

<u>The illustration below shows the levels of organization in a reptile. The levels are numbered 1–4, with 4 being the highest level and 1 being the lowest level. Match the items below the illustration with the number that represents the lowest appropriate level of organization in the illustration.</u>



_____ *1. tissue*

_____ *2. an object consisting of several different tissues*

_____ *3. the smallest unit of the body*

_____ *4. group of organs that operate as a system*

Name: _____ ***Date:*** _____

Lesson 2: System Interactions (use with pages 280– 287)

Match each term with its definition by writing the letter of the correct definition in the right column on the line beside the term in the left column.

_____1. *skeleton*	*a. the place where two bones meet*
_____2. *absorption*	*b. chemical produced by glands of the endocrine system*
_____3. *stimulus*	*c. the body's reaction to a signal in the environment*
_____4. *joint*	*d. all the bones in the body*
_____5. *gland*	*e. substance gotten from food that is needed by body cells*
_____6. *nutrient*	*f. signal in the environment that causes the body to react*
_____7. *hormone*	*g. endocrine system structure that produces chemicals that affect body processes*
_____8. *response*	*h. process by which nutrients move into the blood stream*

Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

_____*1. The circulatory system works with the **digestive** system to get nutrient to all body cells.*

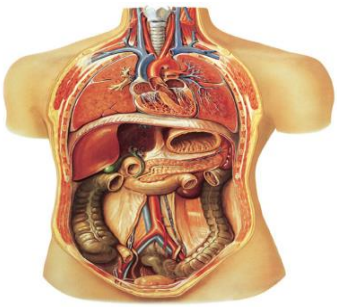
_____*2. Chemical substances produced by glands that affect many body processes are called **bile**.*

_____*3. **Absorption** is the process by which nutrients move from the digestive system into the bloodstream.*

_____*4. Chemical substances needed by body cells that result from the process of digestion are called **stimulus**.*

_____*5. Another name for the circulatory system is the **cardiovascular** system.*

_____*6. The elbow and shoulder are examples of **joint**.*



Complete the diagram below about the function or respiratory system.

Breathing

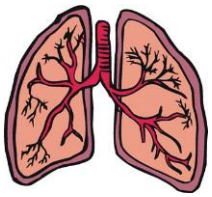
Air moves into the
_____

Oxygen moves into the
_____

Oxygen is delivered into the cell

_____
moves into the bloodstream

Carbon dioxide moves into lungs and
_____ *the body.*



Answer the following questions.

1. How do the respiratory, circulatory, digestive, and nervous systems work together to get essential materials to the cells of the body?

_____

_____

_____

_____

2. How is absorption an important function of the digestive system?

_____

_____

_____