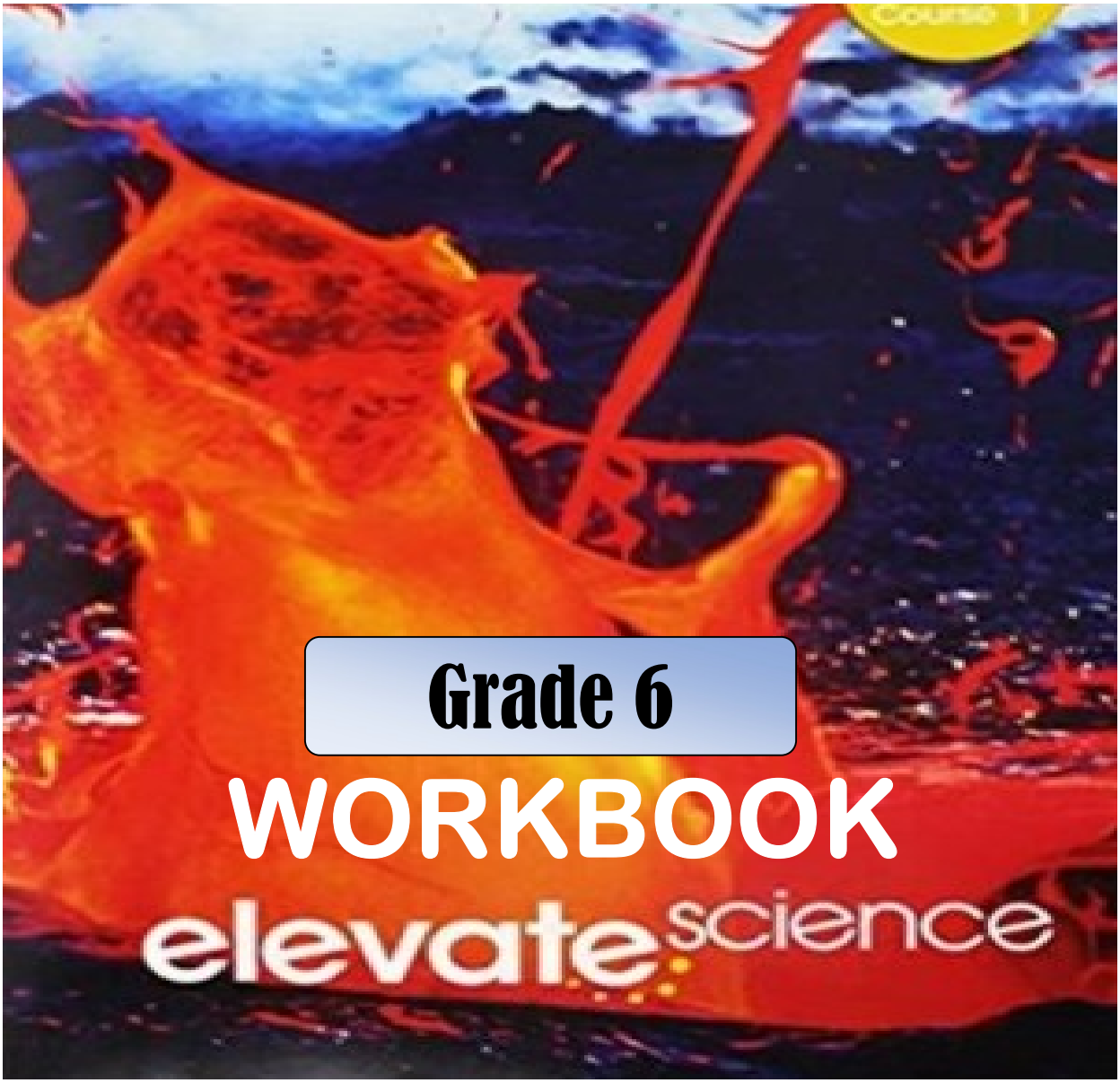
وزارة التعليم
Ministry of Education

AL NOOR INTERNATIONAL SCHOOL
Riyadh, Saudi Arabia
Science Department



Grade 6

WORKBOOK

Name: _____

Class: _____

Academic Year : _____

Table of Contents

GRADE 6

Chapter 1 Introduction to Matter

Lesson 1.....	*8*
Lesson 2.....	*10*
Lesson 3.....	*12*

Chapter 2 Solid, Liquid, and Gases

Lesson 1.....	*14*
Lesson 2.....	*16*
Lesson 3.....	*18*

Chapter 3 Energy

Lesson 1.....	*20*
Lesson 2.....	*22*
Lesson 3.....	*24*
Lesson 4.....	*26*

Chapter 4 Thermal Energy

Lesson 1.....	*28*
Lesson 2.....	*30*
Lesson 3.....	*32*

Chapter 5 Introduction to Earth's Systems

Lesson 1.....	*34*
Lesson 3.....	*36*

Chapter 6 Weather in the Atmosphere

Lesson 1.....	*38*
Lesson 2.....	*40*
Lesson 3.....	*42*
Lesson 4.....	*44*

Chapter 7 Minerals and rocks in Geosphere

Lesson 1.....	*46*
Lesson 2.....	*48*
Lesson 3.....	*50*
Lesson 4.....	*52*

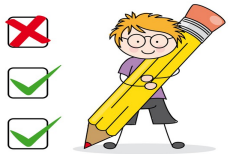
Chapter 8 Plate Tectonics

Lesson 1.....	*54*

Chapter 10 Living things in the Biosphere

Lesson 1.....	*56*
Lesson 2.....	*58*
Lesson 3.....	*60*
Lesson 4.....	*62*

WORKBOOK CHECKLIST



Lesson	Page No.	✓ / X	Teacher's Signature	Parent's Signature
Chapter 1: Introduction to Matter				
Lesson 1	*pp.8-9*			
Lesson 2	*pp. 10-11*			
Lesson 3	*pp. 12-13*			
Chapter 2: Solid, Liquid, and Gases				
Lesson 1	*pp. 14-15*			
Lesson 2	*pp. 16-17*			
Lesson 3	*pp. 18-19*			
Chapter 3: Energy				
Lesson 1	*pp.20-21*			
Lesson 2	*pp. 22-23*			
Lesson 3	*pp. 24-25*			
Lesson 4	*pp.26-27*			
Chapter 4: Thermal Energy				
Lesson 1	*pp. 28-29*			
Lesson 2	*pp. 30-31*			
Lesson 3	*pp. 32-33*			
Chapter 5: Introduction to Earth's System				
Lesson 1	*pp. 34-35*			
Lesson 3	*pp. 36-37*			
Chapter 6: Weather in the Atmosphere				
Lesson 1	*pp. 38-39*			
Lesson 2	*pp. 40-41*			
Lesson 3	*pp. 42-43*			
Lesson 4	*pp.44-45*			
Chapter 7: Mineral and Rocks in Geosphere				
Lesson 1	*pp. 46-47*			
Lesson 2	*pp. 48-49*			
Lesson 3	*pp. 50-51*			
Lesson 4	*pp.52-53*			

Chapter 8: Plate Tectonics				
Lesson 1	*pp. 54-55*			
Chapter 10: Living things in the Biosphere				
Lesson 1	*pp. 56-57*			
Lesson 2	*pp. 58-59*			
Lesson 3	*pp. 60-61*			
Lesson 4	*pp.62-63*			

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

Lesson 1: Describing and Classifying Matter (use with pages 4 – 12)

Fill in the blank to complete each statement.

1. _____is anything that has a mass and takes up space.
2. _____ are made up of only one type of atom, such as aluminum, gold, or copper.
3. _____ are molecules that contain more than one element chemically combined in a set ratio.
4. _____can be observed without changing the matter into another type of matter.
5. _____ are characteristics that describe something's ability to become something else.

Explain: Write your answer on the space provided.

Chiara knows that weight is affected by gravitational pull. She is putting together a poster to display in her classroom.

Since the moon's gravity is less than Earth's, all objects, including mammals, have different weights on the moon than on Earth. Use the table below to calculate how much a dog weighs on the moon.

Weights on Earth and the Moon		
Mammals	**Weight on Earth**	**Weight on the Moon**
human being	120 lbs	20 lbs
tiger	660 lbs	110 lbs
dog	150 lbs	?

_____

_____

Classification:

Oliver's science project consists of six sealed and labeled containers. He challenges his classmates to identify pure substances versus mixtures.

Identify each substance as a pure substance or mixture.

Air Smog Oxygen Sugar Coffee Chocolate milk

Pure Substances	***Mixtures***

B. The difference between a physical change and a chemiphysical changes or chemical changes.

Classify the following items into Physical changes and Chemical Changes

rusting metal boiling water breaking ice carving a wooden statue

baking a cake

Physical Changes	***Chemical Changes.***

Name: _____ **Date:** _____

Lesson 2: Measuring Matter (use with pages 14 – 19)

Match each term in the left column with its description in the right column.

Mass •	• *amount of space that matter occupies.*
Volume •	• *measured in grams per cubic centimeter (g/cm³)*
Density •	• *measure of mass of a material in a given volume*
	• *measured in grams (g)*
	• *measured in cubic centimeters (cm³)*
	• *amount of matter in an object*

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 **weight** of an object is constant even if the force of gravity changes.*

_____ *2. The force of weight depends on the mass of the planet it's on.*

_____ *3. The graduated cylinder is used to measure the **mass**.*

_____ *4. The SI unit of volume is **cm³** or ml.*

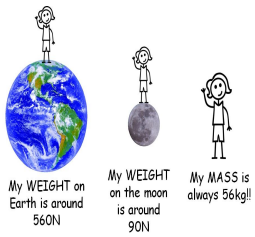
Explain: Write your answer on the space provided.

1. *Why might scientists measure the mass of an object rather than the weight of an object?*

_____

_____

_____



Answer the following questions.

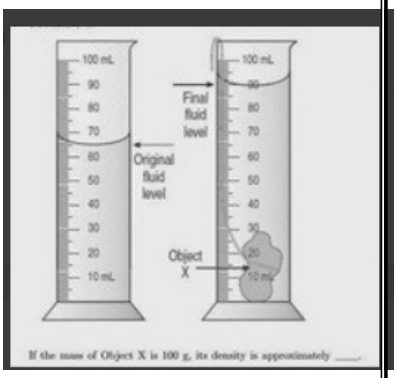
1) **Object X has a mass 100 of 100gr.**

a- Determine the volume of object X. _____

b- Calculate the density of X.

_____

_____



2) **A student added a small ball to a graduated cylinder containing 18 ml of water. The volume of the water rises up to 42 ml. What is the volume of the ball?**

_____

_____

_____

3) **Find the density of each object/liquid and then determine if it will float or sink in water. (density of water = 1 g/ml)**

mass = 7 g volume = 10 cm³ Density = The object will _____.	mass = 12 g volume = 2 cm³ Density = The object will _____.	mass = 22 g volume = 11 cm³ Density = The object will _____.	mass = 40 g volume = 200 cm³ Density = The object will _____.

mass = 5 g volume = 20 ml Olive Oil Density = The object will _____.	mass = 30 g volume = 10 ml Orange Juice Density = The object will _____.	mass = 12 g volume = 15 ml Baby Oil Density = The object will _____.	mass = 44 g volume = 8 ml Honey Density = The object will _____.

Name: _____ Date: _____

Chapter 1

Lesson 3: Changes in Matter (use with pages 24 – 33)

Circle the letter of the correct answer.

1. Which of the following is true about chemical reactions?

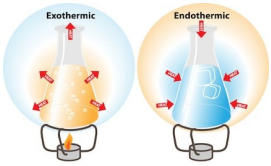
a. They are accompanied by changes in energy.

b. They form new substances with new properties.

c. both A and B

d. neither A nor B

2. In an endothermic reaction, energy is _____.



a. absorbed *c. converted to mass*

b. released *d. synthesized*

3. Which of the following is NOT a physical property?

a. melting point *c. density*

b. state of matter *d. flammability*

4. Substances formed as a result of a chemical reaction are called _____.

a. catalysts *c. products*

b. precipitates *d. reactants*

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 an exothermic reaction, products have **more** energy than reactants.*

_____*2. Water boils at 100°C. This is an example of a **chemical** property.*

_____*3. Substances that enter into a chemical reaction are called **products**.*

_____*4. The ability to react with oxygen is an example of a **chemical** property.*

_____*5. Another name for a chemical change is a chemical **bond**.*

_____*6. In a physical change, some of the physical properties of the substance may be altered and the chemical composition **remains the same**.*

Understanding Main Ideas. Complete the following table. Describe changes in properties that you might notice during each process and state whether the changes are chemical or physical.

Changes in Matter		
Event	***Observable Changes***	***Type of Change***
Baking a cake	*1.*	*2.*
Burning a log	*3.*	*4.*
Freezing water	*5.*	*6.*

Answer the given question below.

1. *When silver coins are found in ancient shipwrecks, they are coated with a black crust. Ask a question that could help you determine whether the silver underwent a chemical change or a physical change. Explain*

_____

_____

_____

_____

Chapter 2

Name: _____ **Date:** _____

Lesson 1: States of Matter (use with pages 46-55)

Fill in the blank to complete each statement.

1. *The amount of space that matter fills is its* _____.
2. *A state of matter with a definite volume, but no definite shape is a(n)* _____.
3. *A(n)* _____ *will always take the shape and volume of its container.*
4. *The* _____ *is a measure of the average speed of the particles in a substance.*
5. *A(n)* _____ *has a definite volume but no shape of its own.*
6. *The* _____ *of a gas is the force of its outward push divided by the area of the walls of its container.*

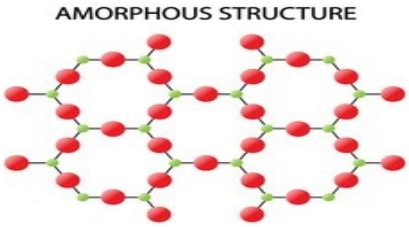
Modified True or False: If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.

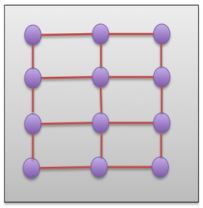
_____ 1. ***Viscosity*** *is the inward force among the molecules of a liquid.*

_____ 2. *A(n)* ***amorphous*** *solid has a definite melting point.*

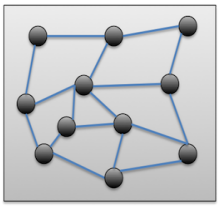
_____ 3. *Both gases and liquids are* ***fluids.***

_____ 4. ***All solids*** *have a closely packed, fixed arrangement of particles.*





Crystalline Solid



Amorphous Solid

Answer the following questions.

1. *What are the general characteristics of a solid?*

_____

_____

_____

2. *How do crystalline solids differ from amorphous solids?*

_____

_____

_____

3. *How are liquids described in terms of shape and volume?*

_____

_____

_____

4. *Explain why a sewing needle can float on the surface of water in a glass.*

_____

_____

_____

_____

5. *What determines the shape and volume of a gas inside a container?*

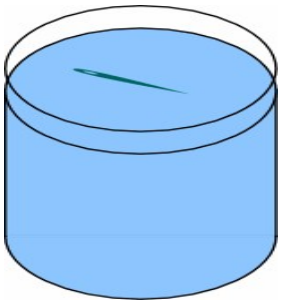
_____

_____

_____

_____

_____



Name:_____ **Date:** _____

Lesson 2: Changes of State (use with pages 56 – 64)

Fill in the blank to complete each statement.

a. The temperature at which a solid change to a liquid is called its _____.

b. Vaporization that takes place both above and below the surface is called _____.

c. When a liquid freezes into a solid, the particles of the substance _____ *energy.*

d. When the temperature of a gas decreases, and volume is held constant, the pressure of the gas _____.

e. _____ energy is energy of motion, and _____ energy is energy that is stored.

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. ***Temperature*** *is a measure of the average kinetic energy of the particles in an object or substance.*

_____ 2 *When the thermal energy* ***increases*** *and its particles move* ***slower.***

_____ 3. *The change in state from a solid to a liquid is called* ***freezing.***

_____*4. All substances freeze at* ***0°C.***

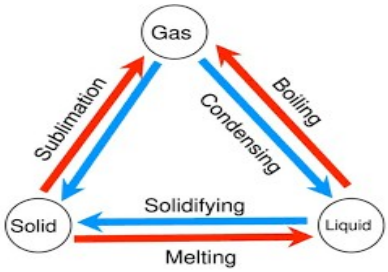
_____*5. The change in state from a liquid to a gas is called* ***vaporization***

_____ *6. The* ***freezing point*** *of water is* ***100°C*** *at sea level.*

_____ *7. As the water is heated on the stove, the pressure inside of the liquid decreases.*

_____ *8.* ***Condensation*** *is the change in state from a gas to a liquid.*

_____ *9.* ***Melting*** *is the change of a solid into gas.*



Shade the correct word to complete the given sentences below.

1. *As liquid water freezes, its molecules _____ thermal energy.* — **gain** / **lose**
2. *During melting, the water molecules _____thermal energy.* — **gain** / **lose**
3. *As water evaporates, its molecules _____ thermal energy.* — **gain** / **lose**
4. *As water vapor condenses, its molecules _____ thermal energy* — **gain** / **lose**

Use the graph below to answer the following questions.

a. *Does this graph represent a directly or inversely proportional relationship?*

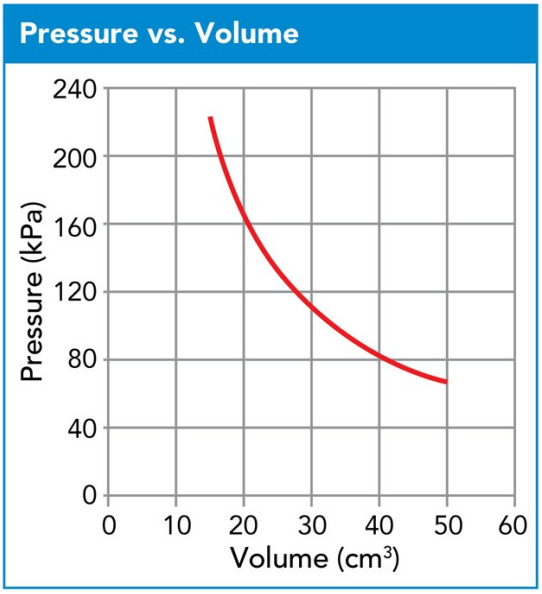
_____

b. Explain what this means for the relationship between pressure and volume.

_____

_____

_____



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

Lesson 3: Gas Behavior (use with pages 66 – 75)

Fill in the blank to complete each statement.

1. *When the graph relating two variables is a straight line passing through the origin, the variables are _____ proportional.*
2. *According to _____ law, when the pressure of a gas at constant temperature is increased, the volume of the gas decreases.*
3. *According to _____ law, when the temperature of a gas is increased at constant pressure, its volume increases.*
4. *When the product of two variables is constant, the variables are _____ proportional to each other.*

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. If the temperature of a gas is constant, when the pressure is increased, the volume **decreases**.*

_____*2. If the air pressure inside an inner tube is constant, when the temperature of the air is increased, the volume **decreases**.*

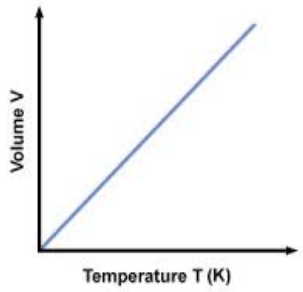
_____*3. The graph of the relationship between the volume of a gas at constant temperature and its pressure is a(n) **line**.*

_____*4. If the temperature of a gas inside a sealed, rigid container is decreased, its pressure **decreases**.*

_____*5. The graph for Charles's law shows that the volume of a gas at constant pressure is **inversely** proportional to its temperature.*

_____*6. If a gas at constant pressure inside a cylinder topped by a movable piston is heated, the volume of the gas will **increase** and push the piston outward.*

Answer the following questions.



1. *The graph of Charles's law shows that the volume of a gas is _____to its Kelvin temperature at constant pressure.*

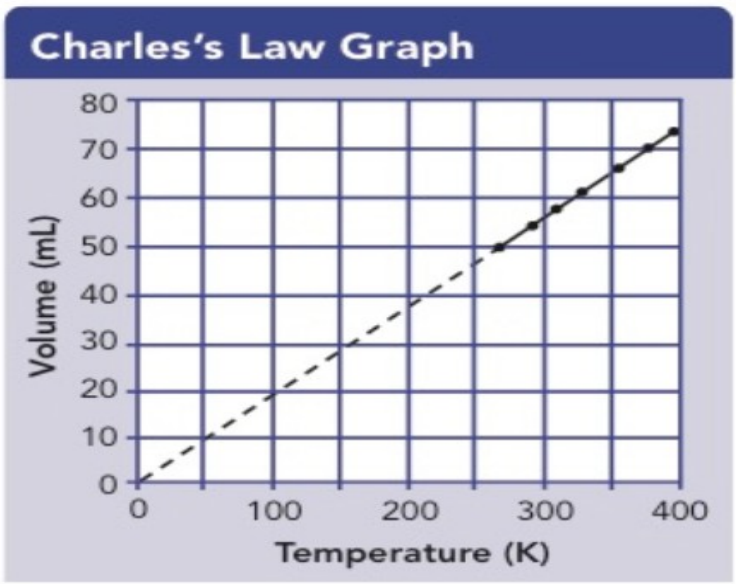
2. *Suppose the gas in Figure 4 (textbook page 27) shown below could be cooled to 100 K (−173°C). Predict the volume of the gas at this temperature.*

_____

_____

_____

_____



Name: _____ **Date:** ___/____/_____

Lesson 1: Energy, Motion, Forces and Work (use with pages 90- 99)

Circle the letter of the correct answer.

1. A push or pull that causes an object to move, stop, or change direction.

a. Force *c. friction*

b. Gravity *d. weight*

2. The ability to do work or cause change

a. Force *c. energy*

b. Motion *d. power*

3. The change in position relative to another object

a. Force *c. work*

b. Motion *d. power*

4. Work is measured in

a. joules *c. watts*

b. newtons *d. watts joules*

Fill in the blank to complete each statement.

1-_____ is the ability to do work or cause change.

2-An object is in _____ if its position changes relative to another object.

3-A _____ is a push or pull.

4-You do _____ any time you exert a force on an object that causes the object to change its motion in the same direction in which you exert the force.

1-Marissa uses a cart to haul flowers at her job with a landscaper. She pushes a 12-kilogram cart a distance of 6 meters with a force of 25 Newtons. How much work does she do?

_____

_____

_____

2-Raul dug a hole in his yard to repair a water pipe. It took him 2 seconds to apply a force of 50 Newtons to push the shovel 0.25 m into the ground. How much power was used?

_____

_____

_____

Name: _____ **Date:** ___/____/_____

Chapter 3

Lesson 2: Kinetic Energy and Potential (use with page 100- 107)

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 faster an object moves, the more kinetic energy it has.*

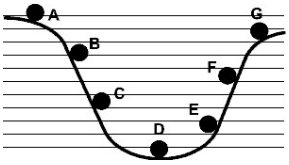
_____*2. Kinetic energy is stored energy.*

_____*3. Gravitational potential energy depends on the height and mass of the object.*

_____*4. Energy can be destroyed.*

Circle the letter of the correct answer.

1. Which point has the most potential energy



a. G *c. f*

b. A ***d. B***

2. How much potential energy is at the top of a hill on a roller coaster ride

a. 100 % *c. 25%*

b. 50% ***d. 0%***

3. As a pendulum swings from its highest to lowest position, what happens to its kinetic and potential energy?

a. Both the potential energy and kinetic energy decrease

b. The potential energy decreases while the kinetic energy increases

c. The kinetic energy decreases while the potential energy increases

d. Bothe the potential energy and kinetic energy increase

4. Energy can be _____ or changed from one type to another.

c. Destroyed *c. transferred*

d. created *d. ignored*

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 faster an object moves, the less kinetic energy it has.*

_____*2. Kinetic energy increases as mass increases.*

_____*3. Gravitational potential energy depends on the height and velocity of the object.*

_____*4. Gravitational potential energy is the energy associated with objects that can be compressed or stretched.*

Answer the following questions below.

Calculate the potential energy of a car with a mass of 2,500 kg that is on a hill 100 meters above sea level.

Lilly's cat ran through your yard. The cat has a mass of 5 kg. He is running at a speed of 3 m/s. What is the kinetic energy of the cat as he runs?

Name: _____ **Date:** ___/____/_____

Lesson 3: Other Forms of Energy (use with pages 108-116)

Circle the letter of the correct answer.

1. ***Andre really likes his new car, and he knows it has a certain amount of mechanical energy. Which types of energy are included in the mechanical energy of the car? Choose the two that apply.***

a. *thermal energy from when fuel burns in the engine*

b. *electrical energy from the battery*

c. *kinetic energy from any movement the car has.*

d. *potential energy based on its position*

2. ***Lama lives near Miami, Florida. His home receives electricity from the Turkey Point power plant, which uses nuclear energy to provide electricity to homes and businesses. What is used to provide energy in a nuclear power plant?***

a. *chemical reactions* c. *nuclear fusion reactions*

b. *nuclear fission reactions* d. *physical changes*

3. ***Before Mrs. Haidi decides what to wear for the day, she wants to know what the temperature is going to be. Which type of energy is most closely related to temperature****?*

a. *chemical* c. *electrical*

b. *mechanical* d. *thermal*

4. ***Electromagnetic radiation does not need a _____ such as air or water, to travel through.***

a. *Medium* c. *height*

b. *Nucleus* d. *speed*

5. ***When you put gas in a car, what type of energy transformation is taking place?***

a. *electrical --> heat* c. *electrical --> mechanical*

b. *chemical --> mechanical* d. *chemical --> electrical*

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

_____1. Mechanical energy is a type of potential energy stored in the nucleus. It can be released through a nuclear reaction.
_____2. In fission, small nuclei combine to form larger nuclei.
_____3. In fission, a nucleus splits into smaller fragments

_____4. The total potential and kinetic energy of particles in an object is called Nuclear energy.
_____5. Heat flows from a cooler object to a hotter one.
_____6. Photosynthesis in plants is considered a nuclear energy.
_____7. Electromagnetic radiation is a form of kinetic energy that travels through space in waves.

Understanding Main Ideas. Fill in the blank to complete each statement.

Mr. Tracy drove to the nursery to buy plants for his garden. His trip involved several examples of chemical energy. The chemical energy contained in_____ changed into energy to run the car. The plants store chemical energy produced during_____. Mr. Tracy had the energy to pick up the plants and carry them to the car because of the chemical energy stored in_____.

Two smaller nuclei are _____ to form a larger more stable nucleus.
Objects that are very _____ have a lot of thermal energy.

Name: _____ *Date: ___/____/_____*

Lesson 4: Energy Change and Conservation (use with pages 118-125)

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

_____1. I n a closed system, the total amount of energy is limited.

_____2. During energy transfer, the total amount of energy stays the same.

_____3. When a pendulum is at the bottom of its swing, is kinetic energy at its maximum amount.

_____4. When a pendulum is at the bottom of its swing, is potential energy at its maximum amount.

_____5. When a pendulum is at the top of its swing, is kinetic energy at its minimum amount.

Understanding Main Ideas. Fill in the blanks to complete each statement.

Your body transforms chemical energy stored in cells into the ------- that moves your mouth your digestive system uses --------- and ---------- to digest the bread. Sunlight, which is a form of _____ .

Answer the following questions below.

1. *What is the law of conservation of energy?*

_____

_____

_____

2- Determine whether the following are energy transfer or energy transformation.

a._____ A battery-powered alarm clock rings because a bell hammer hits the bells of the alarm clock. Is this an example of an energy transfer or energy transformation? _____

b._____ A ball drops off of a table and into a cup. Is this an energy transfer or energy transformation? _____

c. _____ A rotating wheel knocks over a cup. Is this an example of an energy transfer or an energy transformation? _____

d._____ A ball is in a cup, and when the cup is knocked over, the ball rolls out. Is this an example of energy transfer or energy transformation?

_____

e._____ A ball falls downward into a bucket and makes a sound. Is this an example of energy transfer or energy transformation? _____

Name: _____ Date: _____

Chapter 4

Lesson 1: Thermal Energy, Heat and Temperature (use with pages 140-147)

Fill in the blank to complete each statement.

1. The total kinetic and potential energy of all the particles in an object is called_____

2. _____ is the energy that is transferred from a warmer object to a cooler object.

3. _____ is a measure of the average kinetic energy of the particles in a substance.

4. At absolute zero, particles theoretically would have no _____ _____. They would be completely _____!

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.* when heat is added to a solid, its particles move faster.

_____ *2.* Once the solid gains enough thermal energy, it can change to a frozen state

_____ *3.* when water vapor begins to cool, The average kinetic energy remains the same.

_____ *4.* A greater kinetic energy results in a less thermal energy.

Answer the following questions.

1. *Jennifer was heating water on a stovetop to cook pasta. She noticed bubbles of water vapor forming at the bottom of the pot of water as the water was boiling. Explain how this water vapor is formed using the terms* thermal energy, temperature, *and* change of state *in your explanation*

_____

_____

_____

_____

2. *A boy and his younger sister are at the zoo on a hot day. They each buy a cold lemonade. The boy buys a large lemonade and his sister buys a small. They set their cups on a hot table and wait a while before they start drinking. When they finally begin to drink their lemonade, the girl complains that her drink is no longer cold. However, the brother states that his larger drink is still cold. Explain why the boy's drink is still cold, but the girl's drink is not?*

_____

_____

_____

_____

Name: _____ **Date:** _____

Lesson 2: Heat Transfer (use with pages 148- 155)

Circle the letter of the correct answer.

1. In which substance would heat transfer by conduction work best?

a. oxygen *c. water*

b. iron *d. alcohol*

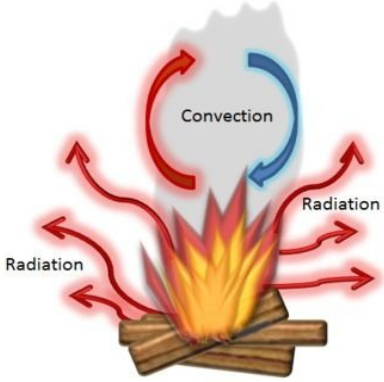
2. Which is true of a pot and a penny with equal temperatures?

a. they have the same thermal energy

b. they are both gaining thermal energy

c. the penny has more thermal energy

d. the pot has more thermal energy



3. How is heat transferred from the sun to Earth?

a. by convection currents *c. by radiation*

b. by conduction *d. by thermal energy*

4. Which temperature is the freezing point of water in the Celsius scale?

a. 100° *c. 10°*

b. 32° *d. 0°*

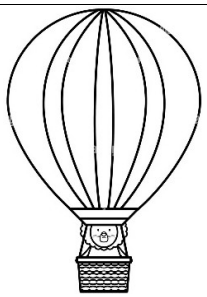
Fill in the blank to complete each statement.

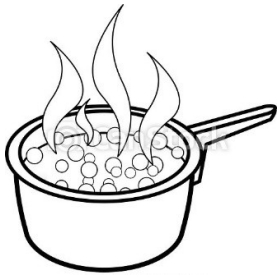
1. *The transfer of heat between two substances that are in direct contact is called* _____.
2. _____ *measures the total energy of the particles in a substance.*
3. *The transfer of heat by the movement of a fluid is called* _____.
4. *The average amount of energy of motion of each particle of a substance is called* _____.
5. *Radiation is the direct transfer of energy by*_____.
6. *Only the first few meters of the troposphere are heated by* _____.

Answer the following questions.

a) *conduction* ***b)*** *convection* ***c)*** *friction* ***d)*** *radiation* ***e)*** *specific heat* ***f)*** *thermal expansion*	_____ *the transfer of heat through the movement of fluids (liquids and gases).* _____ *the transfer of energy between two objects that are in direct contact.* _____ *the transfer of energy by electromagnetic waves through empty space.* _____ *the amount of energy required to raise the temperature of 1 kilogram of a material by 1 kelvin.* _____ *the expansion of matter when it is heated.*

Identify each example of heat transfer as conduction, convection, or radiation.

 Eggs cooking in a pan.	 Rising hot air balloon.	 Warming your hands over a campfire.

 Snowman melting in the Sun.	 Holding hot coffee.	 Water boiling in a pot.

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

Lesson 3: Heat and Materials (use with pages 158 – 165)

Fill in the blank to complete each statement.

To keep food warm or cool, coolers are made out of materials that

(1) _____ The metal in the spoon is an excellent (2) _____,

which means that it (3) _____ heat well. On the other hand, wood is an excellent

(4) _____, which means that it easily (5) _____.

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.A material that conducts heat well is called an* ***Insulator.***

_____ *2.* ***Conductors*** *are materials that do not conduct heat well.*

_____ *3.The amount of energy required to raise the temperature of 1 kilogram of a material by 1 kelvin is called its* ***specific heat.***

_____ *4.As matter* ***cools****, it usually decreases in volume, or* ***contracts.***

_____ *5.When matter is* ***heated*** *its particles slow down and move together.*

_____ *6.Some objects* ***gain*** *kinetic energy because of friction.*

Materials used to make spacecraft are chosen based on their properties. These properties include the ability to hold up under extreme temperatures. Look at the table that shows the specific heat of several materials commonly used in spacecraft.

Material	Specific Heat (J/(kg·K))
Beryllium	1830
Inconel	435
Stainless steel	461
Titanium	544

Energy Change = Mass × Specific Heat × Temperature Change

Suppose a space mission is testing samples of the materials listed in the table. The temperature changes are the same for each material tested and the same amount of mass is used for each test.

a- Which type of material will take more energy to raise its temperature.

b- Which type of material will take less energy to raise its temperature.

Chapter 5

Name: _____ **Date:** ___/____/_____

Lesson 1: Matter and Energy in Earth's Systems (use with pages 178-184)

Circle the letter of the correct answer.

1. Sam read that all subsystems interact with each other. Which example shows how changes in the cryosphere can affect the geosphere?

a. Land that gains weight can rise slowly.

b. Land that loses weight can rise slowly.

c. Land that gains weight will have less mass.

d. Land that loses weight can sink slowly.

2. Fatima drew a diagram of the water cycle to share with her class. She wanted to be able to explain the source of energy for the water cycle, so she looked it up in an encyclopedia. What provides the energy that drives the water cycle?

a. heat sources at the center of Earth

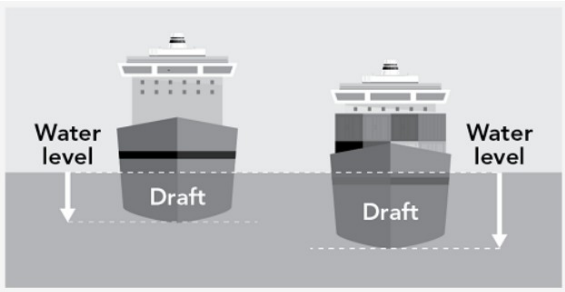
b. evaporation and condensation

c. heat of the sun

d. *biosphere*

Marc was looking at this picture of two boats sitting differently in the water. He decided to compare the way the two boats sit in the water to the way land is behaving in Greenland.

Explain how what is happening in Greenland is similar to the ways the two boats are sitting in the water.



_____

_____

_____

_____

_____

<u>Use the information below to answer questions 3 and 4. collection of subsystems.</u>

Use the words from the word bank and the graphic organizer to match the characteristics with the subsystems they describe.

contains solid inner metal core, liquid outer core, and rocky mantle and crust • holds all of Earth water • contains all living things on Earth • rocks and metals • cryosphere • thin envelope of gases that contains the weather

biosphere	*hydrosphere*	*geosphere*	*atmosphere*

Name: _____ **Date:** ___/____/_____

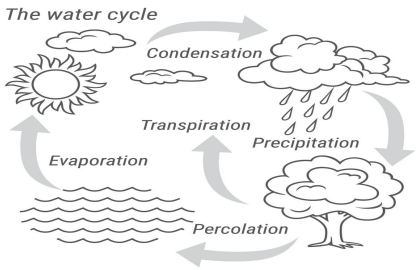
Lesson 3: The Hydrosphere (use with pages 198-207)

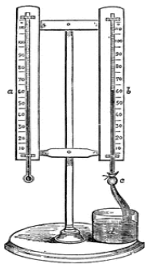
Fill in the blank to complete each statement.

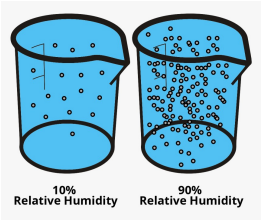
1. *In the water cycle, _____ in the form of rain or snow falls from the clouds.*
2. *Water returns to the atmosphere as vapor by the process of _____.*
3. *Water vapor in the atmosphere _____ to form clouds.*
4. *Cool air can hold _____water vapor than warm air.*
5. *At 10°C, 1 cubic meter of air can hold 8 grams of water vapor. If the air had 2 grams of vapor, the relative humidity would be _____percent.*

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. condensation	a. an instrument for measuring relative humidity
_____2. evaporation	b. a measure of the amount of water vapor in the air
_____3. humidity	c. the process by which water vapor becomes liquid water
_____4. psychrometer	d. a percentage comparing the amount of water vapor in the air to the maximum amount of water vapor the air can hold at a particular temperature
_____5. relative humidity	e. the process by which molecules of liquid water escape into the air after becoming water vapor







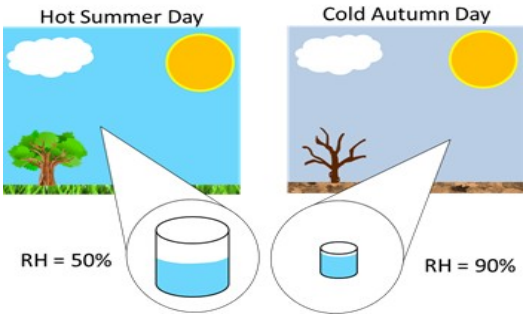
Answer the given question below.

1. *Suppose a sample of air can hold at most 10 grams of water vapor. If the sample actually has 2 grams of water vapor, what is its relative humidity?*

_____

_____

_____



Sophia was fascinated while studying the role of oceans in the hydrosphere. She decided to illustrate the features of the ocean floor on a poster for her part in a group project. Identify and describe the kinds of features found on the ocean floor.

_____

_____

_____

_____

Name: _____ **Date:** ___/____/_____

Lesson 1: The Atmosphere Around You (use with pages 222-227)

Circle the letter of the correct answer.

1- He knows what causes the local winds, but he decides to investigate global winds. What is the cause of global winds?

a. movement of air from areas of low pressure to areas of high pressure

b. conduction currents caused by cool and warm air

c. radiation currents caused by absorbing the sun's heat

d. unequal heating of Earth's surfaces over large areas

2- Lia lives in the mountains of Colorado. Her aunt came to visit and had difficulty breathing for a few days until she adjusted to the higher altitude. Which explanation best describes the reason for this difficulty?

a. Decreased air pressure causes the density of air to increase at higher altitudes.

b. Decreased air pressure causes the density of air to decrease at higher altitudes.

c. Increased air pressure causes the density of air to increase at higher altitudes.

d. Increased air pressure causes the density of air to decrease at higher altitudes.-

3- Which layer of the atmosphere has no definite outer limit?

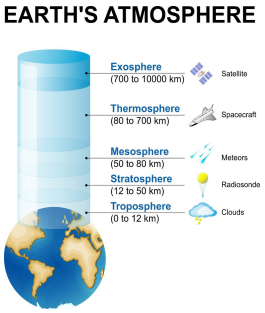
6. Thermosphere *c. Mesosphere*

7. Stratosphere *d. Troposphere*

4- Which layer is just above the stratosphere?

a. Troposphere *c. Mesosphere*

b. Exosphere *d. Thermosphere*



5- In which layer does Earth's weather occur?

c. Mesosphere *c. Thermosphere*

d. Stratosphere *d. Troposphere*

6- In which layer can air temperatures reach 1,800°C?

a. Mesosphere *c. Exosphere*

b. Thermosphere *d. Stratosphere*

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 troposphere is thickest over the ***equator***.

_____*2.* Water forms thin, feathery clouds of ice at the top of the ***exosphere***.

_____*3.* The upper stratosphere is ***cooler*** than the lower stratosphere.

_____*4.* The ***mesosphere*** contains the ozone layer.

_____*5.* The ***ionosphere*** is the lower layer of the thermosphere.

_____*6.* Most meteoroids burn up in the ***ionosphere***.

_____*7. . Air pressure is the result of the* ***weight*** *of a column of air pushing on an area.*

_____*8. The level of mercury in a barometer* ***falls*** *as the air pressure falls.*

Understanding Main Ideas. Fill in the blank to complete each statement.

1. The middle layer of Earth's atmosphere is the _____.

2. The upper region of the stratosphere is warm because energy from the sun is absorbed by the _____.

3. The exosphere is the outer layer of the _____.

4. The _____contains almost all the mass of the atmosphere.

5. The _____is thicker over the equator than over the poles.

6. The lower layer of the thermosphere is the _____.

7. Air pressure at sea level is _____than air pressure at the top of a mountain.

Answer the question below.

1. Why would you feel cold in the thermosphere?

_____

_____

_____

Name: _____ **Date:** ___/____/_____

Lesson 2: Water in the Atmosphere (use with pages 230- 239)

Colin watched the weather report on television. He saw the forecast for the coming week.

Day of the week	Sun	Mon	Tues	Weds	Thur	Fri	Sat
High temp. (°C/°F)	30/86	27.2/81	30/80	25.6/78	25.6/78	27.2/81	29.4/85
Forecast	Sunny	Partly cloudy	Cloudy	Rain	Fog	Partly cloudy	Sunny
Relative humidity	29%	40%	90%	100%	100%	70%	30%

Circle the letter of the correct answer.

1. Colin knows that the water cycle follows certain steps in a repeating cycle. When the sun heats water molecules, they increase speed and collide. On Sunday he noticed that a puddle on the sidewalk was getting smaller over time. Which step in the water cycle would Colin predict is occurring?

A. precipitation
B. evaporation
C. condensation
D. crystallization

2. The meteorologist talked about how humidity affects weather and then predicted the humidity for the next week. Knowing that the amount of humidity would affect the coming weather, what does the amount of humidity on Tuesday indicate?

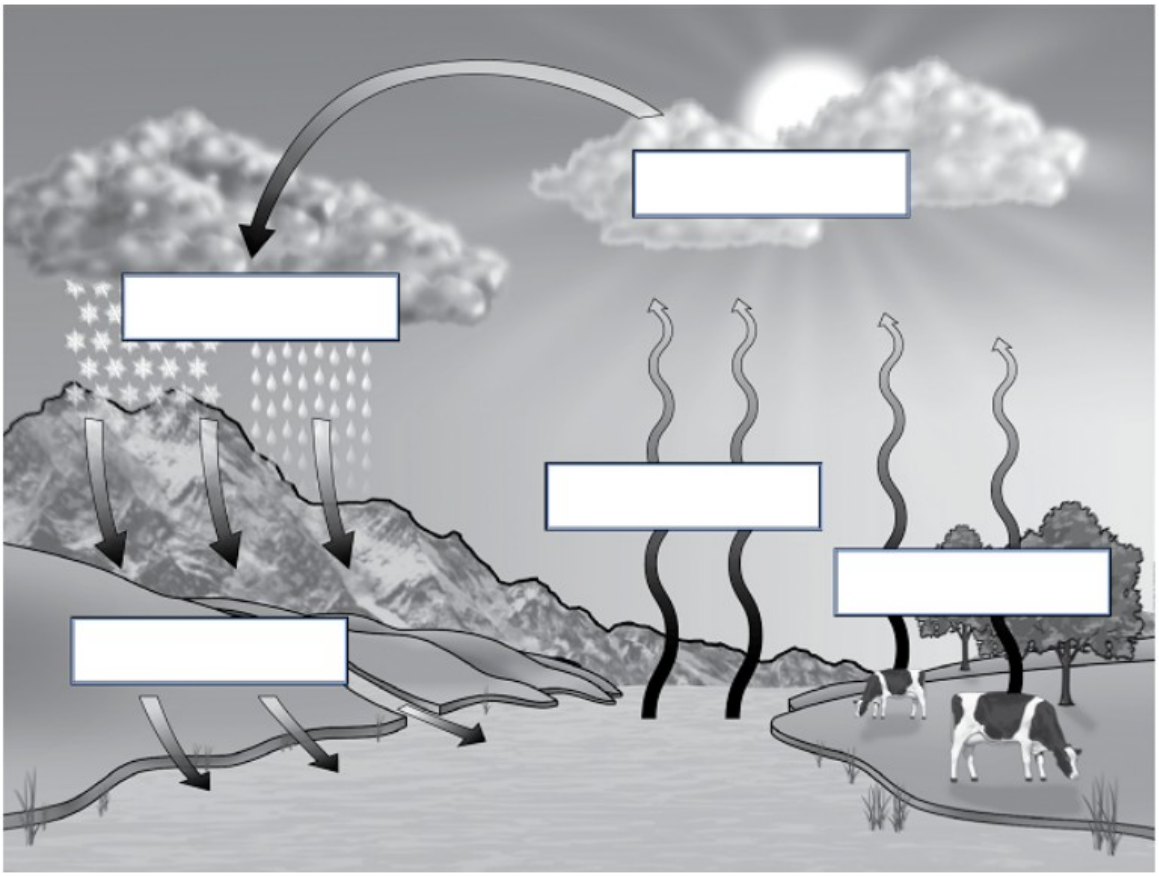
A. low level of air pressure on that day.
B. high level of air pressure on that day.
C low level of water vapor in the air on that day.
D. high level of water vapor in the air on that day.

3. What is the dew point?

a. the temperature at which condensation begins
b. the temperature at which frost turns to dew
c. the temperature present in a cloud
d. the temperature present when a storm begins

Choose the correct word from the word bank to correctly label each part of the water cycle in the image below.

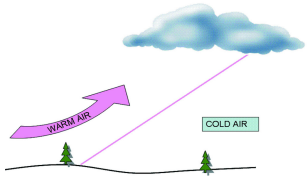
condensation • respiration • runoff • evaporation • precipitation



Name: _____ **Date:** ___/____/_____

Lesson 3: Air Masses (use with pages 240-247)

Circle the letter of the correct answer.



1. Maritime polar air masses are _____.

a. cold and dry *c. warm and dry*

b. cold and moist *d. warm and moist*

2. A stalled front that may bring many days of clouds and precipitation is a(n) _____.

a. cold front *c. stationary front*

b. occluded front *d. warm front*

3. An air mass that forms over Arizona and New Mexico will be a _____.

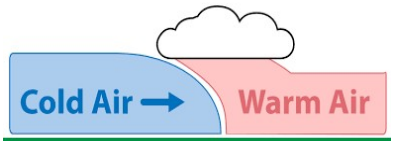
a. continental polar air mass *c. maritime polar air mass*

b. continental tropical air mass *d. maritime tropical air mass*

4. Bands of high-speed winds about 10 kilometers above Earth's surface are called _____.

a. air masses *c. fronts*

b. cyclones *d. jet streams*



Fill in the blank to complete each statement.

1. *A large body of air that has similar temperature, humidity, and air pressure at a given height is called a(n) _____.*
2. *Air masses that form over oceans are called _____air masses.*
3. *The boundary where air masses meet is a(n) _____.*
4. *A(n) _____ front occurs when a fast-moving warm air mass overtakes a slower-moving cold air mass.*
5. *A swirling center of low air pressure is called a(n) _____.*
6. *_____are high-pressure centers of dry air.*

Understanding Main Ideas. Fill in the blanks in the table below.

Type of Air Mass	*Where It Forms*	*Temperature*	*Humidity*
1.	*Over ocean*	*Warm*	*Moist*
Maritime polar	*2.*	*Cold*	*Moist*
Continental tropical	*Over land*	*3.*	*Dry*
Continental polar	*Over land*	*Cold*	*4.*

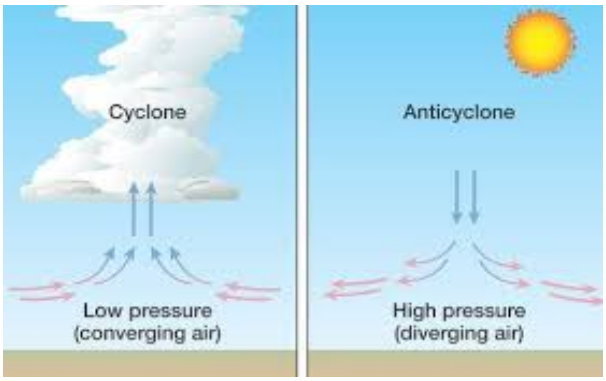
Answer the given question below.

1. *What kind of weather is associated with a cyclone? What kind of weather is associated with an anticyclone?*

_____

_____

_____



Name: _____ Date: ___/____/_____

Chapter 6

Lesson 4: Predicting Weather Changes (use with pages 248-254)

Circle the letter of the correct answer.

1- What are the important job duties of a meteorologist? Choose the two that apply.

A. collect and analyze data to make predictions about the weather

B. guess what the weather will be and report it on television

C. carry out investigations of insects

D. use observations and technology to determine how global patterns affect weather

2- What are some reasons people need accurate forecasts? Choose the two that apply.

A. helps them to prepare for dangerous weather

B. helps them to get to school on time

C. helps them to harvest their crops at the right time

D. helps them to learn to read and understand maps

E. helps them to work even during bad weather

3- How does the Gulf Stream affect the air masses above ocean water?

A. causes the air masses to become cooler

B. causes the air masses to become warmer

C. causes the air masses to collide

D. causes the air masses to move along the jet stream

Fill in the blank to complete each statement.

i. A _____ is a scientist who studies and predicts weather.

ii. _____carry instruments for collecting weather data high into

iii. _____the atmosphere where human observation is not feasible.

iv. _____ ocean currents cause the air masses above them to become warmer, while cold currents _____ the temperature of air masses above them.

v. _____orbit high above Earth collecting data as well as images of Earth's surface and atmosphere.

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

_____1. Good forecasters could be one hundred percent accurate predicting the weather.

*_____3. A **thermometer** measures air pressure.*

*_____4. If the air pressure in the area is decreasing, then you can expect **sunny** weather.*

*_____4. When you see thin, high clouds in the sky, a **warm** front may be approaching.*

Choose a word from the word bank to complete the label naming each type of technology that meteorologists use to collect data and predict the weather.

station • balloon • computer • satellite

Name: _____ Date: ___/____/_____

Chapter 7

Lesson 1: Earth's Interior use with pages 280-285)

Circle the letter of the correct answer.

Which of these are examples of evidence that scientists use to discover what the layers of Earth's crust are like? Choose the two that apply.

a. fossils
b. X-rays
c. seismic waves
d. samples of rock
e. digging below the surface

Volcanoes extend so deep below Earth's surface that they reach down to the next layer. Which is the second layer of Earth?

a. crust
b. inner core
c. mantle
d. outer core

Which part of Earth is responsible for creating its magnetic field?

a. crust
b. inner core
c. mantle
d. outer core

Which of the following can occur after a rock is weathered?

a. It forms metamorphic rock.
b. It melts and forms igneous rock.
c. The sediment can form magma.
d. It gets compacted and forms sedimentary rock.

Which process is responsible for causing this column of rock to form?

a. _____ *crystallization*
b. _____ deposition
c. _____ sedimentation
d. _____ weathering

Words to Know: Write the word next to the description it matches.

inner core ***outer core*** ***crust*** ***mantle***,

The _____ is a layer of solid rock that includes both dry land and the ocean floor.

The _____ a layer of hot rock.

The _____ is a layer of molten metal surrounding the inner core.

The _____ is a dense ball of solid metal.

Sam is not sure what the difference is between the inner core and the outer core. Read each word or phrase that describes the inner or outer core of Earth, and then use the graphic organizer to place each word or phrase in the correct column.

solid • liquid • hottest layer • under the most pressure • causes the magnetic field

Inner Core	*Outer Core*

In Journey to the Center of the Earth, by Jules Verne, an adventurer travels through the layers of Earth until he reaches the center. While it is not possible to actually travel through all of the layers of Earth, in what order would the adventurer have traveled to reach the center? Number the layers listed below in the correct order.

_____ *outer core*

_____ *mantle*

_____ *inner core*

_____ *crust*

Name: _____ Date: ___/____/_____

Chapter 7

Lesson 2: Minerals (use with pages 292-300)

1- Which process is responsible for causing this column of rock to form?

a. crystallization

b. deposition

c. sedimentation

d. weathering

2- What determines crystal size in minerals formed by lava or magma?

e. the kind of mineral that formed

f. the amount of material available

g. the rate at which the minerals cooled

h. the materials in the lava or magma

3. What causes the differences in the way diamonds form compared to graphite?

a. high temperature and high pressure

b. low temperature and location deep in the mantle

c. high pressure and location in the continental crust

d. low temperature and low pressure

Fill in the blank to complete each statement.

harder • heavier • cleavable • softer

Any mineral can scratch any mineral _____ than itself, and it can be scratched by any mineral that is _____.

Susanna was hiking in the mountains, and she discovered an interesting shiny object. She wondered if this object was actually a rock or if it might be a mineral. As she observed it more closely, she noted that it was solid and naturally occurring, with a definite chemical composition. The object did not appear to have a crystal structure.

Could Susanna have found a mineral? Explain why or why not.

_____

_____

_____

_____

_____

Name: _____ *Date:* ___/____/_____

Lesson 3: Rocks (use with pages 302-309)

Circle the letter of the correct answer.

_____ **1. Marcie found a rock formed by volcanic processes. What type of rock would it be?**

- **A.** igneous
- **B.** metamorphic
- **C.** mineral
- **D.** sedimentary

_____ **2. Marcie believes that she has found a piece of obsidian. What causes obsidian to form?**

- **A.** extremely hot rock that cools quickly
- **B.** remains of plants and animals compacted
- **C.** pressure deep beneath the surface of Earth
- **D.** particles of rocks pressed and cemented together

_____ **3. Which of these statements describes the gypsum rock that is rated a 2 on Moh's hardness scale? Choose the two that apply.**

- **A.** It cannot scratch any other rocks.
- **B.** It can scratch rocks that are rated a 1.
- **C.** It is very soft compared to other rocks.
- **D.** It is very hard compared to other rocks.
- **E.** It can scratch any rock rated from a 2 to a 10, but not a 1.

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.

Igneous	formed from cooled magma or lava
Metamorphic	formed from small particles of rocks or other materials cemented together
Sedimentary	formed when rock is changed from heat or pressure deep below Earth's surface

Reese collects rocks with his brother every time they go hiking. He has a decent collection, but he is always on the lookout for a new kind to identify and include. He knows rocks contain at least one mineral and often several kinds of minerals. Explain how geologists describe rocks. Include at least three different characteristics, and explain how these characteristics are used to describe rocks.

_____

_____

_____

_____

_____

Name: _____ Date: ___/____/_____

Chapter 7

Lesson 4 : Cycling of Rocks (use with pages 310-316)

1.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. food

_____2. process

_____3. magma

_____4. Rock cycle

a. the source of igneous rocks.
b. the source of the energy my body needs.
c. a series of changes that happen over time and lead to an expected result
d. series of processes that occur on Earth's surface and inside earth that slowly change rocks

2.Use the information below to answer questions 1-3.

Marcie's family takes a trip to the beach. They observe many features along the shoreline, including sea stacks and sea arches. These features are made of granite, a very hard rock. It takes many years and a huge amount of wave energy for a sea arch to fall, forming a sea stack.

Write the letters of the correct answers on the lines at left.

_____ **1. Which step of the rock cycle happens as the sea stacks are broken down?**

a. *deposition*

b. *pressure changes*

c. *temperature changes*

d. *weathering*

_____ **2. Marcie believes that the sea arch was once part of a mountain. Which** *sentence explains how the mountain was formed?*

a. *Plates moved apart to form it.*

b. *Volcanic lava hardened to form it.*

c. *Tectonic plates collided to form it.*

d. *. Sand was deposited to form it.*

_____***3. Which processes can cause rocks to change to metamorphic rock? Choose the 2 that apply.***

a. *breaking*

b. *crushing*

c. *deposition*

d. *heat*

e. *pressure*

3.Write an answer for the following question in the space provided.

Marcie finds a rock that looks like a bunch of seashells cemented together.

<u>Explain what type of rock it is and how it was formed.</u>

_____

_____

_____

4. Kat is creating a model to show how plate movements are linked to the formation of new rocks, and she is trying to place the steps in the correct order. Number the steps of her model below in the correct order.

_____ *The tectonic plates move apart from one another.*

_____ *Lava flows onto Earth's surface.*

_____ *Magma forms beneath the plates and rises up through the cracks.*

_____ *Lava cools and hardens to form igneous rock.*

Name: _____ ***Date:*** ___/____/_____

Lesson 1 : Evidence of plate motions (use with pages 330-337)

Use the information below to answer questions 1 and 2.

Kelly had read that German meteorologist Alfred Wegener further developed a hypothesis about the continents and their positions.

Write the letters of the correct answers on the lines at left.

_____ **1.** What was the **most** complete hypothesis that Alfred Wegener made?

A. All the continents would slowly drift together over millions of years.
B. All the continents would fit together like a giant world jigsaw puzzle.
C. All the continents were once grouped together and had drifted apart over time.
D. All the continents were slowly rotating around the world in continental drift.

_____ **2.** Which evidence supports Wegener's hypothesis? Choose the three that apply.

A. evidence of similar fossils in different locations
B. evidence from similar coal deposits in different locations
C. evidence of tropical plants in locations that are now cold
D. evidence from scientists looking at the animals now living in those locations
E. evidence from drilling deep beneath Earth's surface to find fossils in other locations

Write an answer for the following question in the space provided.

3. Katrina wanted to find out more about Wegener's hypothesis because it didn't explain how continental drift took place. Explain how scientists discovered the mechanism for the continents moving.

_____

_____

_____

_____

_____

_____

Circle the words or phrases that correctly complete the sentences.

4. Thuy was learning about mid-ocean ridges and how they spread, creating more land. She wondered why Earth doesn't keep growing bigger and bigger because of the new land. She learned that the reason Earth isn't expanding is because of the many **(trenches / mid-ocean ridges / mantles / subduction areas)** that occur at ocean **(mantles / trenches / mid-ocean ridges / subduction areas).**

5. Lee knew that certain events occur to create new material in the process of sea-floor spreading. Number the following steps of the process in the correct order.

_____ The ocean floor on both sides of the crack moves farther away from the mid-ocean ridge.

_____ Molten material flows upward in a crack in Earth's crust.

_____ The ocean floor gradually becomes wider.

_____ The molten material hardens into solid strips of rock on both sides of the crack.

Write the letters of the correct answers on the lines at left.

_____ **6.** Why is the Atlantic Ocean growing larger while the Pacific Ocean is growing smaller?

A. The Atlantic Ocean has more mid-ocean ridges than the Pacific Ocean, so that keeps it growing larger.
B. The Atlantic Ocean is building more islands than the Pacific Ocean, so the continents are pushed apart more.
C. The Atlantic Ocean has more subduction areas, whereas the Pacific Ocean has more mid-ocean ridges.
D. The Atlantic Ocean has a spreading mid-ocean, while the Pacific Ocean is subducting faster than the mid-ocean ridges can make new land.

_____ **7.** Jerome had read about plate tectonics and the mid-Atlantic ridge. He investigated by reading further, learning that evidence existed to show volcanic activity was happening along the mid-Atlantic ridge. How do the pillow-shaped rocks found there provide evidence that volcanic activity is taking place?

A. They form only when molten material cools slowly in warm water.
B. They form only along subduction zones in the trenches of the Atlantic.
C. They form only when lava erupts above the water when the air is cool.
D. They form only when molten material hardens quickly in cold water.

Name: _____ Date: ___/____/_____

Chapter 10

Lesson 1: Living Things (use with pages 438-447)

Fill in the blank to complete each statement.

a. *All organisms are made of _____. All organisms contain similar _____ and use _____. All organisms respond to their_____. All organisms _____, develop, and _____*

b. *Organisms consisting of one cell are called _____ while organisms consisting of many cells are _____.*

c. *Any change or signal in the environment that can make an organism react in some way is called a _____.An organism reacts to a stimulus with a _____ an action or a change in behavior.*

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. *Cell*	*a. a change in an organism's environment*
_____2. *characteristic*	*b. a feature or quality that helps you identify something*
_____3. *development*	*c. ability to maintain certain internal conditions*
_____4. *homeostasis*	*d. changes that occur within an organism during its lifetime*
_____5. *stimulus*	*e. made of one cell*
_____6. *unicellular*	*f. the smallest unit of life*

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

_____*1. Heterotrophs get energy from the Sun to make their own food.*

_____*2. Proteins and lipids are chemicals that provide the cell with energy*

_____*3.Sexual reproduction involves only one parent.*

_____*4. Birds, mammals, and most plants reproduce asexually.*

_____*5.Bacteria, the most numerous organisms on Earth, are multicellular organisms.*

_____*6.An organism reacts to a stimulus with a response.*

1. List the six characteristics that all living things share.

_____

_____

_____

_____

_____

_____

2. Identify the characteristic of living things that is being described in each statement below.

a. A baby songbird hatches from its egg with both parents watching.

_____

b. A caterpillar hibernates in a cocoon and emerges as a butterfly.

_____

c. A sea worm drops its tail, and the tail becomes a new worm.

_____

Name: _____ **Date:** ___/____/_____

Chapter 10

Lesson 2: Classification System (use with pages 450- 458)

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.

_____ *binomial nomenclature*

_____ *classification*

_____ *domain*

_____ *genus*

_____ *prokaryotes*

_____ *species*

_____ *taxonomy*

a. *organisms made up of cells that lack a cell nucleus*

b. *the broadest level of organization*

c. *the final classification stage in which members are very similar.*

d. *the process of grouping things based on their similarities*

e. *the scientific study of how organisms are classified*

f. *the system in which each organism is given a unique two-part scientific name*

*2..**If the statement is true, write true. If the statement is false, change the underlined word or words to make the statement true.***

_____*1. A species is a group of similar organisms that can mate with each other and produce offspring that can also mate and reproduce.*

_____*2. In Linnaean Naming System, the first word is the organism's genus and the second word is the species.*

_____*3. Bacteria have nuclei containing DNA.*

_____*4. Eukarya and Archaea have only one cell and no nucleus,*

3. Number the following classification groups from the largest to the smallest (the largest group will be Number 1).

_____ *Class*

_____ *Domain*

_____ *Family*

_____ *Genus*

_____ *Kingdom*

_____ *Order*

_____ *Phylum*

_____ *Species*

Name: _____ Date: ___/____/_____

Chapter 10

Lesson 3: Viruses, Bacteria, Protists, and Fungi (use with pages 460-471)

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.

___bacteria	*a-A substance that consists of pathogens, such as viruses, that have been weakened or killed but can still trigger the body to produce chemicals that destroy the pathogens.*
___conjugation	*b-A tiny, nonliving particle that enters & reproduces inside a living cell.*
___decomposers	*c-An organism that provides a source of energy or a suitable environment for a virus to live*
___host	*d-Exchange of genetic material through cell-to-cell contact.*
___ribosomes	*e-Organisms that break down wastes & other dead organisms into smaller molecules.*
___vaccine	*f-Round structures in cells where proteins are made.*
___ virus	*g-Single-celled organisms, also known as prokaryotes, that lack a nucleus.*

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

_____*1. organisms in Domains Archaea and Bacteria are more complex than protists.*

_____*2. Many archaea can't live in extreme conditions*

_____*3. Bacteria can be heterotrophs or autotrophs.*

_____*4. A vaccine is a tiny, nonliving particle that enters and then reproduces inside a living cell.*

_____*5.A **host** is an organism that provides a source of energy or a suitable environment for a virus to live.*

Number the steps of the virus' s reproduction.

- _____ *The virus either enters the cell or injects its genetic material into the host cell.*
- _____ *a virus attaches itself to a host cell.*
- _____ *The host cell bursts open, releasing many new viruses.*
- _____ *Viruses infect other healthy cells and the process repeats.*
- _____ *the virus's genetic material takes over and forces the cell to make more copies of the virus.*

Name: _____ **Date:** ___/____/_____

Lesson 4: Plants and Animals (use with pages 472-483)

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.

_____ *cell membrane*	***a****-It controls all the activities of the cell as it contains the genetic material.*
_____*cell wall*	***b****-It makes food for the plant.*
_____ *chloroplasts*	***c****-It produces energy for the cell.*
_____ *cytoplasm*	***d****-It stores excess water, food, and wastes.*
_____*mitochondria*	***e****-It surrounds the organelles and controls the passage of materials in or out of the cell.*
_____ *nucleus*	***f****-Jelly like substance that contains the organelles.*
_____ *vacuole*	***g****-rigid outer covering that protects the cell and gives it its shape.*

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

_____*1.Animals are autotrophs, or producers.*

_____*2. Plants use photosynthesis to make their own food.*

_____*3. The largest structure inside the cell is the nucleus.*

_____*4. Chloroplasts contain a green pigment called chlorophyll that absorbs sunlight,*

_____*5. Stem anchor the plant to the ground.*

_____ *6. Vascular plants have phloem that transports food to all parts of plants.*

_____*7. xylem moves water downward to the roots.*

_____*8.* ***Nonvascular plant,*** *are high-growing plants that lack vascular tissue for transporting materials.*

Circle the letter of the correct answer.

1. Animals with a backbone are called

a. *Vertebrates*

b. *invertebrates.*

2. a body structure composed of different kinds of tissues that work together.

a. *system*

b. *organ*

3. animals without symmetry such as sea sponge are ;

a. *radial symmetry*

b. *bilateral symmetry*

c. *asymmetrical*

4. Most animals are:

a. *Vertebrates*

b. *invertebrates.*

5._____ are animals that their body temperature changes with the environment

Vertebrates

invertebrates.

6. A_____ whose body temperature is regulated by its internal heat, and has glands that produce milk

a. *Vertebrates*

b. *invertebrates.*