مشروع بناء برامج تعويضية

لصعوبات تعلم المواد الدراسية للاجئين السوريين

لبنان - الأردن - تركيا (الداخل السوري)

الدليل المرجعي

لصعوبات تعلم العلوم

للحد من الفاقد التعليمي لدى اللاجئين السوريين

5

الصف الخامس الأساسي

الجهات المانحة

البنك الإسلامي للتنمية IsDB

صندوق التضامن الإسلامي

الهيئة الخيرية الإسلامية العالمية

الجهة المنفذة

جمعية التميز الإنساني بالكويت

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الإشراف الفني للمشروع

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جامعة عين شمس ومؤسس فكرة المشروع

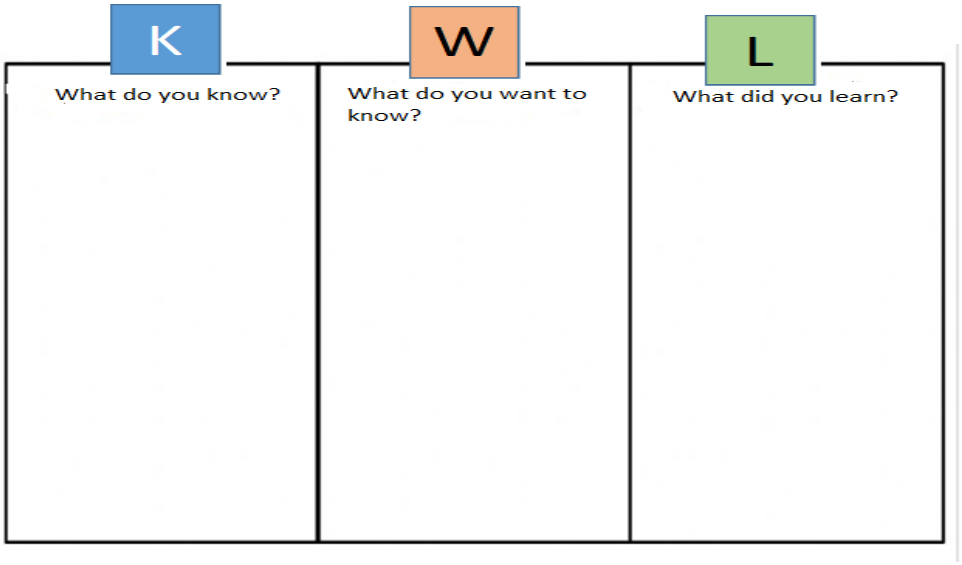
الإشراف الإداري للمشروع

د/ مدحت محمود سليمان

مدير قطاع التعليم بجمعية التميز الإنساني

Slide 1

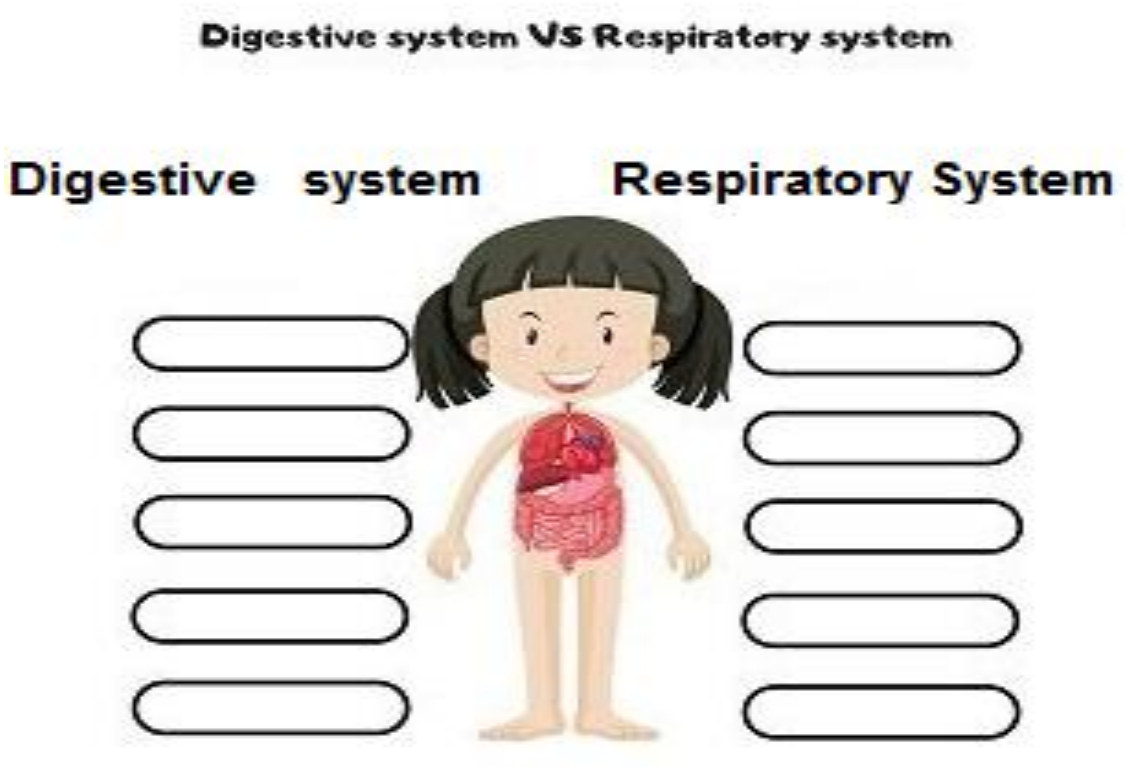
Topic: Body Systems (Respiratory and Circulatory System)



Worksheet 1

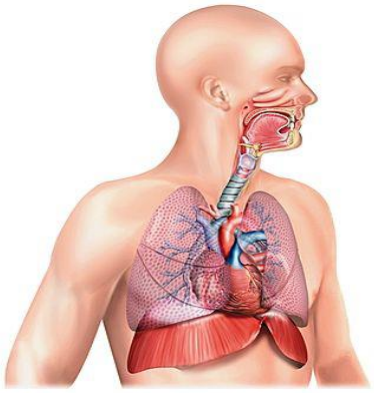
According to your acquired knowledge; indicate the organs which belong to digestive system and the organs which belong to respiratory system.

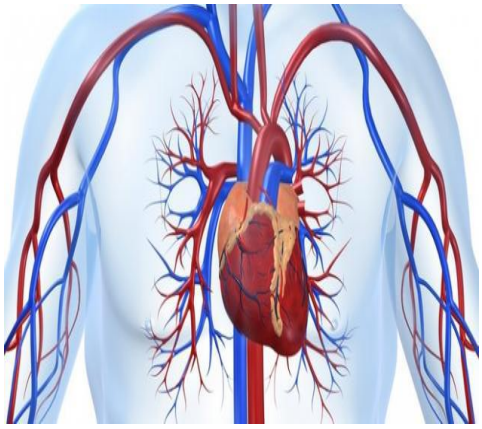
Stomach- nasal cavity- trachea- small intestine - large intestine- alveoli- lungs- mouth- bronchi.



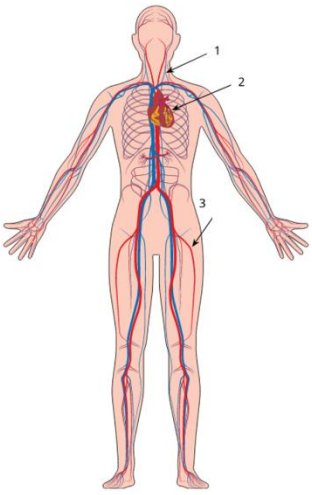
Worksheet 2

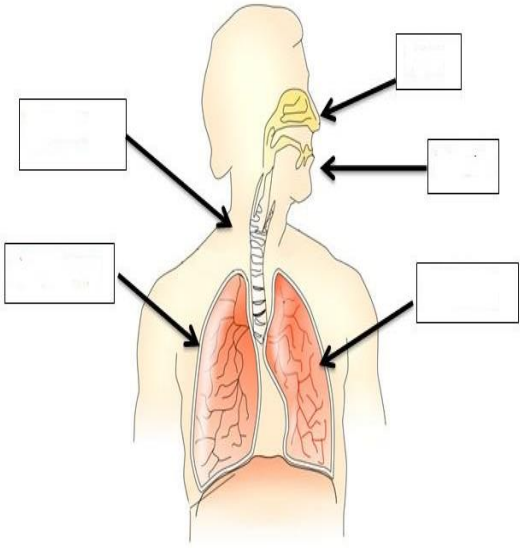
The following figures represent two body systems. Indicate which one is the circulatory system, and which one is the respiratory system.





Observe the following figures of the circulatory and respiratory systems, then label the figures using words from the parenthesis (nose-heart-trachea-right lung-artery-mouth-left lung-vein).





Worksheet 3

Match

Column (A)		Column (B)
Parts of our face		Heart
It is the fluid of life, it is composed of plasma, W.B.C and R.B.C		Mouth and Nose
Long tube		trachea
Responsible for flow of blood and supplying the body with food and oxygen		Alveoli
Two small tubes		arteries
Air bags		blood
Carries blood from the heart to all parts of the body		diaphragm
Two organs in the thoracic cavity		veins
Muscle under the thoracic cage that separates it from abdominal cavity		bronchioles
It transports blood from different parts of the body towards the heart		lungs

Slide 1

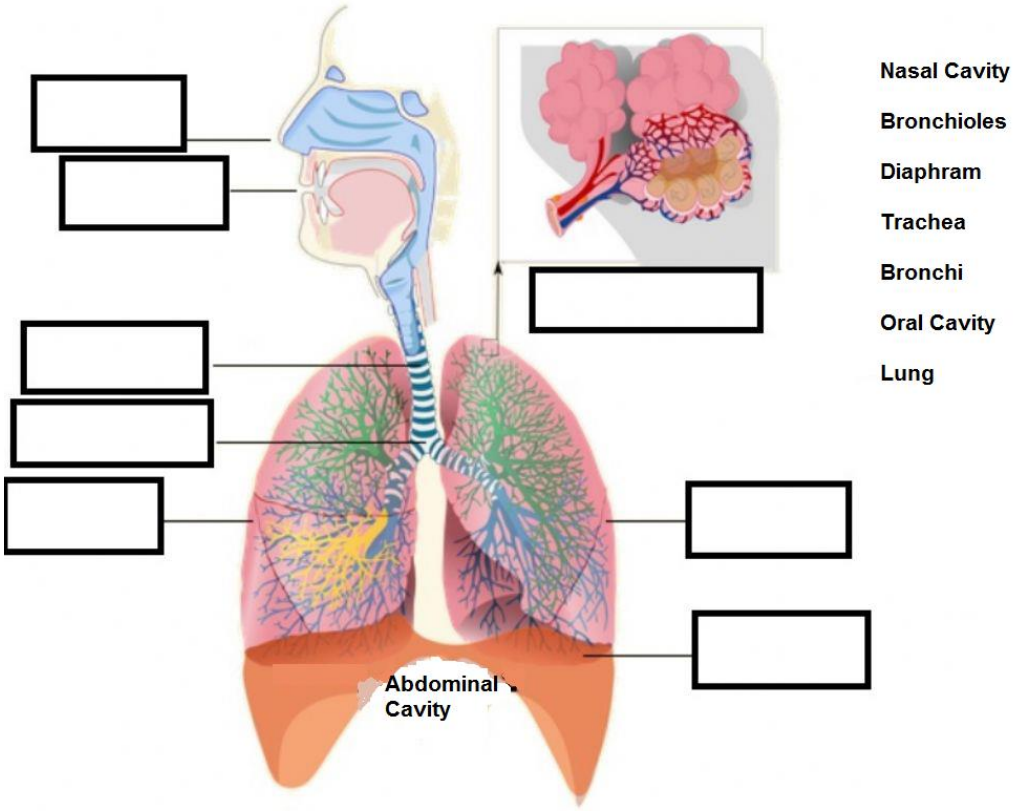
Indicate by true or false

	Statement	True	False
1	The respiratory system gets rid of the liquid wastes from body.		
2	Air travels to the body in vessels such as blood.		
3	During exhalation, the diaphragm contracts.		
4	The lungs expand during inhalation.		
5	During inhalation, the diaphragm moves upward.		
6	Exhalation takes more time than inhalation.		
7	There is no difference between blood vessels and arteries.		
8	Arteries return blood to the heart from all parts of the body.		
9	Veins carry blood from the heart to all parts of the body.		
10	Blood is made up of red blood cells only.		
11	The systemic circulation is the flow of blood from the heart to the lungs and back to the heart again.		
12	Pulmonary circulation is the flow of blood from the heart to the whole body.		
13	Blood exits from the blood vessels and enters the parts of the body.		

14	The heart is not affected by smoking and obesity.		

Worksheet 4

Label the figure



Nasal Cavity

Bronchioles

Diaphram

Trachea

Bronchi

Oral Cavity

Lung

Worksheet 5

1-Arrange the following steps of respiration from 1-4:

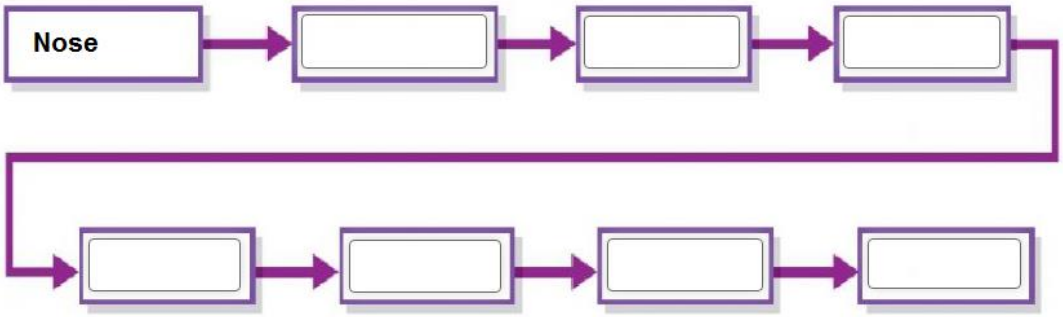
-Air travels to the trachea. ☐

-Air travels to the lungs and then to the alveoli. ☐

-Oxygen leaves the alveoli into the blood. ☐

-Air enters the body through the nose or mouth. ☐

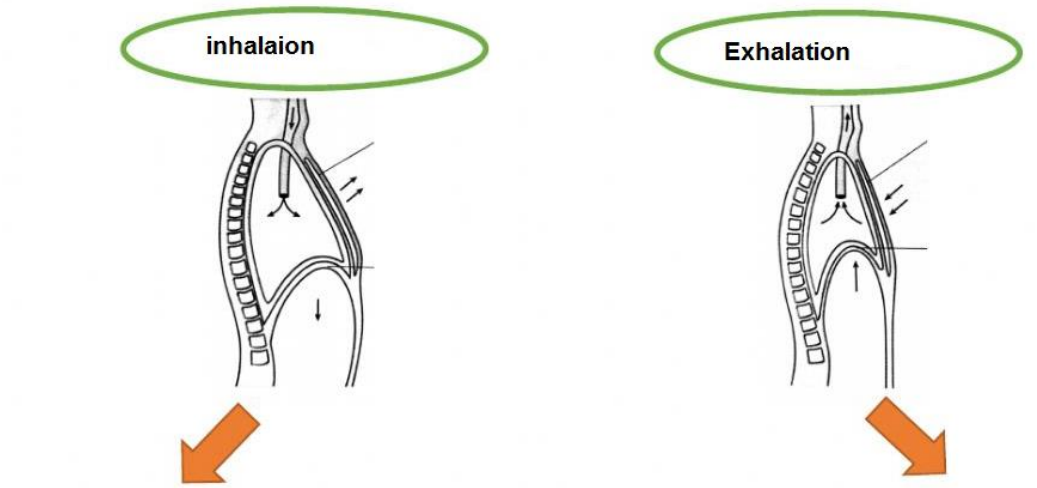
2- Complete the following diagram showing the movement of air beginning from the nose.



Worksheet 7

Inhalation and Exhalation

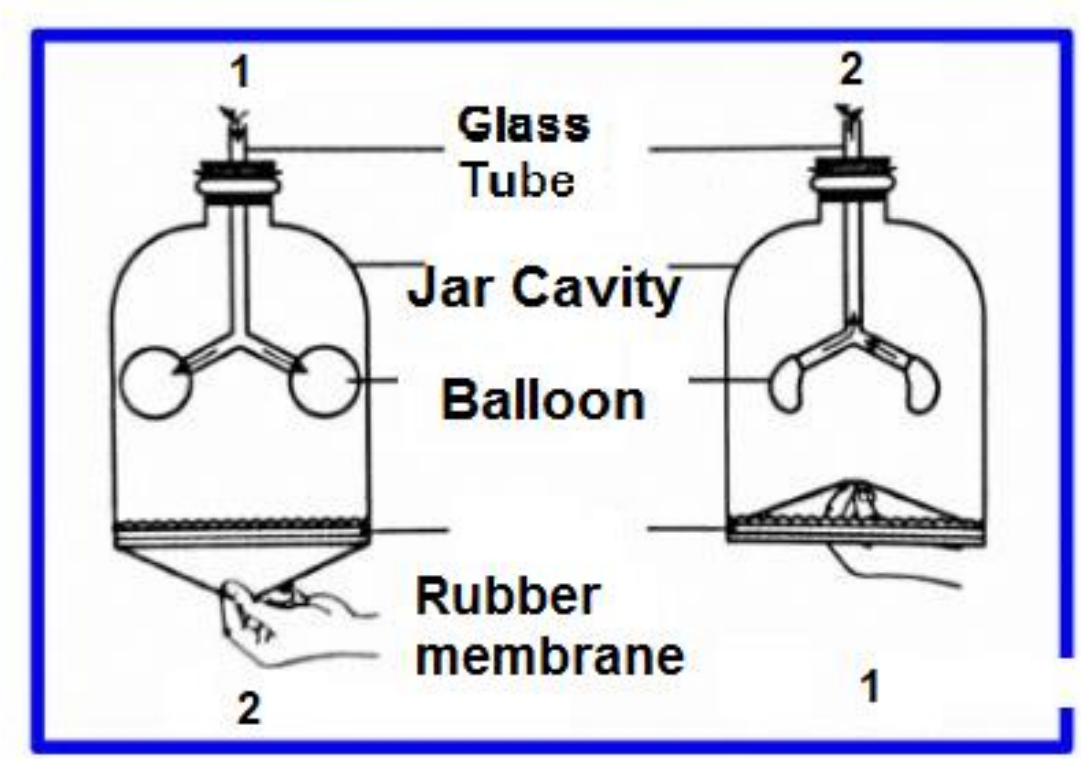
Compare the processes of inhalation and exhalation by describing what happens during the two processes (you can use the words in the middle of the table):



	thoracic cage	
	Diaphragm	
	volume of thoracic cavity	
	Pressure of the air in the lung	
	movement of the air	

Worksheet 8

The following figure shows two models of the respiratory system during the processes of inhalation and exhalation, relate each component of the model to the organ of respiratory system.



Match each part to the components of the respiratory system:

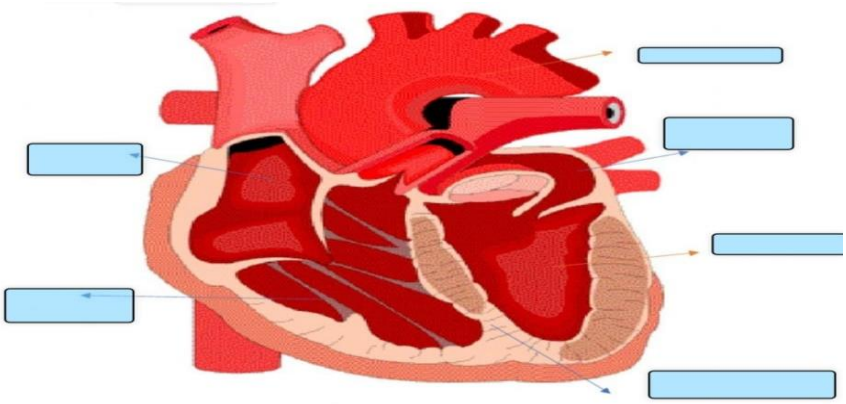
Glass tube	Trachea
balloon	lungs
Hollow glass jar	Thoracic cavity
Rubber membrane	diaphragm

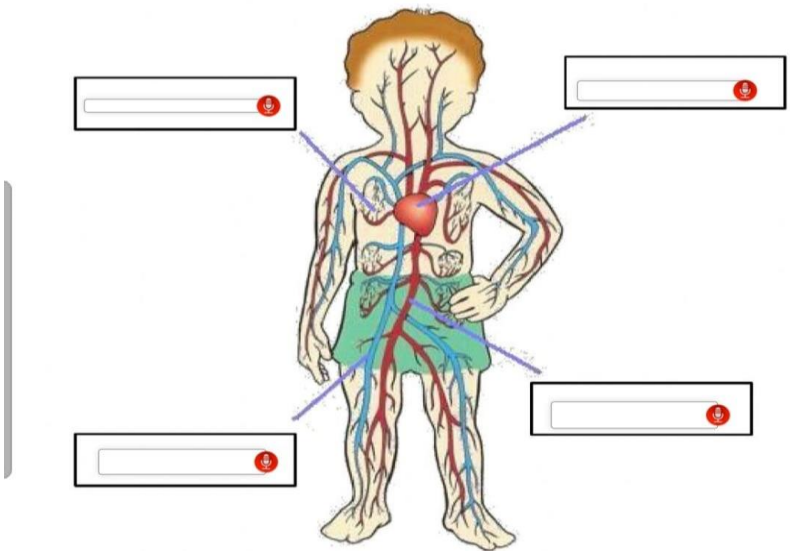
-Model (1) expresses ……. process, while model (2) expresses ……process.

Worksheet 9

Components of the Circulatory System and the Heart

Label the heart and the circulatory system





Work sheet 10

Relation between Respiratory and Circulatory Systems

Arrange the following steps from the beginning of the entry of oxygen to the exit of carbon dioxide.

Oxygenated blood moves from the heart to all body organs

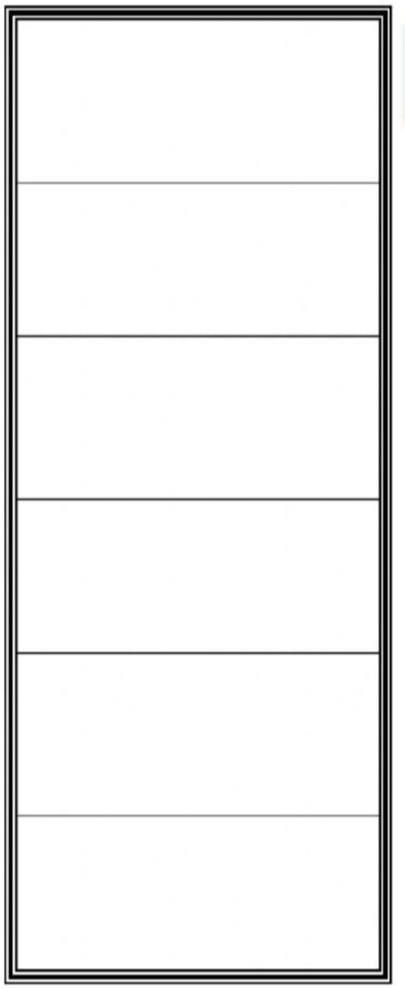
Exit of CO_2 with the exhaled air outside the body

Entrance of the oxygen into the lungs through inhalation

Carbon dioxide leaves in the veins into the heart

The blood travels from the capillaries in the lungs to the heart, carrying oxygen

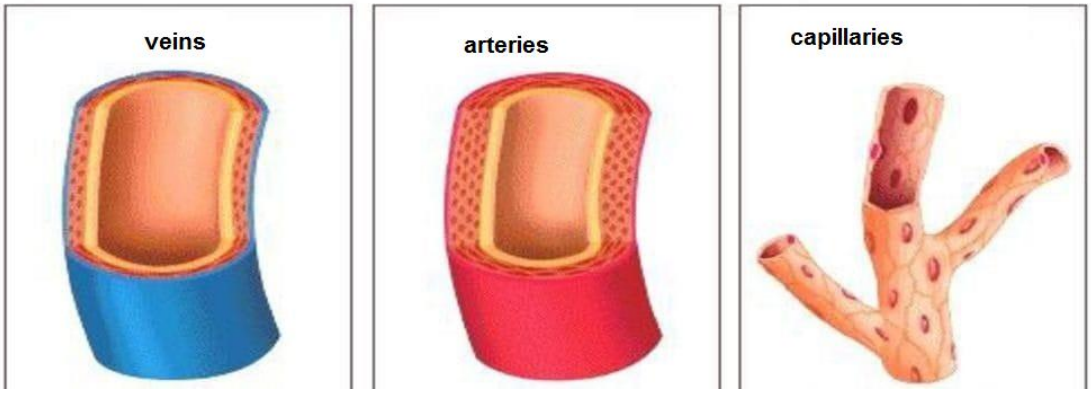
Exit of carbon dioxide by exhalation



Worksheet 11

Difference between Arteries and Veins

According to the video, draw out the function of each type of blood vessel.



Capillaries

……
……
……

Arteries

……
……
……

Veins

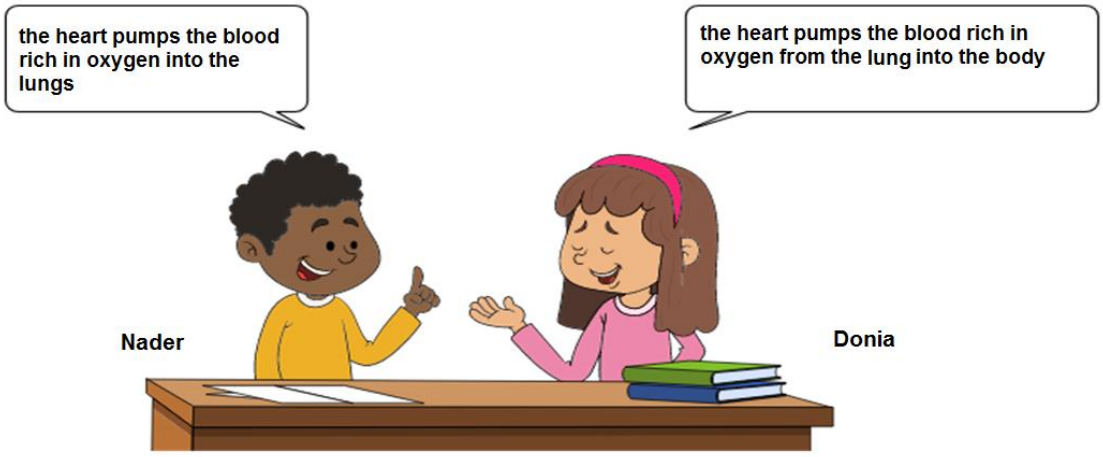
……
……
……

Worksheet 12

Systemic Circulation

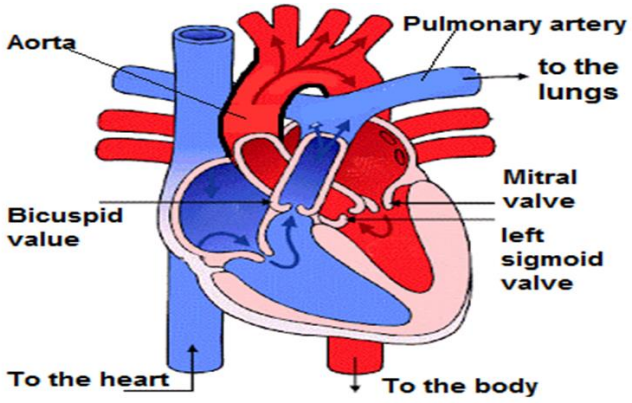
Donia and Nader discussed the movement of blood during the systemic circulation. In your opinion: Which of the two opinions is correct? And Why?

……
……



……
……

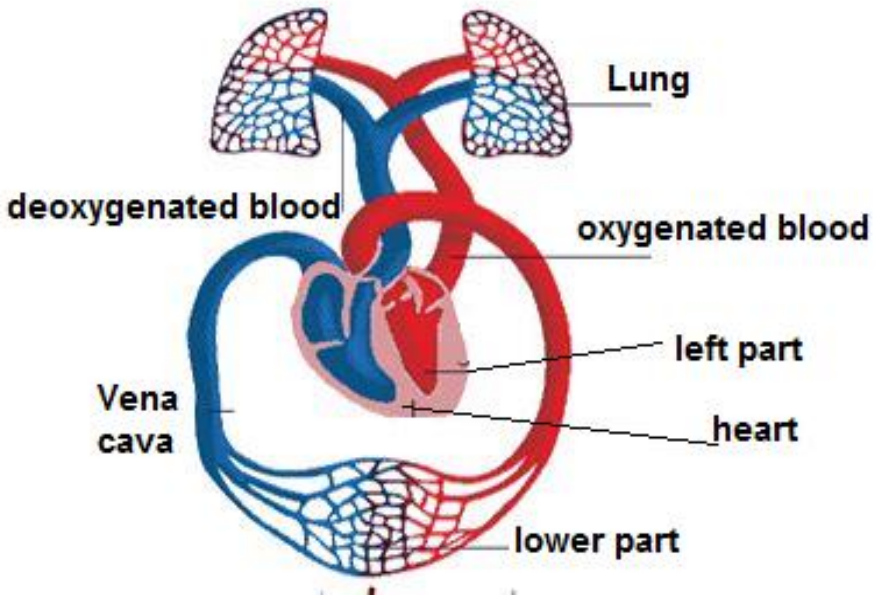
Indicate the pathway of blood in the systemic circulation.

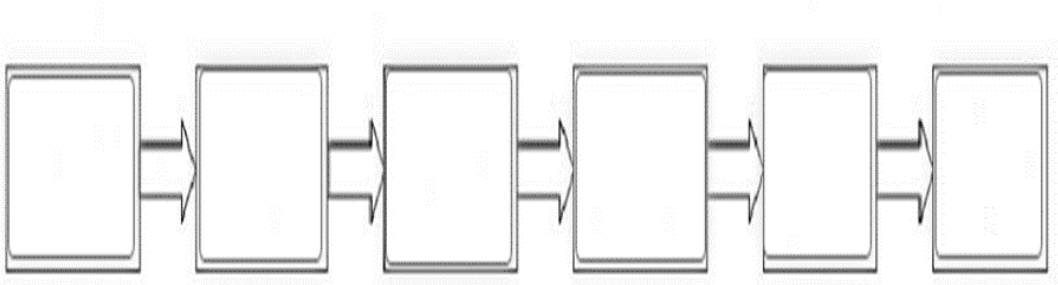


Worksheet 13

The Pulmonary Circulation

Here is a picture showing the small (pulmonary) blood circulation, Indicate the pathway of blood.

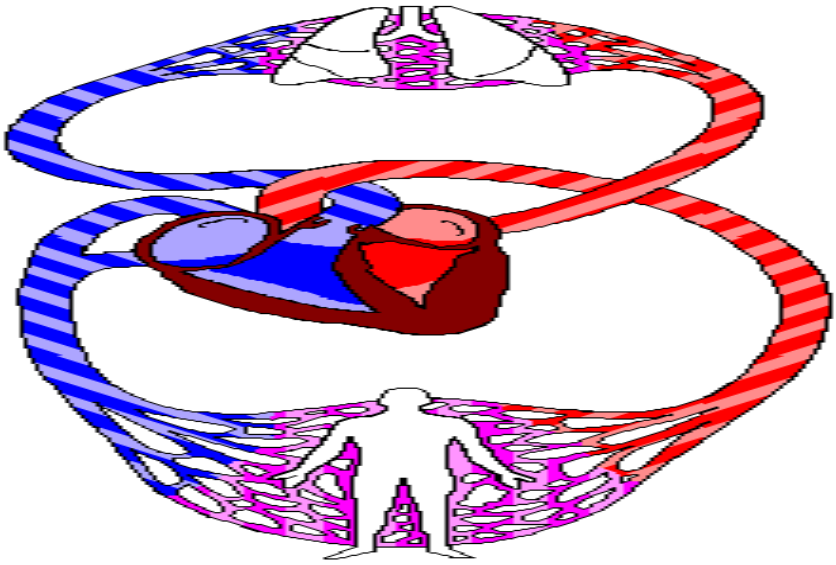




Worksheet 14

The difference between Pulmonary and Systemic Circulations

Draw the pathway of both the pulmonary and systemic circulations.



Compare the two types of circulation by completing the following table.

Systemic circulation	Compare	Pulmonary circulation
	Start with	
	End with	
	artery	
	Veins	
	Function	

Worksheet 15

Taking care of the Respiratory and Circulatory systems

Read the following behaviors for some individuals and classify into good and bad habits for the respiratory and circulatory systems:

1- Breathing deeply.
2- Staying away from sources of air pollution.
3- Using a lot of fresheners.
4- Inhaling chemicals and detergents.
5- Keeping hands clean.
6- Using our fellow wipes.
7- Sharing our tools with our colleagues.
8- Residing near cement factories.
9- Exercising regularly.
10-Eating healthy food such as vegetables and fruit.
11-Sitting in smoking area.
12-Planting more plants.

Good habits for the respiratory and circulatory systems	Bad habits for the respiratory and circulatory systems

Worksheet 1

Learning Table

Topic: Adaptation of Animals and Plants

K	W	L
What do you know about adaptation?	What do you want to know about adaptation?	What did you learn about adaptation?
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
		

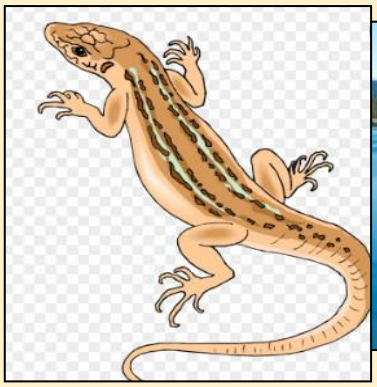
Worksheet 2

Indicate by true or false.

No.	statement	False	True
١	Adaptation is a change over time that helps in the survival of animals.		
٢	The camel turns its body into a water tank to retain the water.		
٣	The animal adapts depending on the climate according to its habitat.		
٤	The polar bear lives in the desert.		
٥	The dinosaur is extinct due to its huge size.		
٦	There is no relationship between birds' migration and its adaptation, since it's a hereditary behavior.		
٧	Some desert plants reduce leaves to thorns and depends on the stem for photosynthesis.		
٨	Some insects hibernate in winter, and others hibernate in summer		

Worksheet 3

Match each animal to its habitat.



Worksheet 4:

Classify these adaptations into structural and behavioral:

1. Carapace

2. Living in a group

3. Fat layer

4.Color Change

5.Hiding by day in the desert

6.migration in groups

7.hiding in the shell

8.shark fin

9.Random running of ants

10.sharp claws

11.webbed feet

12.white fur

Adaptation type	1	2	3	4	5	6	7	8	9	10	11	12
Structural adaptation												
behavioral adaptation												

Worksheet 5

Match each animal to its type of adaptation:

It has a long trunk to search for underground ants and insects.

It has big eyes to see at night and long fingers to search for food.

It changes its color to hide from predators.

It has a long neck to reach leaves at the top of trees.

Worksheet 6

Classify the behaviors into innate and learned.

..... behavior

..... behavior

..... behavior

..... behavior

..... behavior

..... behavior

Worksheet 7

Indicate whether the following statements are true or false

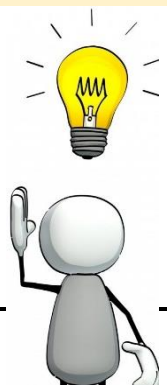
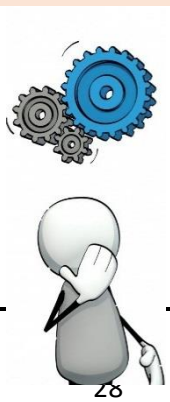
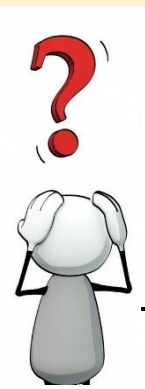
1 - Cactus is characterized by thick stems that can store water (.....)
2- The leaves of cactus fall down in winter to reduce the water lost (.....)
3- The roots of the cactus are dense to search for the scarce water in the soil (.....)

4- The small roots of aquatic plants facilitate their dispersal in water (.....).
5- Aquatic plants are characterized by their narrow leaves (.....).

Worksheet 1

Learning Table

Topic: Composition of Matter

K What do you know about the composition of the matter?	W What do you want to know about the composition of matter?	L What did you learn about the composition of the matter?
		

Worksheet 2

Difficulty Diagnosis

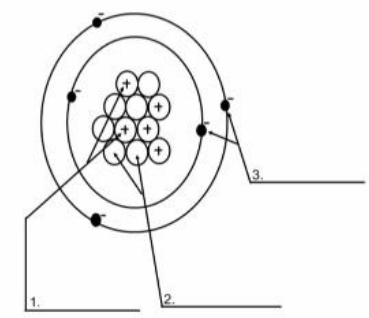
Indicate by true or false

N	Statement	True	False
1	There are fine particles in the matter.		
2	Matters are not made up of fine particles.		
3	Atoms can be seen by using a microscope.		
4	There are no particles in motion inside solids.		
5	An atomic orbit is a shell in which electrons move, like the road on which cars travel.		
6	Properties of matter differ from properties of its molecules/ materials.		
7	Properties of molecules are the same as properties of their atoms.		
8	Water contains molecules with water or air between them.		
9	Molecules are static particles that do not move.		
10	When a certain volume of water is mixed with a certain volume of alcohol, the sum of their volumes does not change.		

Test Your Knowledge1

Atomic Structure

Observe the figure and answer the following questions



Q1/ label the above figure:

1- .....

2- .....

3- .....

Q2/ What is the charge of a proton?

.....

Q3: What is the charge of a neutron?

.....

Q4/ What is the charge of an electron?

.....

Q5: Where is the nucleus located?

.....

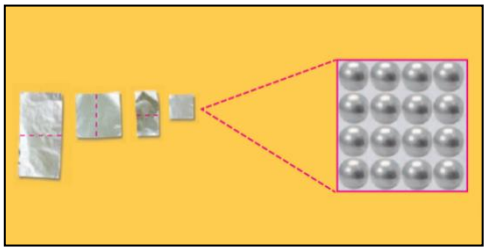
Q6/ What are the particles inside the nucleus?

……

Q7: What are the particles outside the nucleus?

……

Q8/ What is the charge of the nucleus?



……

Q9: What is the charge of the atom?

……

Q10/ What is the name of the path through which the electrons move?

……

Worksheet 3

What is Matter Composition?

What do you do?

- **Cut the aluminum foil into half.**
- **Cut one of the halves into smaller halves.**
- **Repeat the above step until you get the smallest possible part that cannot be cut with scissors.**
- **Break down the sugar cube with a hammer.**
- **Try to break up the small pieces into smaller and smaller ones.**
- **Taste the smallest piece of sugar you get.**
- **Observe the other characteristics such as: color and smell.**

what do you observe?

……

……

What do you conclude?

……

……

Slide 1

Composition of Atom

Although the atom is very tiny, it is made up of smaller parts: nucleus and electrons.

1. Nucleus:

- The nucleus is located in the center of the atom.
- The Mass of the atom is concentrated in the nucleus.
- The nucleus contains two types of particles:
  - Protons: are particles that carry a positive (+) charge.
  - Neutrons: are particles with a neutral charge.

2.Electrons:

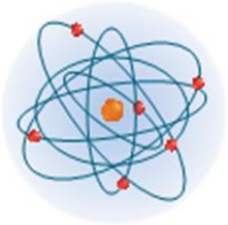
- Tiny particles, and their mass is very small compared to the mass of the nucleus, so it is neglected.
- Particles with negative electric charge (−), They have the same number of positive protons, so the atom is electrically neutral.
- Electrons move in circular or elliptic orbits around the nucleus at high speeds without falling into the nucleus of the atom. These orbits are called energy levels.

Slide 2

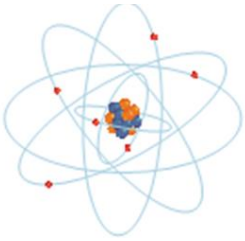
Scientists' Efforts to Discover the Atom

***Dalton, 1808**: The atom is a tiny indivisible particle (s).*

***Thomson, 1904**: The atom is a sphere of positively charged matter in which electrons are embedded as the seeds in the watermelon. The atom is electrically neutral where the electric forces from opposing positive and negative charges would balance each other.*



***Rutherford, 1911:** The atom is mostly empty, where its mass is concentrated in the positively charged nucleus with negative electrons orbiting at a fixed distance around.*



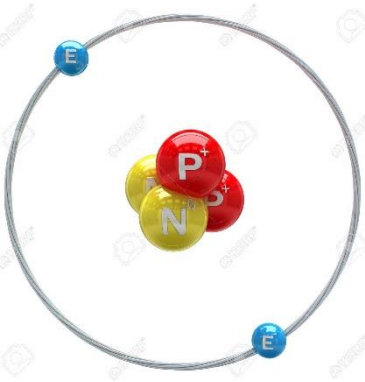
***Bohr, 1913:** Each electron revolves in a fixed circular orbit around the nucleus. Later we discover that the nucleus is made up of positively charged protons and neutral (uncharged) particles called neutrons.*

***Modern atomic model:** The nucleus is surrounded by a cloud of moving electrons.*

Worksheet 4

How can you Design a Model of an Atom?

Procedure:



- Distribute to each group four tennis balls, two ping pong balls, a metal wire, a transparent plastic bag, and a nail.
- Color the two tennis balls in red and write a (+) sign on them to indicate that they represent protons.
- The other two tennis balls are colored in yellow with no signs written on them to indicate that they are neutral in charge and represent neutrons.
- Put the four tennis balls in a transparent bag representing the nucleus.
- Write a (-) sign on the two ping pong balls representing the electrons.
- Pierce the two ping pong balls in the center so a metal wire can pass through.
- Make a circle shape with two ping pong balls having the wire inside.

what do you observe?

- .....
- .....

What do you conclude?

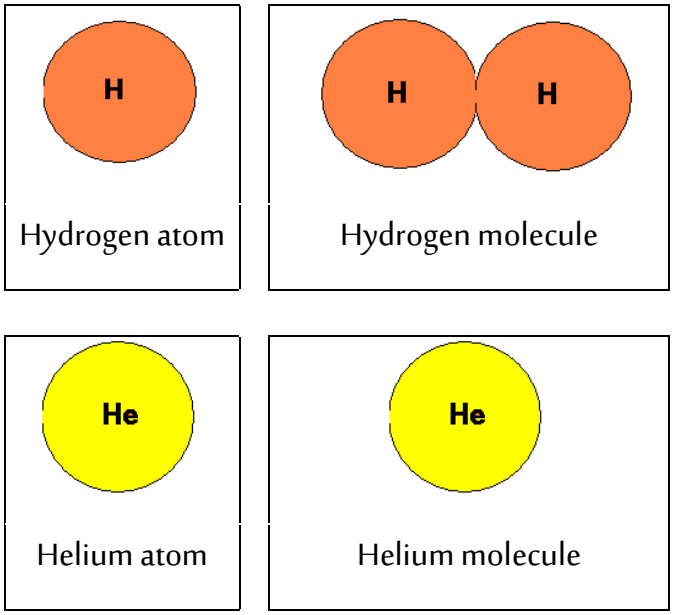
- .....
- .....

Worksheet 5

What is the Difference between Atom and Molecule?

Procedure

• Use the previous materials to make the following molecules:



- Observe the models that you designed, then indicate the most important differences between an atom and a molecule using the following table:

Atom	Molecule
The smallest unit of any element that can..... a chemical reaction.	The smallest unit into which a pure substance can be ..... and still retain the ..... and properties of that substance.
It cannot be..... into simplest ones.	It can be ..... into a number of atoms.
Atom is one of the components of	A molecule consists of .....or more bonds, and it may consist of one atom, as in the inert gases.
Chemically active	Chemically stable.

Worksheet 6

Properties of Molecule and its Atoms

Observe the following table, then answer the questions:

	Properties	
Matter	**Physical**	**Chemical**
Hydrogen	**Gas**	**It can burn**
Oxygen	**Gas**	**It does not burn, but it can help in combustion.**
carbon	**solid**	**It can burn**
Water	**Liquid**	**It does not burn and can't help in combustion.**
Carbon dioxide	**Gas**	**It does not burn and can't help in combustion.**

• What are the physical and chemical differences between a water molecule and the atoms it consists of?

.....

.....

• What are the physical and chemical differences between the carbon dioxide molecule and the atoms it consists of?

.....

.....

Worksheet 7

Can Molecules Move?

What do you do?

- Fill a glass with water.
- Put a small amount of purple potassium permanganate powder in the glass.
- Leave the glass for an appropriate period of time.
- Repeat the previous experiment using hot water.

What do you observe?

- ....
- .....

What do you conclude?

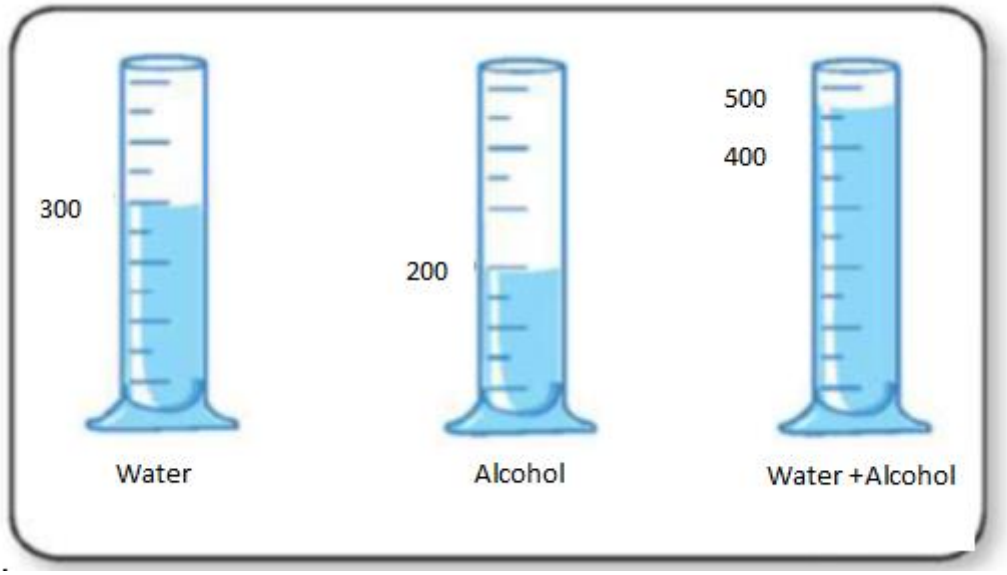
- .....
- .....

Worksheet 8

Is there a Distance between Molecules?

Procedure:

- Put 300 cm³ of water in a graduated cylinder.
- Add 200 cm³ of alcohol to the water.



What do you observe?

- .....
- .....

What do you conclude?

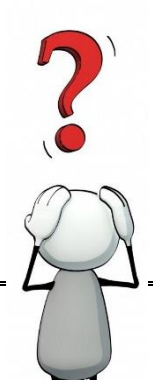
- .....
- .....

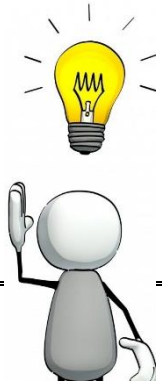
Worksheet 1

Learning Table

Topic: Physical and Chemical Changes.

K What do you know about physical and chemical changes?	W What do you want to know about physical and chemical changes?	L What did you learn about physical and chemical changes?





Worksheet 2

Test your Knowledge

Classify the following changes that occur in your kitchen into physical or chemical changes.

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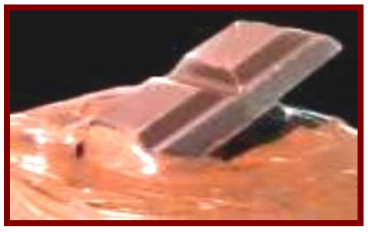

.....

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Worksheet 3

Diagnosing Assessment

The following is a group of statements about the composition of matter. Indicate by true or false:

No.	Statement	True	False
1	All physical changes are changes from one state to another.		
2	All physical changes are reversible; Where the materials can be reversed.		
3	During a physical change, the mass of a substance changes.		
4	All chemical changes are non-reversible; Where the materials can't be reversed.		
5	At the end of chemical reaction , the reactants disappear completely (and do not turn into another substance).		
6	Heat is necessary for the chemical reaction.		
7	During a chemical change, the mass of a substance changes.		
8	The substance burns completely during combustion.		

Worksheet 4

Physical Change

Procedure:

- Tear a paper into small pieces. Does the color of paper change after tearing it? Does the smell of paper change after tearing it?
- Put a piece of wax in a bowl and leave it on the flame until it is completely melted. Does the color of the wax change after melting? Does the smell of wax change after melting?
- Dissolve a quantity of sugar in a glass of water. Does the taste of sugar change after dissolving in water؟

What do you observe?

.....

.....

What do you conclude?

.....

.....

Slide 1

Common Examples on Physical Change

1- Change of shape of matter:

Changing the shape of a substance is a physical change. When a glass falls from your hand, it breaks and its shape changes, but it remains glass, so its properties do not change into another substance. Examples of changing the shape of the matter include: grinding sugar and salt, tearing or wrapping a piece of paper, breaking a rock or carving it into a statue, forming clay, weaving thread into clothes, cutting a fruit, breaking a chicken egg....

2- Mixing the materials:

Mixing materials is a physical change. When sand is mixed with iron filings, iron retains its ability to attract magnets, and sand retains its color, indicating that the composition and properties of iron filings and sand have not changed. Examples of materials mixing include: mixing fruits to make fruit salad and dissolving sugar in water.

3- Change of matter:

Matter has three states: solid, liquid, and gas. A change in the state of matter is a physical change. When the ice cream you eat melts on a very hot day, its taste and color do not change, which indicates that the composition or properties of the ice cream have not changed. The change in the state includes: Freezing melting, evaporation, and condensation.

Worksheet 5

Does Mass of a Substance Change in a Physical Change?

Procedure:

- Indicate the mass of each substance in the given table before undergoing a physical change.
- Make the physical change, shown in the table, on each substance.
- Re-measure the mass of each substance before and after, and write down its mass in the table below.

What do you notice?

Matter	Physical change	Mass before physical change	Mass after physical change
Piece of clay	Shaping a piece of clay	.....	.....
Fruit	Cutting fruit with a knife	.....	.....
Sugar cube	Grinding the sugar cube by a hammer	.....	.....
Ice cubes	Melting ice cubes.	.....	.....

What do you conclude?

.....

.....

Worksheet 6

Chemical Change

Procedure:

- Under the supervision of the teacher, burn a small paper until it turns into ashes. What is the difference between the color of the paper and the color of the ashes?

- Put a piece of wax in a glass and leave it on the flame until it burns completely. What do you observe?
- Put a small amount of sugar on a teaspoon and expose it to a flame until it burns completely. Does the color of the sugar change?

What do you observe?

.....

.....

What do you conclude?

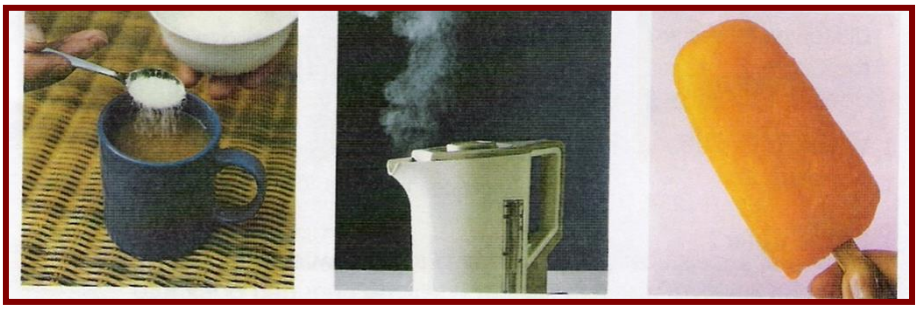
.....

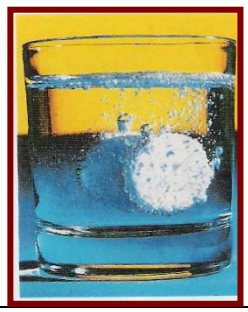
.....

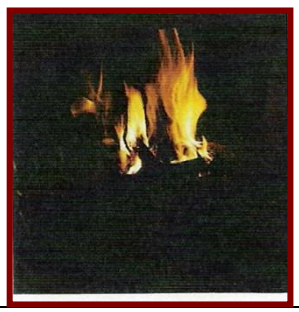
Slide 2

Comparison between Physical and Chemical Changes

Compare	Physical change	Chemical change
Definition	A change in the shape of a substance, but not in its identity.	A change that produces a new substance with new identity and properties.
Examples	Change in shape, mixing of materials, Change in state.	Cooking, burning, and rusting.
Evidences	Change of shape, change of texture, change of size, change of condition.	Energy release, color change, gas release, formation of precipitate.
The possibility of reversing the change	Some physical changes allow matter to be reversed to its original state by simple physical methods.	Chemical changes cannot be reversed by physical methods, but there are some chemical changes that can be reversed in certain circumstances.
Mass change	The mass of matter is constant, it's not affected by physical change.	The mass of a substance is constant, it's not affected by chemical change.







Worksheet 7

Reaction of Vinegar with Baking Powder

Procedure:

- Put a quantity of vinegar in a bottle.
- Put an amount of baking powder in a balloon.
- Insert the nozzle of the balloon into the nozzle of the bottle.
- Gently invert the balloon so that the baking powder falls into the bottle.

What do you observe?

.....

.....

What do you conclude?

.....

.....

Worksheet 8

Reaction of Iron with Sulfur

Procedure:

- Mix an amount of iron filings and sulfur, and place the mixture on a metal plate.
- Place the mixture of iron filings and sulfur on a flame.
- Observe what happens to the mixture during the heating process.
- After the product cools, approach the magnet close to it, what do you observe?

What do you observe?

.....

.....

What do you conclude?

.....

.....

Slide 3

Evidences of a Chemical Reaction

If you observe your surroundings, you will find evidences of a chemical reaction; and these evidences are:

- **Energy release:** It may be in the form of heat, light, electricity or sound. When fireworks explode, they produce light and sound energy.

- **Color change:** The color change is an easy evidence, for example the change in the color of the fruit after leaving it out of the refrigerator.

- **Released gas:** When you put one of the effervescent tablets in water, you notice that gas bubbles appear, indicating a chemical change.

- **Formation of precipitate:** When two solutions are added to each other, a solid substance that does not dissolve in the liquid may form, and thus a solid precipitate is formed.

Worksheet 9

Mass and Chemical Reaction

Procedure:

- Determine the sum of the masses of a glass with a solution of table salt and a glass with a solution of silver nitrate using a balance before mixing them together.
- A solution of table salt is poured over a solution of silver nitrate. Does a chemical change occur? What is the evidence on that?
- Determine the sum of the mass of the empty glass and the mass of the glass containing the two solutions mixed together. Does the mass change as a result of a chemical change?

What do you observe?

.....

.....

What do you conclude?

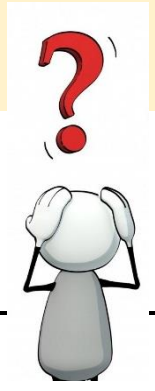
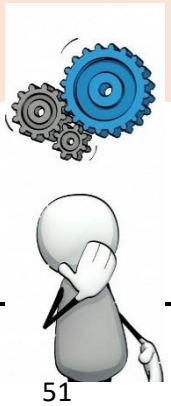
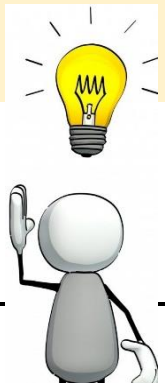
.....

.....

Worksheet (1)

Learning Table

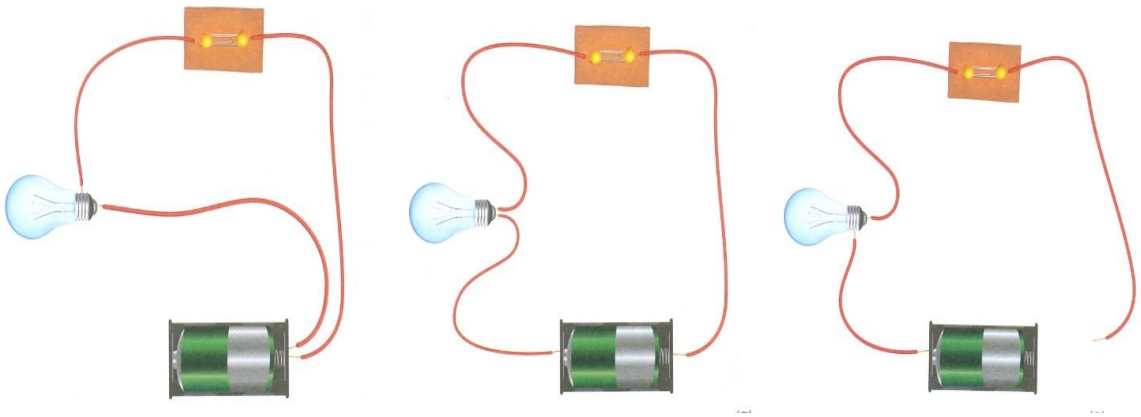
Topic: Electric Circuit

K What do you know about Electric circuit?	W What do you want to know about electric circuit?	L What did you learn about electric circuit?
		

Worksheet 2

Indicating Errors in Connection

One of the students made 3 different electric circuits, but the lamps did not light, help him to indicate the error in each circuit



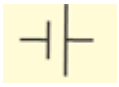
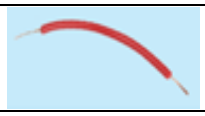
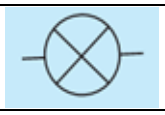
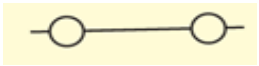
(1) (2) (3)

- **Error in circuit (1): .....**
- **Error in circuit (2): .....**
- **Error in circuit (3): .....**

Draw the correct electric circuit in the below box:

Slide 1

Components of Electric Circuit

Name	*Component*	*Symbol*	*Function*
Battery (dry cell)			*It has an electromotive force and it supplies the circuit with an electric current.*
			
Connecting Wires			*Allows the electrical charges to pass through the circuit*
Lamps			*Converts the electrical energy into light energy*
Switch			*Close or open the electric circuit.*
			
			
Resistor			*Plays multiple roles, as it converts electrical energy into heat energy as in an iron.*
Rheostat			*It is a variable resistor, by changing the resistance it controls the current flowing in the circuit.*

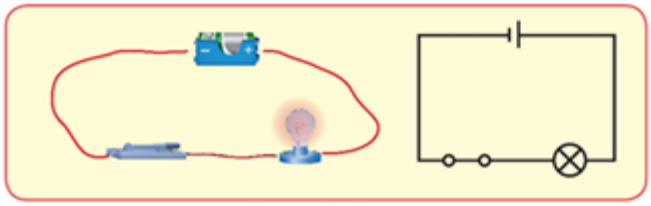


fig 1.1 - closed electric circuit

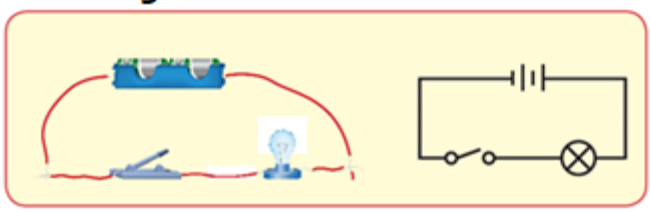
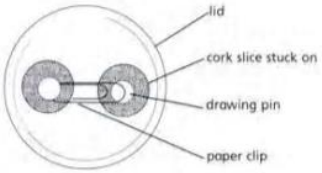


fig 1.2 - opened electric circuit



Worksheet 3

Make a Simple Electric Circuit

Procedure:

- Make a switch as indicated in the figure, connect each pin with a copper wire.
- Connect component of electric circuit, then close the switch, what do you observe?

.....

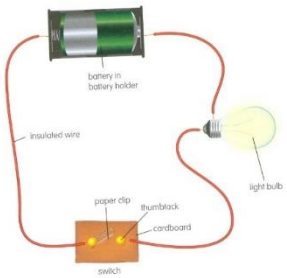
- Open the switch as in the figure, what do you observe?

.....

- Close the switch again, then cut one of the wires, what do you observe?

.....

What do you conclude?



- To light the lamp, the electric circuit must be .....

.....

.....

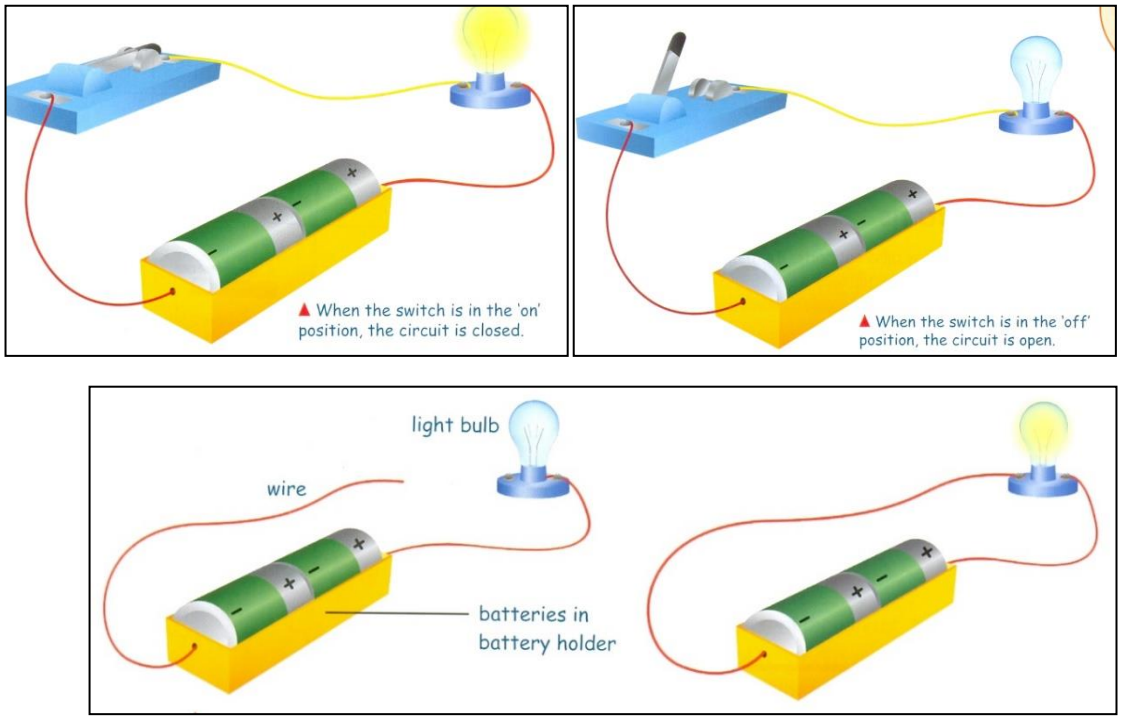
- In order to light the lamp, all the electric components must work well, and the switch must be closed.

Draw a figure of the electric circuit using symbols in the below box:

Worksheet 4

Discover the Errors of Electric Circuit

Observe the following electric circuits:



- What is the difference between these four electric circuits? .....
- The lamp may not glow. Give the reasons for this.
  - .....
  - .....
  - .....

- .....

- The lamp may glow. Give the reasons for this
  - .....
  - .....
  - .....
  - .....

Worksheet 5

Test the Connection of the Circuit

Procedure:

1. **Make an electric circuit as in the figure below.**
2. **Is this circuit opened or closed?**
3. **Connect the end of wires with an iron nail. Does the lamp light?**
4. **Replace the iron nail with a piece of Wool. Does the lamp light?**
5. **Repeat all previous step with the materials in this activity.**

What do you observe?

Materials allow the passage of electric current	Materials don't allow the passage of electric current

what do you conclude?

.....

.....

Worksheet 6

Series connection

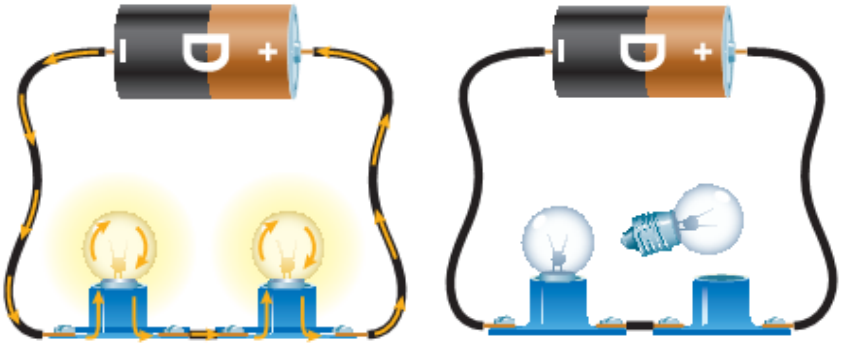
Procedure:

1. Fix 2 small lamps in their bases.
2. Connect a wire between the positive pole of the battery and the terminal of first lamp.
3. Connect with a wire the second terminal of the first lamp to the base of the second lamp.
4. Connect with a wire the second terminal of second lamp to the negative pole of the battery, what do you observe?

.....

5. Remove one of the lamps from its base, what do you observe?

.....



6. **Connect three lamps in the circuit in the same way, what do you observe?**

.....

.....

What do you conclude?

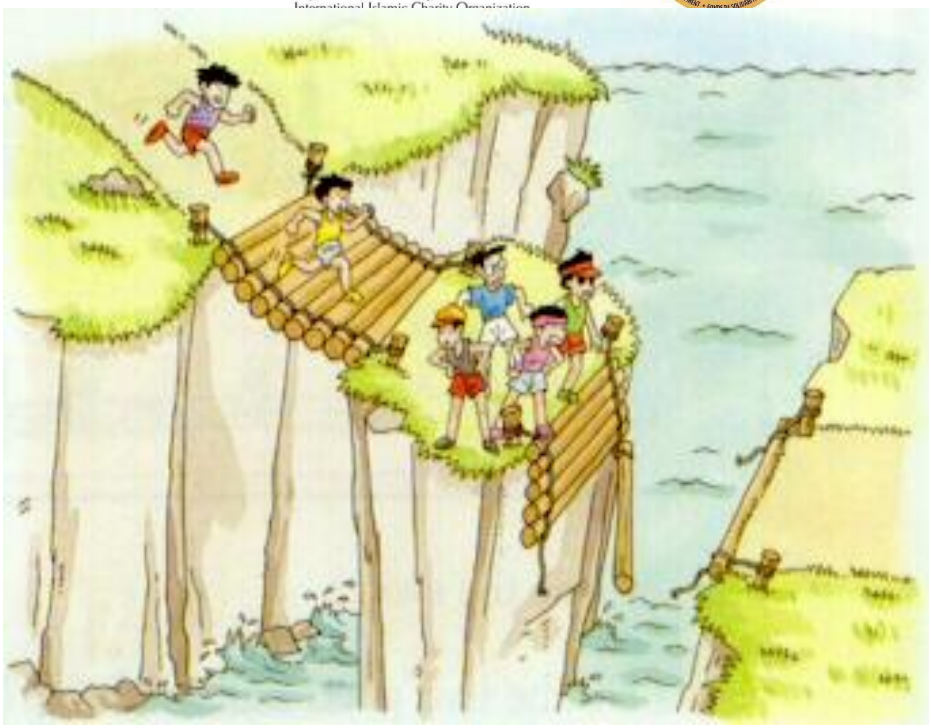
.....

.....

Slide ٢

Characteristics of Series Connection

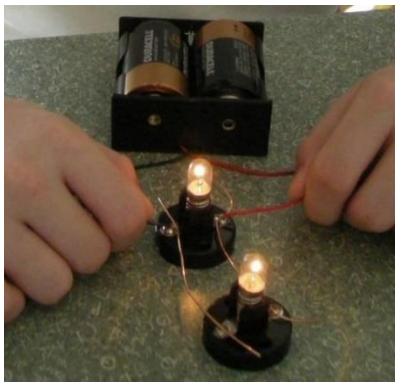
Observe the two pictures then explain: why does the electricity turn off when the lamps are in series connection?



Worksheet ٧

Parallel connection

Procedure:

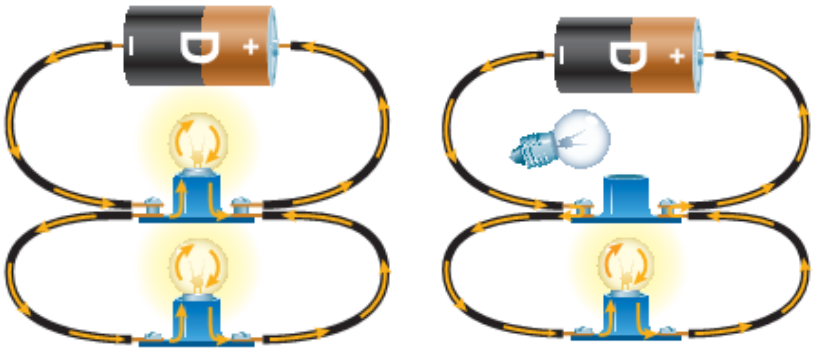


1. Fix 2 small lamps on their bases.
2. Connect with a wire between the 1st terminal of first lamp to the 1st terminal of second lamps
3. Connect with a wire the 2nd terminal of first lamp to the 2nd terminal of second lamps
4. Connect the two wires with two poles of the battery. What do you Observe?

.....

5. Remove one of the lamps from base, what do you Observe?

.....



1. **Connect three lamps in the circuit in the same way, what do you notice?**

.....

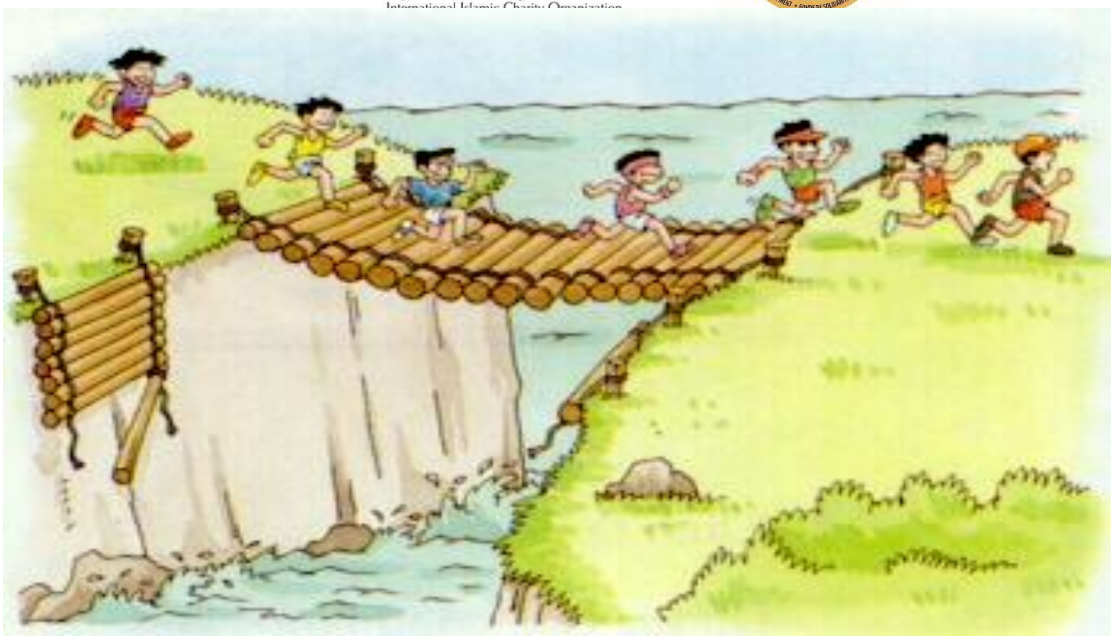
What do you conclude?

.....

Slide 3

Characteristics of Parallel Connection

Observe the two pictures then explain: why electricity doesn't turn off in parallel connection?



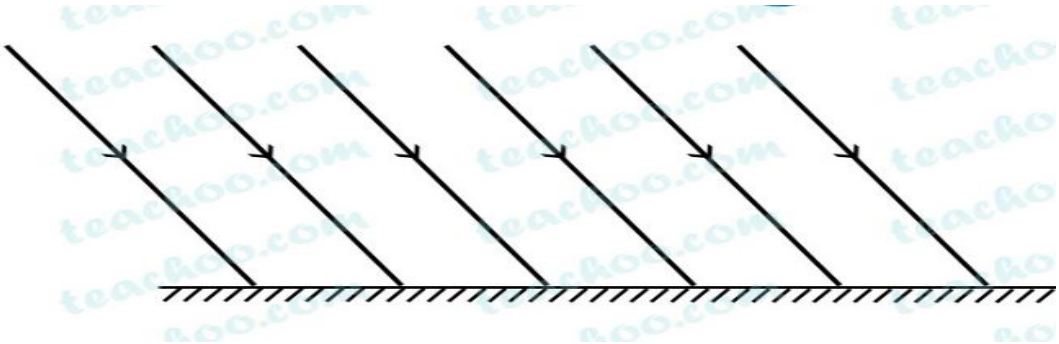
Slide (1)

KWL table

Topic:

S What do you know about lenses and mirror?	V What do you want to know about lenses and mirror?	A What did you learn about lenses and mirror?
…… …… …… …… …… …… 		…… …… …… …… …… …… 

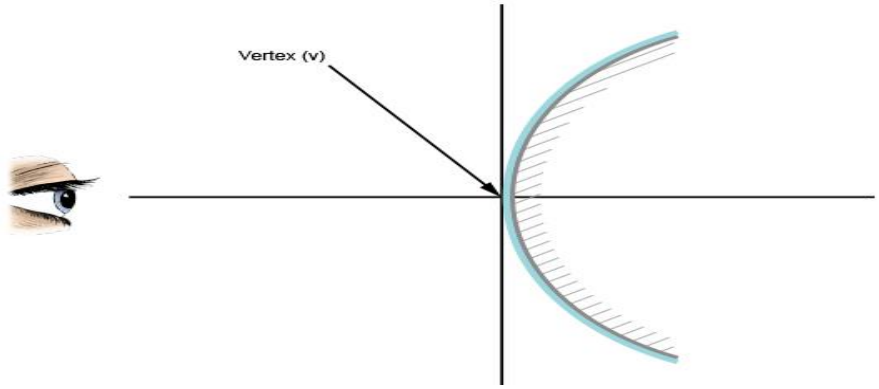
Worksheet 1



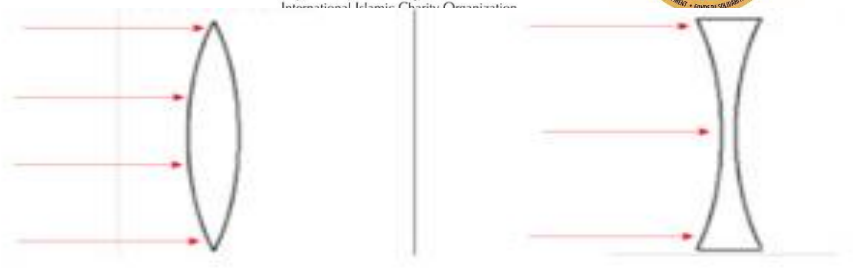
Complete the pathway of the light in each case:

1- When it falls on a plane mirror:

2- When it falls on a convex mirror:



3- When it falls on converging and diverging lens

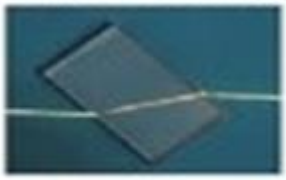


Worksheet ٢

Classify the following pictures into refraction and reflection.

Refraction	Reflection





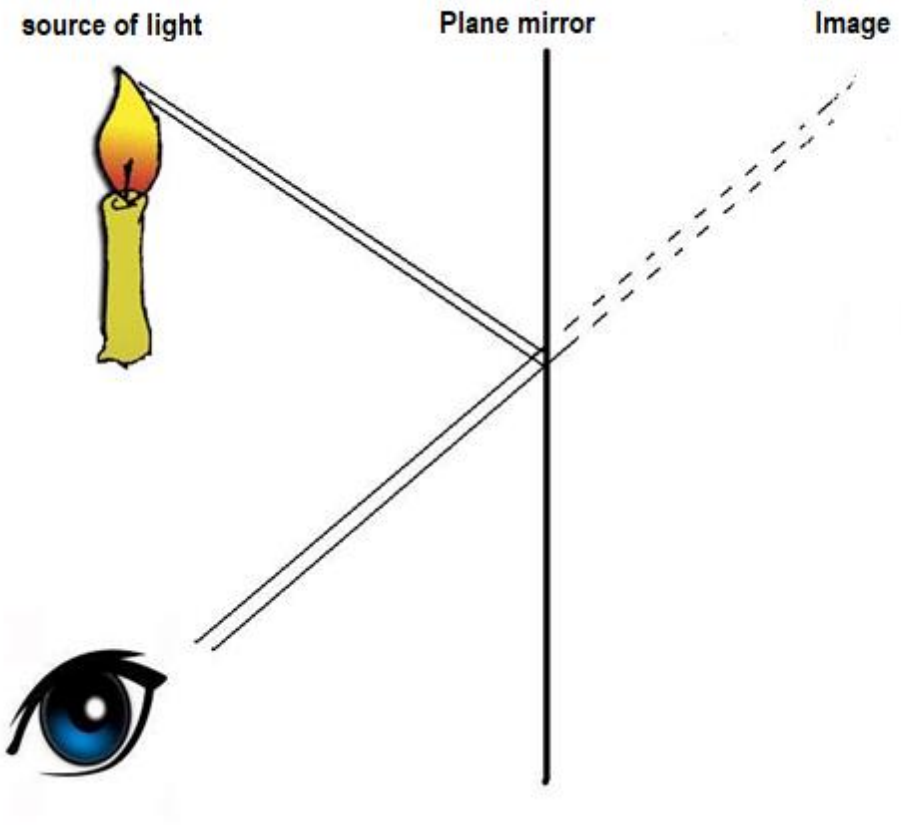

Slide٢

Indicate by true or false .

No	Statements	True	False
1	The light remains on the mirror during reflection.		
2	Light does not reflect when it falls on an apple.		
3	Light reflects when it falls on the lenses surface.		
4	Reflection of light occurs only on shiny surfaces.		
5	A piece of wool doesn't reflect light falling on it.		
6	Reflection of light occurs only in the presence of sunlight.		
7	Dull things don't reflect light.		
8	Lenses are reflectors of light.		
9	A magnified image is formed on the convex mirror.		
10	A diminished image is formed on the concave mirror.		
11	The outer surface of the ball represents a concave mirror.		
12	The inner surface of the ball represents a convex mirror.		
13	Concave mirrors are used in cars.		

Worksheet 3

Draw the image of the candle.



Worksheet 4

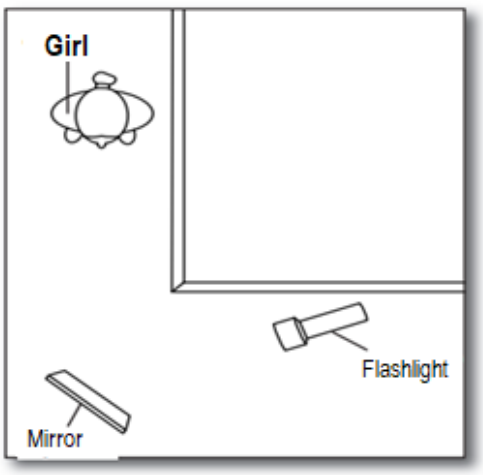
Draw the pathway of light that lets the boy in figure “a” reads the book, and the girl in figure “b” sees the picture:

a.

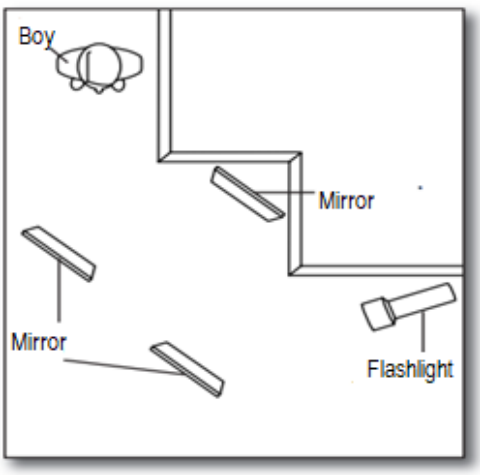
b.

Draw the pathway of light in “c” and “d” in order to see the image of

"c".



"d".



each.

Worksheet ٥

Match:

Concave mirror

Plane mirror

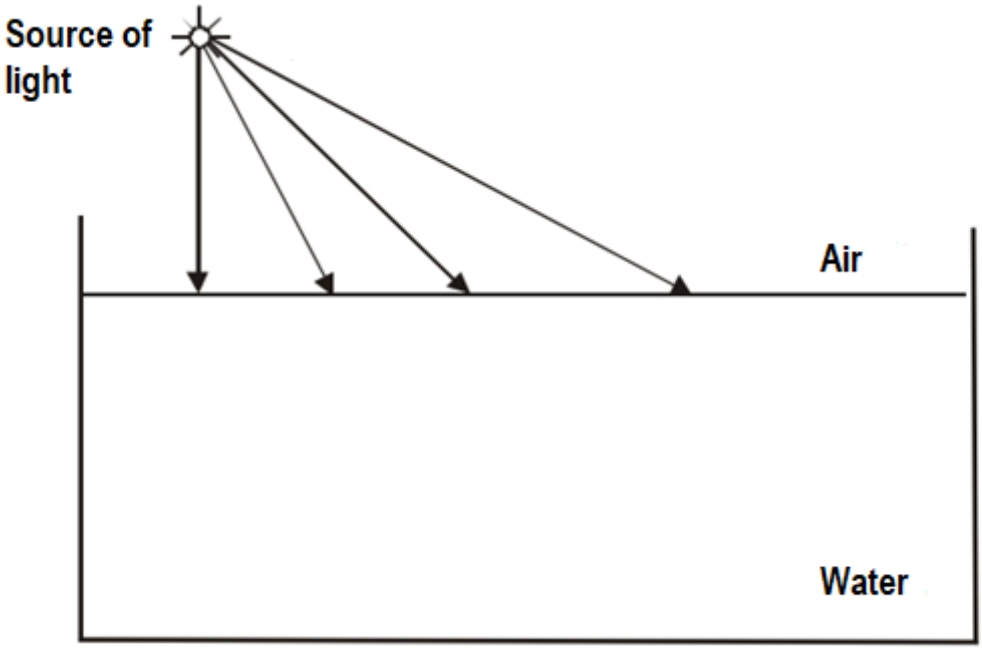
Convex mirror

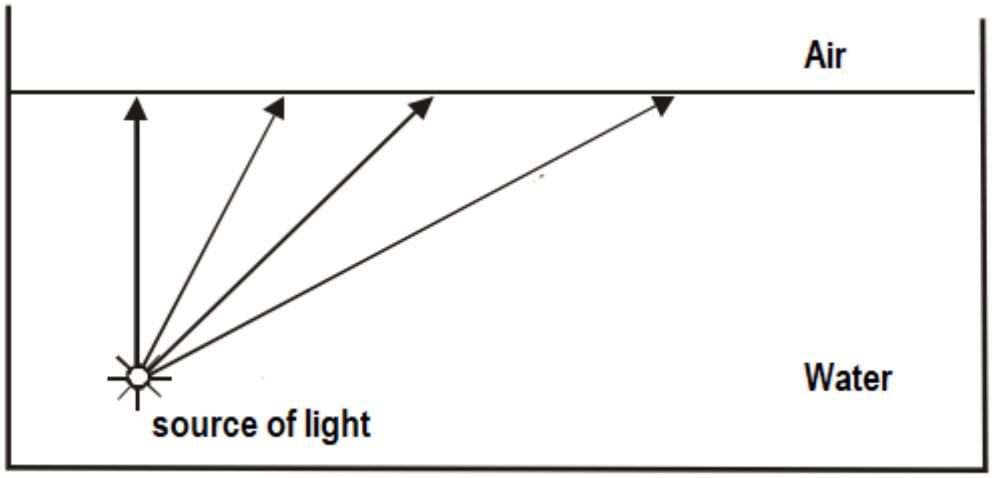
Worksheet ٦

Draw the pathway of light when it falls on both the mirror and the glass, and classify each phenomenon into **Reflection** and **Refraction:**

Worksheet 7

Draw the pathway of light in each case:

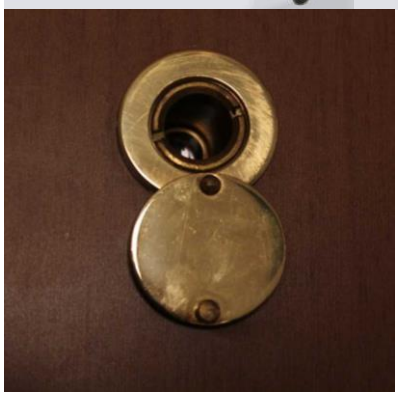




Worksheet

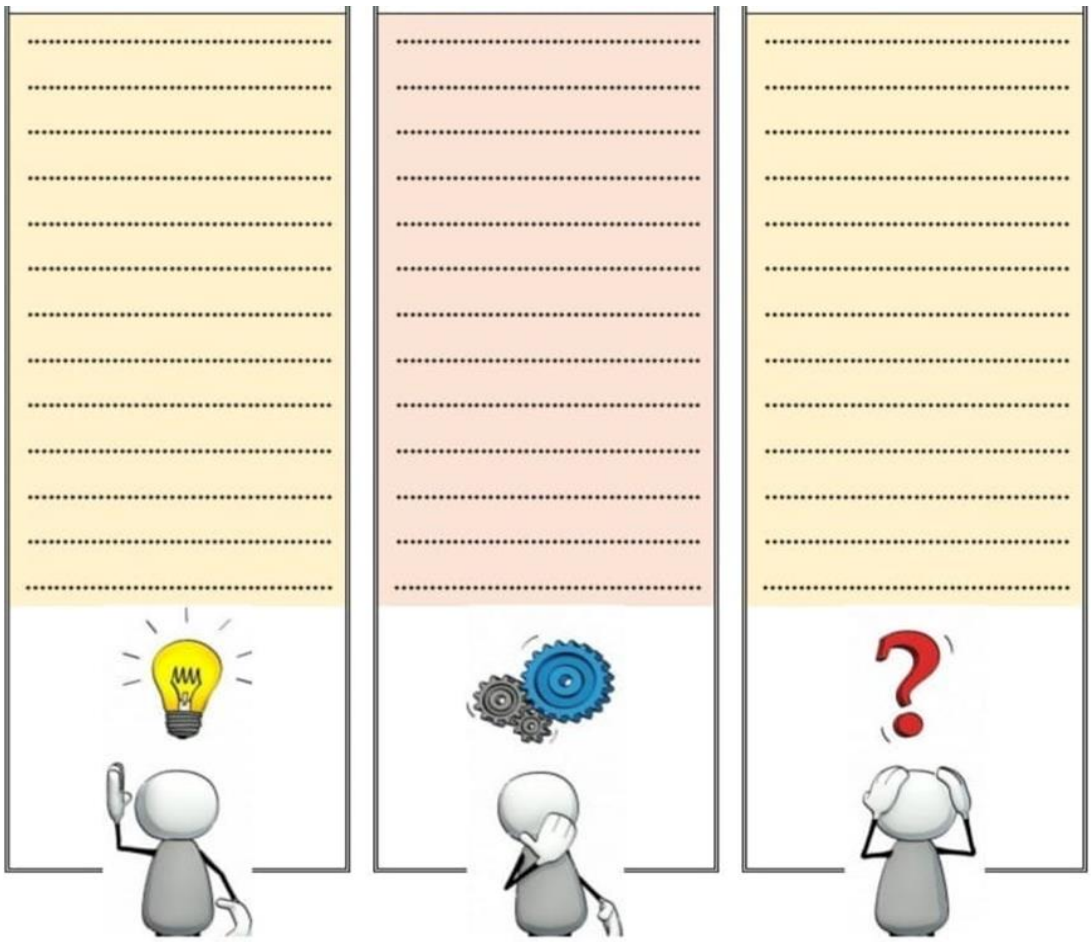
Classify the following lenses as concave or convax

Concave lenses	Convex lenses



Slide (1)

Learning Table



What do you know about temperature? (K)	What do you want to know about temperature? (w)	What did you learn about temperature? (L)

Slide 2

Indicate by true or false:

M	Statements	True	False
1	There is no difference between heat and temperature.		
2	Touch can be used to indicate the object's temperature.		
3	All thermometers are suitable for measuring the temperature of the human body.		
4	All thermometers contain a constriction.		
5	The temperature can be read in the thermometer by placing the eye above the thermometer.		
6	It is not recommended to shake the medical thermometer before using it.		
7	The thermometer is arranged between maximum (100 ℃) and minimum (0℃).		
8	Any liquid can be used in the manufacture of thermometers, and it's not necessary to use mercury.		
9	There is no difference between the temperature in Celsius and the temperature in Fahrenheit.		
10	Human body's temperature can be only measured through the mouth.		

Worksheet 1

Heat and Temperature

How do you know the degree of hotness or coldness of an object?

……

……

……

What is the difference between the heat and the temperature of the body?

……

……

……

……

Ahmad feels an increase in his temperature, how can you help him to recognize his temperature, and does he really have an increase in his body temperature?

……

……

……

Ahmad asked his mother to touch his forehead to see if he really had a high temperature. What do you comment about his request? Do you agree or disagree with him? Why?

……

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How can you help Rania to indicate the water temperature? Did it reach boiling or not?

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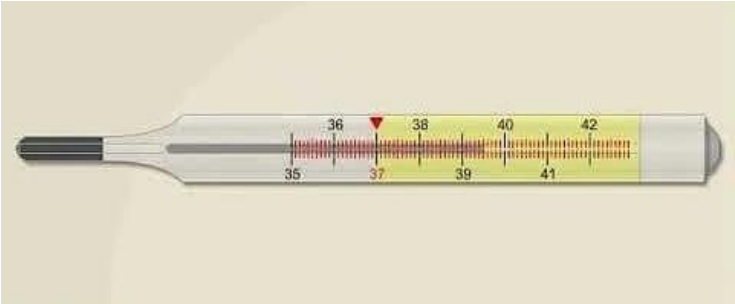
Worksheet 2 Types of Thermometer



The following figure represents a medical thermometer.

Indicate the range on the thermometer, and the main reason for this range.

……

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Explain the most important steps to measure your body temperature using this thermometer.

……

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Predict what would happen when you put this thermometer in a cup of boiling water.

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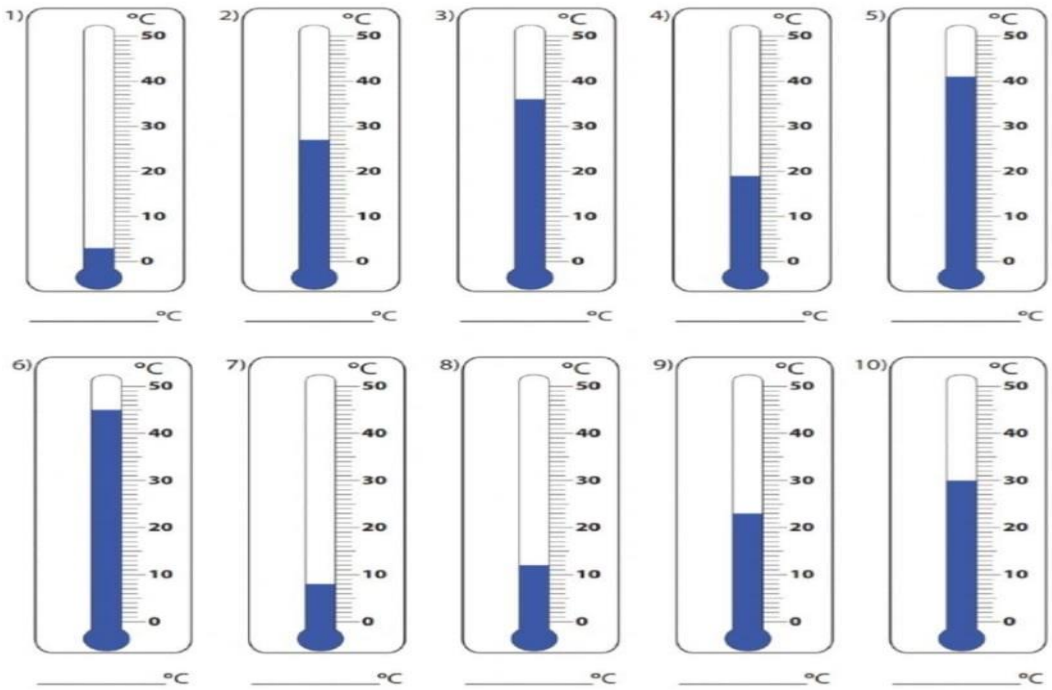

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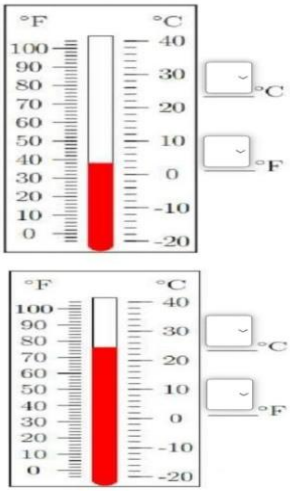
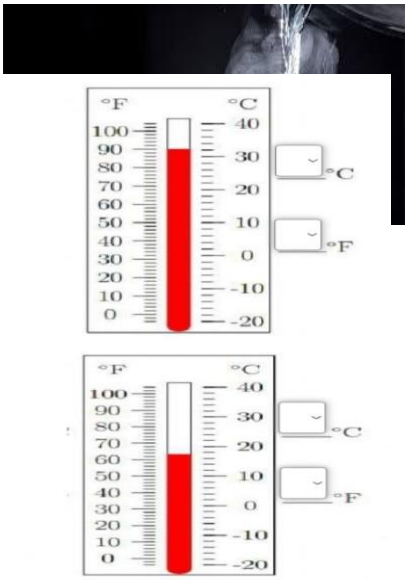
Worksheet 3

Temperature Units

1- Indicate the range of each thermometer and record it in Celsius.





2- Indicate the range of each thermometer and record it in Celsius and Fahrenheit.

Worksheet 4
Temperature Measurement

1- Angy wants to measure the temperature of heated water close to its boiling point. She used a thermometer that was left on a table in the room for an hour. She puts the thermometer reservoir in the water and indicate the measurement directly. She has estimated the water temperature as 19°C. In your opinion, why is this estimated measurement incorrect?

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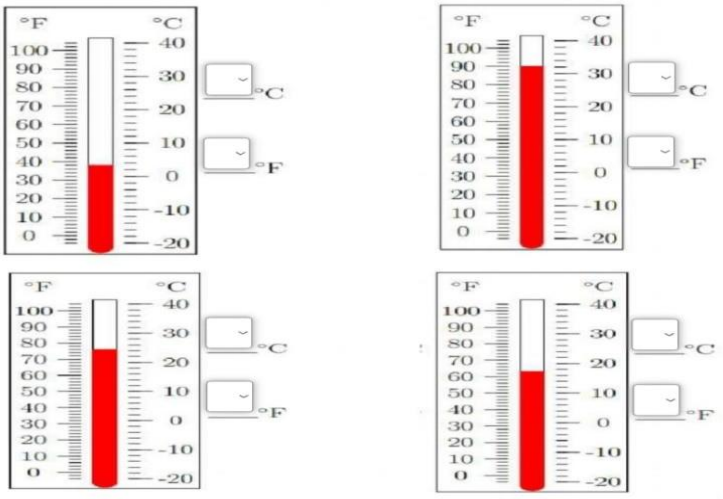

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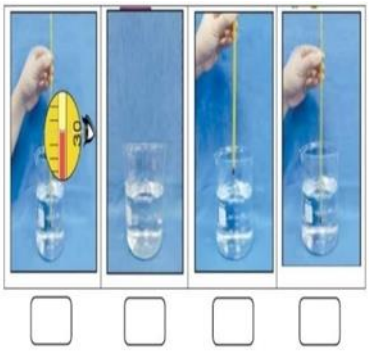
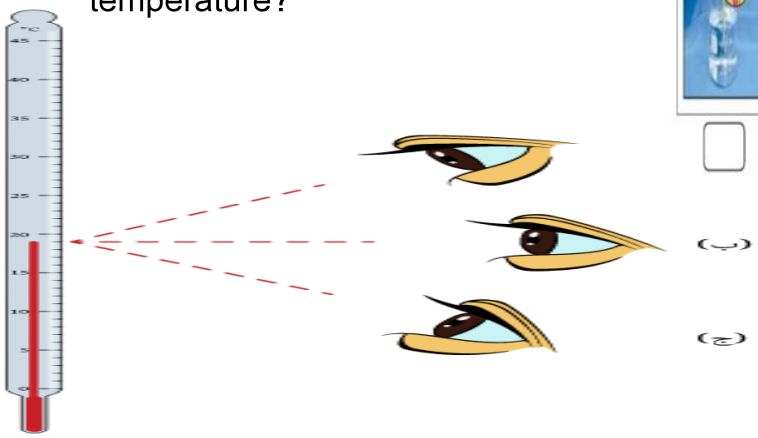
2- The following figure shows three different angles to read the temperature of thermometer. What is the best angle to read accurate temperature?





Worksheet 5

Steps of Temperature Measurement

Dear student, these are group of pictures that show the steps of measuring liquid temperature, predict the correct order of these steps, describing each with simple words.

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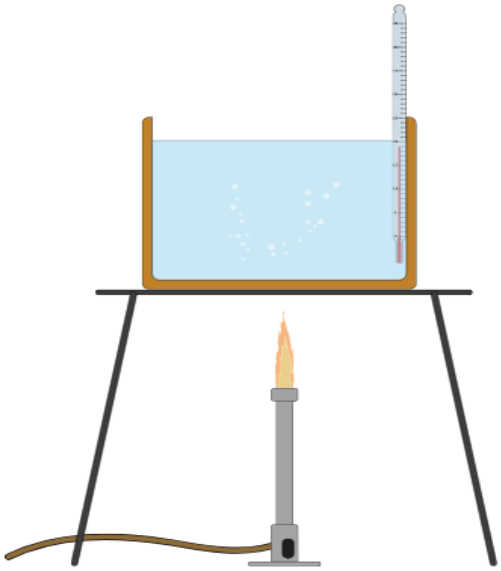
2- The adjacent figure represents a thermometer put in warm water. Describe what happened to the liquid inside in the thermometer and explain this result.



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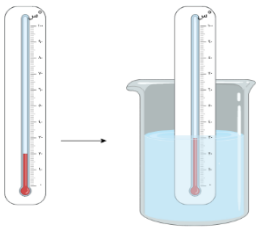

Worksheet 6

Temperature Measurement Errors

Samar heats water in a copper vessel using a Bunsen burner as shown in the figure. She wants to measure the water temperature. She puts a thermometer in a bowl, touching one of its sides. The temperature on the thermometer was higher than the actual temperature of the water. Indicate the error that Samar made when measuring the temperature?

.....

.....

Dalia wants to measure the temperature of a quantity of water in a glass that is about to reach the boiling point. She placed the thermometer above the surface of the water, and kept carrying it until the thermometer measurement was stabilized. She estimated the water temperature to be 77°. Indicate the error when measuring the temperature.

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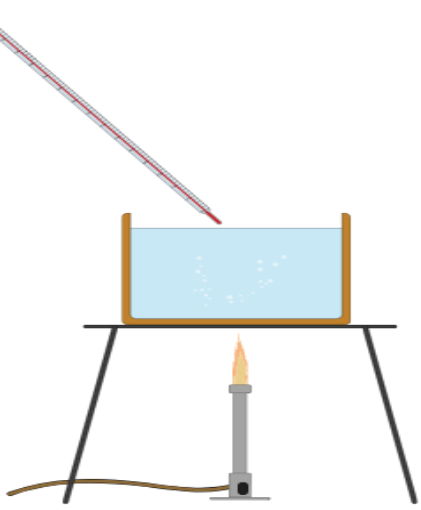
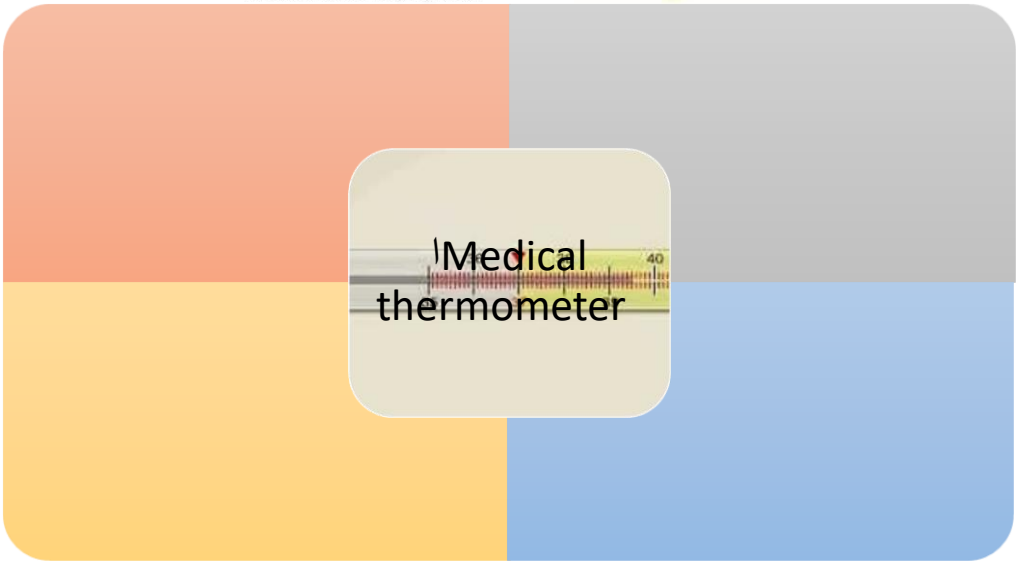
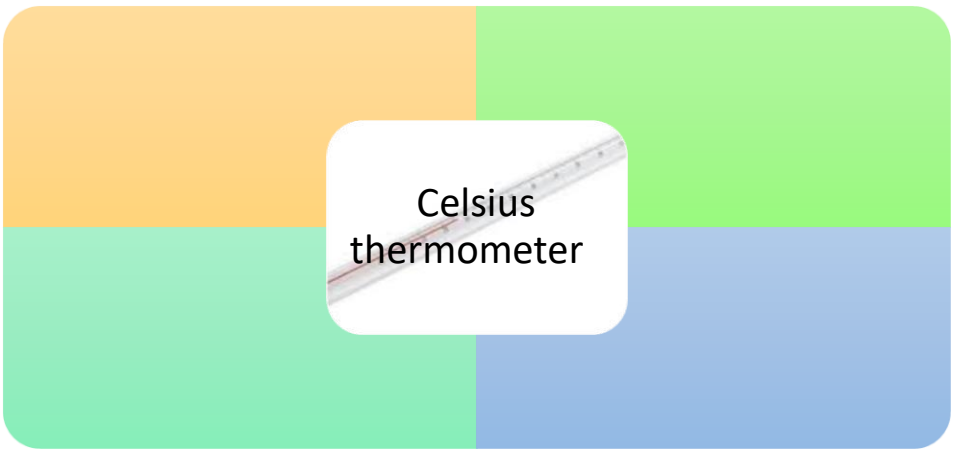
Worksheet 7
Daily Life Examples of the Uses of the Medical Thermometer and the Celsius Thermometer



According to your knowledge about Medical Thermometer and Celsius Thermometer, write examples of daily life uses for these thermometers around you.

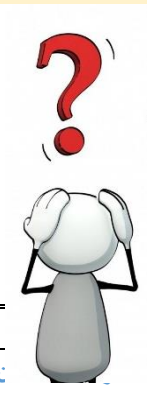
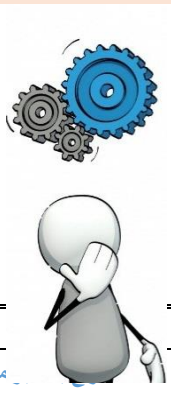
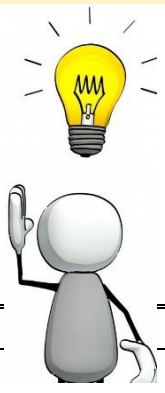

Medical thermometer


Celsius thermometer

Slide 1

Learning Table

Topic: Population and Biotic community

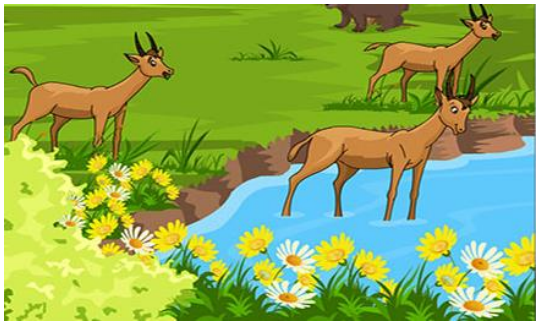
K	W	L
What do you know about population and biotic community?	**What do you want to know about population and biotic community?**	**What did you learned about population and biotic community?**
		

Worksheet 1

Population

Observe the picture and complete the diagram with the appropriate words:

With lungs	Same species	Same size?	Live in the same place
Cupressus	Live at the same time	Lions	Insects



The ecological population

Characteristics

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Definition

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Examples

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Examples

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Worksheet 2

Factors that Affects the Size and Density of a Population

Observe following pictures then answer the following questions:

 1	 2
 3	 4

1. Name the relationship represented in picture 1.

   ……

2. Name the relationship represented in picture 2.

   ……

3. What is the effect of these two relationships on the numbers of living things in biotic community?

   ……

4. Do the weather factors have an impact on the life of living things? Explain.

   ……

5. Summarize the most important factors that affect the life of living things, and thus affect the size of population.

……

……

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6. **A nature reserve is consisting of 20 oak trees and 10 deer,** which population has the highest density?

……

……

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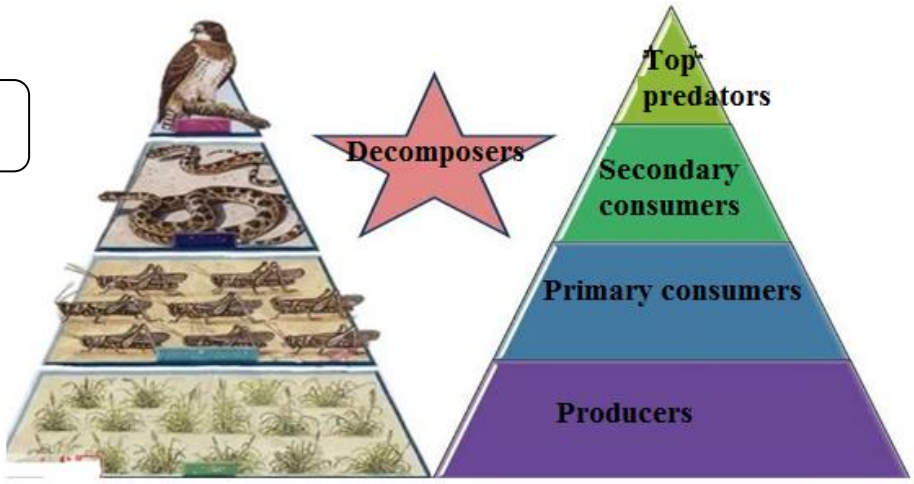
Slide 2

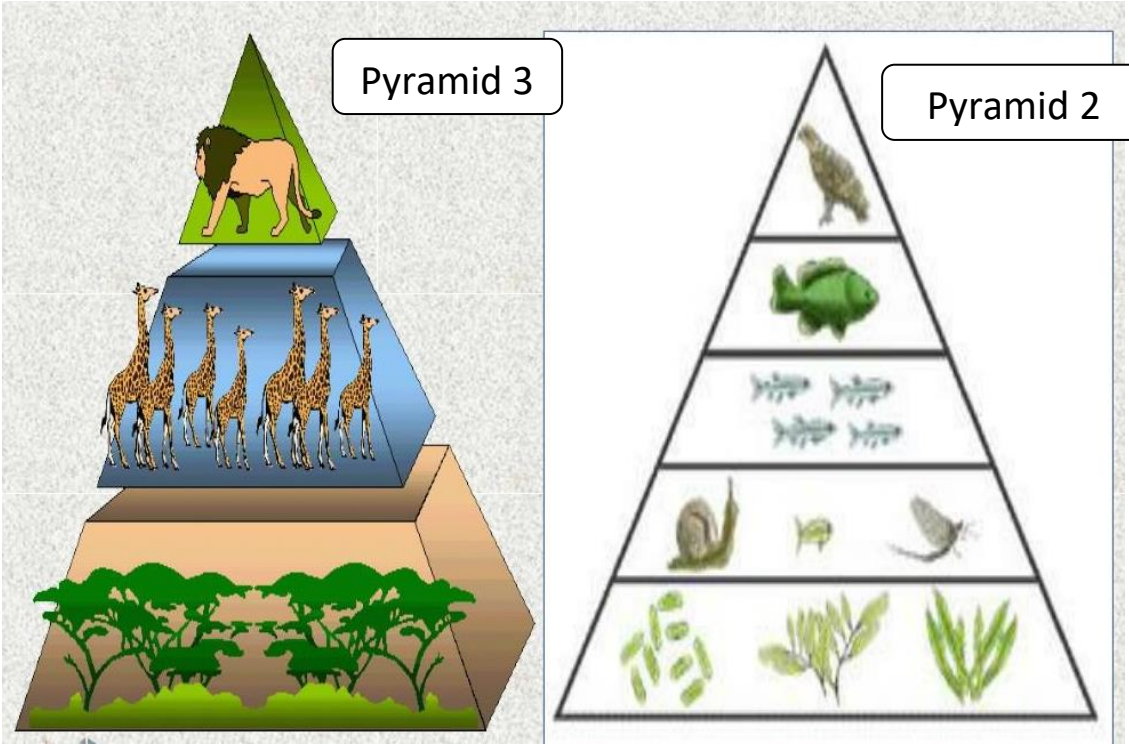
Pyramid of Numbers

Pyramid 1



Pyramid 3

Pyramid 2



Worksheet 3

Assessment

Answer the following questions:

1- The population size decreases with the lack of resources.

a- true b- false

2- Parasitism is a relationship between two living things; where they benefit from each other.

a-true b- false

3-Rain increase causes flooding and an increase in the population.

a- true b- false

4- Explain three conditions that can help increase in the size of Oryx in the desert.

……

……

……

……

……

Worksheet 4

Ecological Balance

Observe the picture that represents a food chain in an ecosystem, and then answer the following questions:

1- What will happen to the number of frogs if the number of worms decreases?

2- What will happen to the number of worms if number of snakes increases?

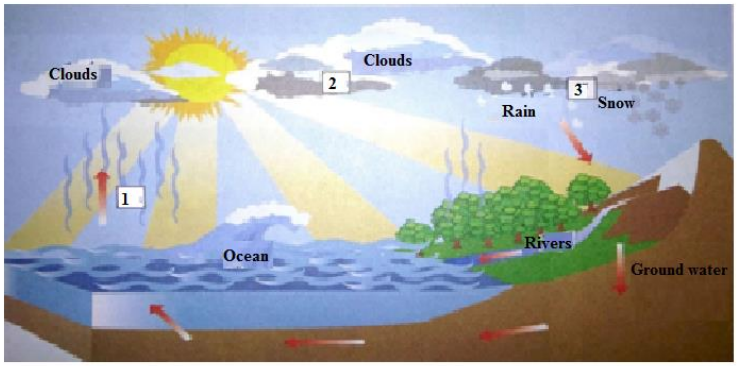
3- If a number of hawks are included in this food chain, will it remain in balance? Why?

4-Suggest a plan to maintain ecological balance to this region in case of imbalance.

Worksheet 5

Environmental Water Cycle

Observe the figure, and then answer the following questions:



1- What is the main source of heat on earth?

2-What are the processes represented by the numbers (1, 2, and 3)?

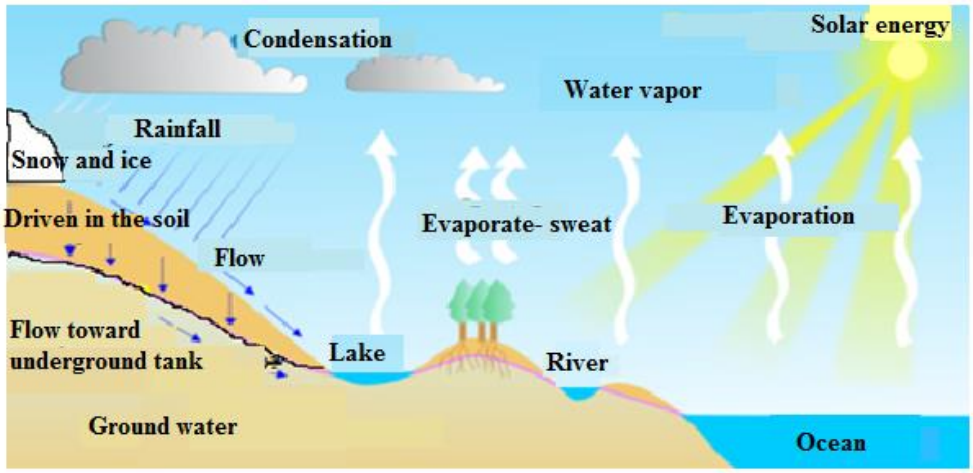
3- What will happen to rainwater after it falls on the surface of the earth?

4- If you were a director of a school, what would you suggest to students to conserve water at school? Write the suggestions in your notebook.

Worksheet 6

Water Cycle

Observe the picture, and answer the following:



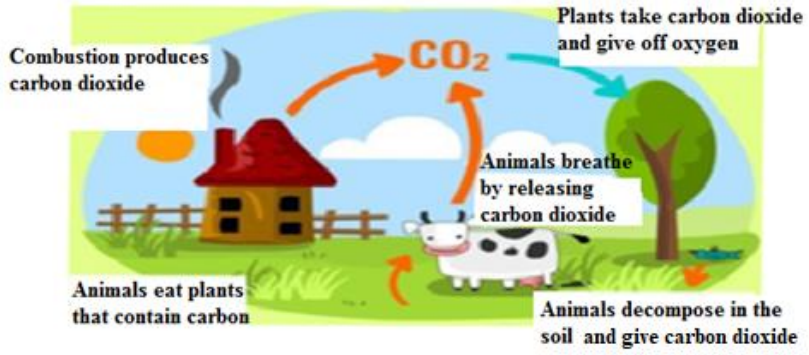
1-Name the forces that produce the water cycle in nature.

2- From where does the water evaporate in this cycle?

Worksheet 7

Student's Assessment for Steps of Carbon Cycle

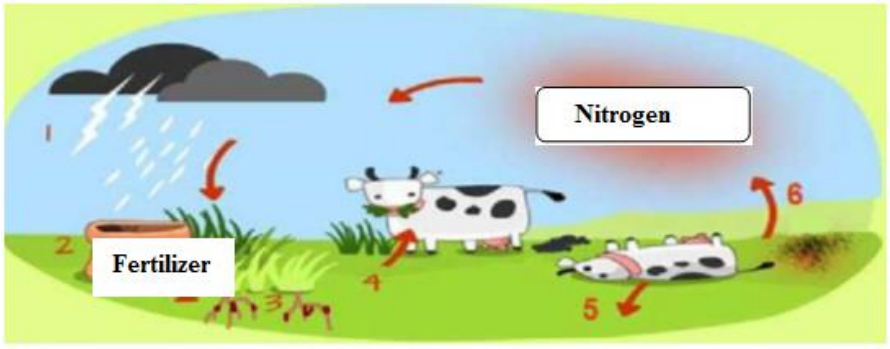
Solve the worksheet using the following website:



Worksheet 8

Environmental Nitrogen Cycle

Solve the worksheet by using the following website:



Worksheet 9

Assessment

Fill in the blanks using the following word box:

Word box:

Liquid –Penetrates-groundwater- clouds- water vapor-condenses-lower-air-land-rain

- Water in the environment evaporates from---------- into ----------in the ----------.

- Water vapor rises, cools and ----------and turns into water droplets in the clouds.

- ---------- falls from the ---------- into the sea and on the land.

- Part of the water that falls ---------- underground and joins the ----------

---

- A Part of water that falls on the ---------- flows over the surface from a high place to a ----------place. This water joins streams and rivers.

Worksheet 10

Assessment

Answer the following questions:

1- In what form do plants absorb most of the nitrogen from the soil?

a. Nitrogen gas

b. Nitrogen monoxide

c. Nitrogen dioxide

d. nitrite

2- Which of the following explains the needs for plants to absorb nitrogen from the soil?

a. Plants need nitrogen to help in movement of sucrose into the plant.

b. Plants need nitrogen to make important nitrogen-containing compounds, like proteins.

c. Plants need nitrogen to break down it during cellular respiration to release energy.

d. Plants need nitrogen as a reactant in photosynthesis.

3- The figure shows root nodules on a pea plant. These roots nodules are colonized by nitrogen-fixing bacteria.

The relationship between bacteria and the pea plants has been described as a mutualistic relationship, what do we mean by that?

a. The pea plant benefits from the relationship, the bacteria do not.

b. The bacteria benefit from the relationship, the pea plant does not.

c. The bacteria and pea plant benefit from this relationship.

d. The bacteria and pea plant do not benefit from this relationship.

4-What are the living things that react in the nitrogen cycle and convert nitrogen gas into nitrogenous compounds in the soil?

a. Nitrobacteria

b. Nitrogen fixing-bacteria

c. Decomposers

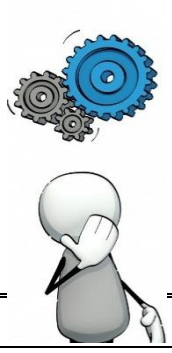
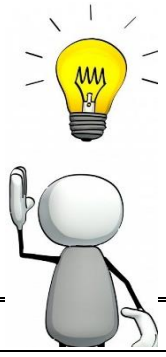
d. Bacteria denitrifying

Slide 1

Learning Table

Topic:

The Earth

K What do you know about Earth?	W What do you want to know about Earth?	L What did you learn about Earth?
		

Worksheet 1

Diagnosing Assessment

Indicate by true or false.

No	Statement	True	False
١	The hydrosphere is the Earth's outer layer.		
٢	The Earth's crust includes continents and ocean bottoms.		
٣	There is only one mantle in the earth.		
٤	The outer core in the earth is a solid part.		
٥	A hill is a low area that extends between two mountains or two hills.		
٦	The coast is the line where land meets sea water.		
٧	A lake is a natural area for water flow and transmission.		
٨	Earthquakes and volcanoes are external processes that affect the landmarks of the Earth's surface.		
٩	Weathering, erosion and deposition are external processes that affect the landmarks of the Earth's surface.		
١٠	Volcano is the vibration of the earth's crust.		
١١	A volcano is an opening in the earth's crust through which magma, gases, and ashes rise to the surface of the earth.		

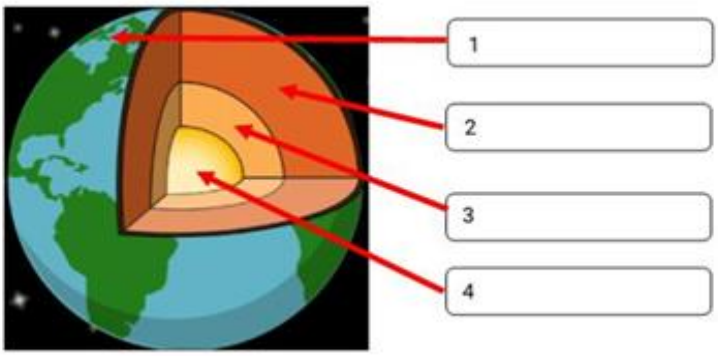
Worksheet 2

Landmarks of the Earth's Surface and Factors that Change it

Question 1:

Label

Mantle -Outer core -Earth's crust -Inner core



Question 2:

Complete each of the following statements:

volcanic mountain – gravity -lava – River -plain – waves – heavy rains –Magma – away from –landslide

a. **The vibrations of an earthquake move in the form of ..... and the vibrations weaken as we move ..... earthquake.**
b. **When lava flows from an opening in the earth's crust, a ..... is formed**
c. **The molten rocks that are found in the mantle and the crust are called ....., while the rocks that come out of the crater of a volcano are called .....**
d. **The ..... is a wide and flat land.**

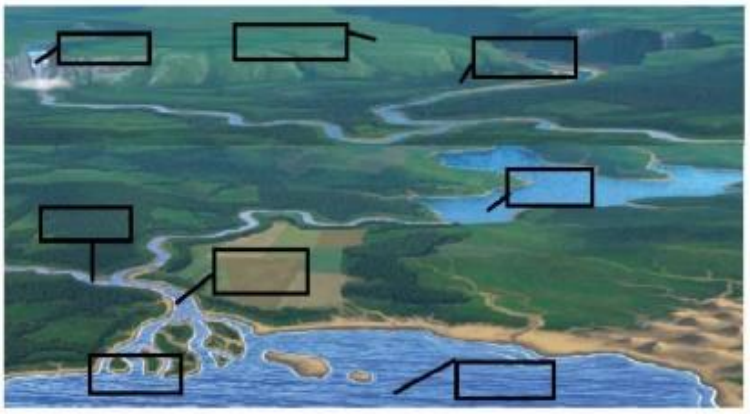
e. .....is a large, natural stream of running water.

f. ..... is the rapid movement of rocks and soil down a hill or mountain, causing it to change its shape, and it occurs because of .....

g. Flooding is caused by .....

Slide 2

Landmarks of the Earth's Surface



Worksheet 3

Assessment

Question 1: Complete by filling the correct answer in the appropriate place.

Sea	Delta
Downstream	Plateau
Tributary	Gorge
Lack	Waterfall

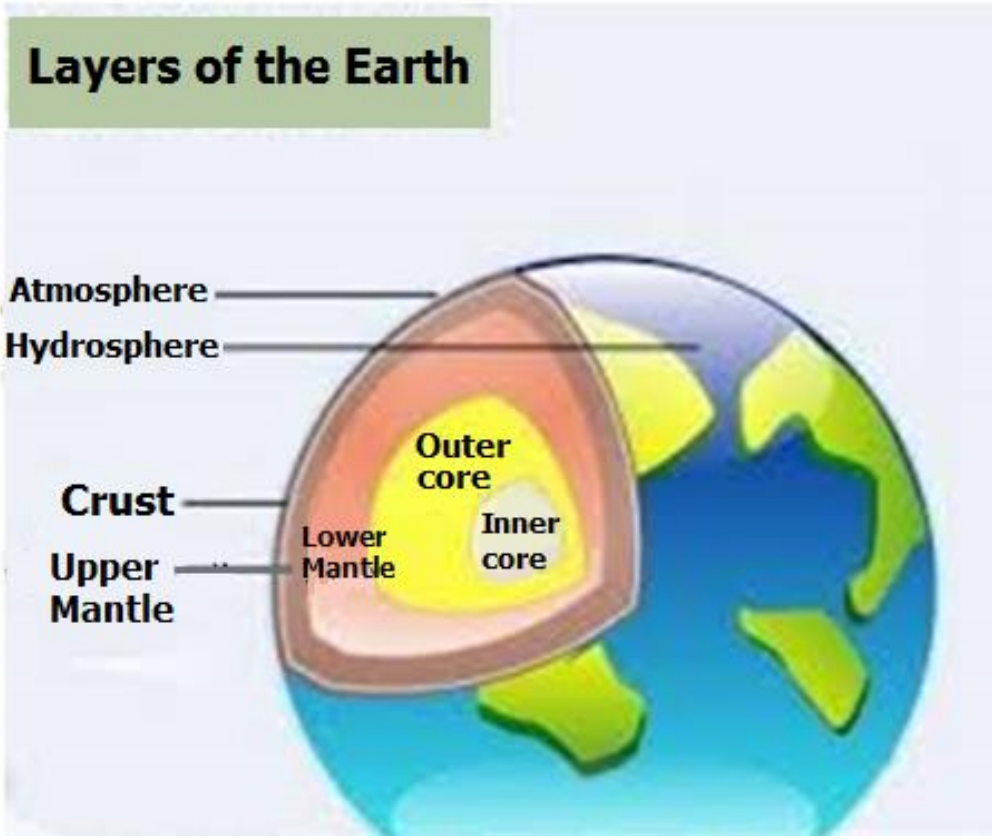
Question 2: Choose the correct answer:

1. ..... a large area filled with salt water. (Sea - Coast - Waterfall)
2. ..... a line where land meets water. (Sea or Ocean - Coast - Waterfall)
3. ..... a natural area for water flow and transmission. (River - Coast - Waterfall)
4. ..... a small river or stream of water that flows into a large river. (Tributary - Coast - Waterfall)

5. …… a stream of natural water falling from a high place. (Tributary - Coast - Waterfall).
6. ……. an area of water surrounded by land. (Lake - Downstream - Delta)
7. ……. a junction of river waters and ocean waters or seas. (Lake - Downstream - Delta)
8. ..... a land with a triangular shape formed at the mouth of the river. (Lake - Downstream - Delta)

Slide 3

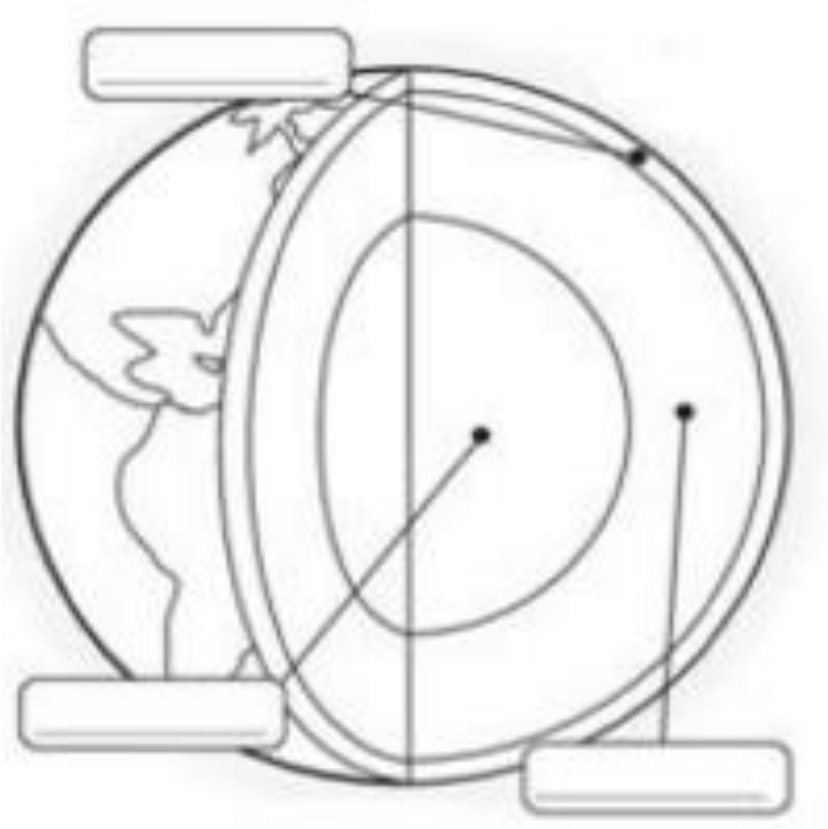
Layers of the Earth



Worksheet 4

Layers of the Earth

Color the layers of the earth with the appropriate colors, and label them.



Worksheet 5

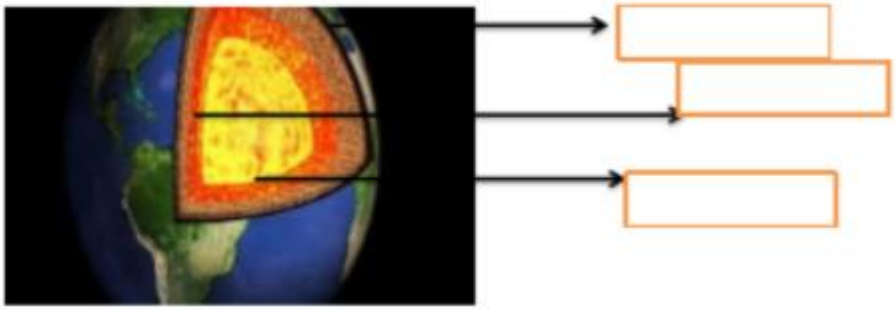
Assessment

Question 1: Choose the correct answer:

1. The number of layers of the earth is (Three - Four - Five).
2. The outer layer of the earth is (Mantle - Crust - Core).

3. The Earth's core is the (inner - outer - middle) layer.
4. The layer that is considered the center of the Earth is the (Mantle - Core - Earth's crust).

Question 2: Label the layers of the earth in the adjacent figure.



Question 3: Fill in the blanks with suitable words

(rocks – Earth's crust - land -water – seas – mountains -plains – soil)

1. The Earth's surface consists of .....and .....
2. The solid outer layer of the Earth is called .....
3. The blue color on the earth represents .....
4. The brown and green colors on the earth represent..... and.....
5. The Earth's crust consists of ..... and .....

Slide 4

Earthquake

Explore

How does the earth move during an earthquake?

Objective

Make a model of the Earth's motion during an earthquake.

Steps

1. Place the two corks, one next to the other, in the bowl.
2. Cover the two pieces of cork with soil.
3. Pull the bowl about 5 cm away from the edge of the table.
4. Knock gently the bottom of the bowl with the wooden piece. What happened to the soil and the two pieces of cork?
5. What happens if you keep knocking at the bowl?

Results

1. Deduce what would happen if you knocked at the bowl harder.
2. What do the two pieces of cork, and the fault that formed between them represent?

Explore more

The fault separating the two cork pieces has a definite angle. What do you expect to happen if the angle changes? Make a Hypothesis about the angle that causes more soil to fall into the fault. Make a model and test your hypothesis.

Worksheet 6

Earthquakes and their Effects

Question 1:

Choose the correct answer:

1. ١. A point on the Earth's surface located directly above the Hypocenter of an earthquake is called:

Epicenter Earth's surface Fault The Hypocenter

2. Which of the following are water waves formed by an earthquake under the ocean?

Primary waves Surface waves Secondary waves Tsunami

3. Which of seismic waves travel fast in the Earth?

Primary waves Surface waves Secondary waves Tsunami

Question 2:

Match each term in group (A) with the appropriate one in group (B)

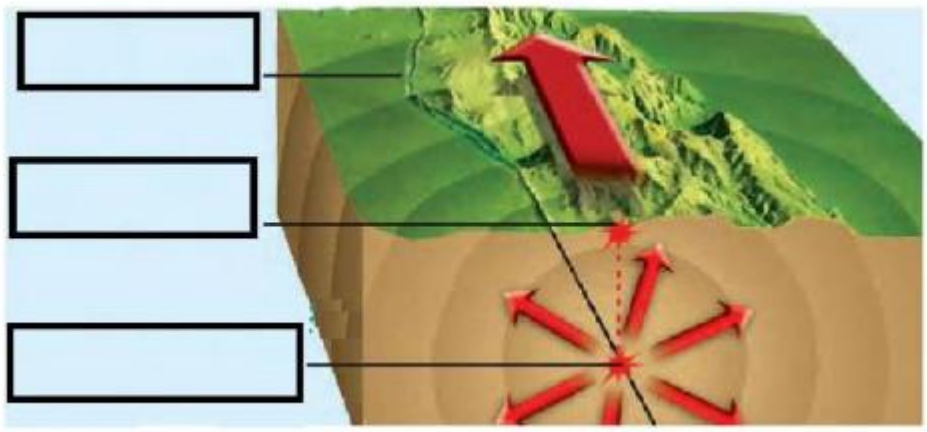
Group (A)		Group (B)
Hypocenter		. A point on the Earth's surface directly above the hypocenter.
Fault		. Vibrations generated by movement along the fault.
Earthquake		. A fracture along which the rocks move and slide.
Epicenter		. Point of origin of an Earthquake.

Worksheet 7

Assessment

Question 1: Label the figure below using the following words

Fault – Epicenter - Hypocenter



Question 2: Choose the correct answer.

1. Among the ..... processes that occur in the earth's inner part are earthquakes and volcanoes.
   internal external
2. ..... is the vibration of the earth's crust.
   Earthquake Volcano Weathering
3. ..... is the point of origin of the earthquake under the earth's surface.
   Hypocenter Crater Weathering

Question 3: Explain the effects of earthquakes on the formation of the Earth's surface, living things, and the environment.

.....
.....
.....
.....
.....

Slide 5

Volcanoes

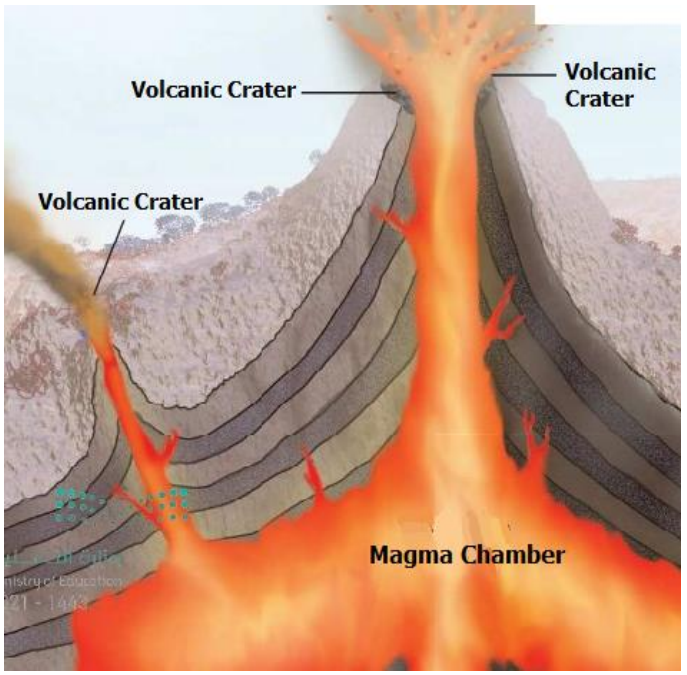
What are volcanoes? How do they form the surface of the Earth?

A volcano is an opening in the earth's crust through which magma, gases and volcanic ashes come out to the surface of the earth. When magma reaches the earth's surface, it is called "lava".

Most volcanoes occur along the boundaries of the Earth's plates, whether on land or in the bottom of the ocean.

When a volcanic eruption occurs, lava accumulates around the crater, and a cone-shaped crater is formed at its top, and with the recurrence of volcanic eruptions, the accumulation of materials increases, and the height of the cone increases.

The volcano may have more than one crater.



Landslides may occur around the crater of the volcano, and volcanic craters are formed as a result.

There are three types of volcanoes: Active volcanoes, from which magma is still erupting up to this day, and extinct volcanoes, from which the eruption of magma has stopped and is not expected to erupt again. As for the third type, it is the dormant volcanoes that have stopped erupting, but may return and erupt from time to time, including the "Iceland volcano," which re-erupted in 1431 AH after a quiescence of nearly 200 years.

Worksheet 8

Volcanoes

1. Color the volcano, and indicate its main parts:

2. Fill in the blank with the appropriate word:

- A volcano is an opening in the earth's crust that erupts ..... and ..... and volcanic ash.
- There are three types of volcanoes:
  - .....:it is from which magma is still erupting until this time
  - .....:it is from which the eruption of magma has stopped and is not expected to erupt again.
  - .....:it is the one that stopped erupting, but it may come back and erupt from time to time.

Worksheet 9

Final Assessment

Question 1:

Choose the correct answer:

1. The natural landmarks of the Earth's surface and one of its topography is:

Mountains Buildings Dams

2.The rocky part of the Earth's surface is:

Atmosphere Earth's Crust Mantle

3.Part of the Earth in which living things live extending from the atmosphere to the ocean is:

Biosphere Hydrosphere Core

Question 2:

Answer by "True" or "False":

1. Earth landmarks cover only the surface of the globe (.....)
2. The Mantle forms the central mass of the Earth (.....)
3. The movement of the Earth's plates causes the formation of mountains and oceans (.....)
4. The hydrosphere consists of the Lower Mantle and part of the Upper Mantle (.....)

Question 3:

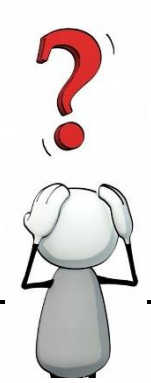
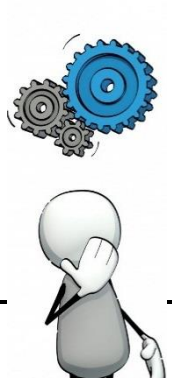
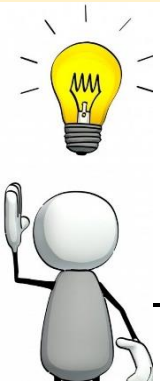
Match each term in group (A) with its appropriate one in group (B):

Group (A)	Group (B)
Plates	• A device that works according to the principle of sound and echo
Volcanic Islands	• The layer that follows the earth's crust
Echo sounder	• The boundary separating two plates
Mantle	• The line where land meets water
Coast	• Huge panels originate from the lithosphere
Fault	• Mountains rising from the bottom of the ocean above the surface of the earth

Worksheet 1

Learning Table

Topic: Celestial Objects

K What do you know about Celestial Objects?	W What do you want to know about Celestial Objects?	L What did you learn about Celestial Objects?
		

Worksheet 2

Indicate by true or false:

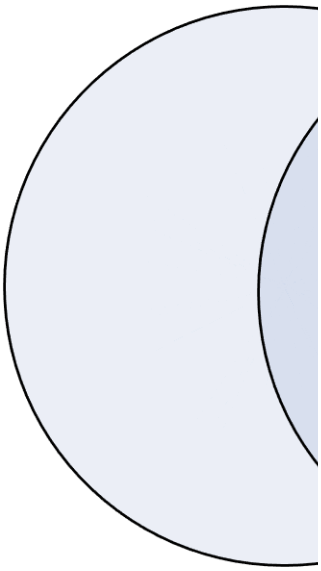
No	Statement	True	False
١	Stars are very small objects.		
٢	Stars are present only during the night and they are absent during the day.		
٣	All stars are present at the same distance from Earth.		
٤	All stars are the same.		
٥	Stars can fall towards the Earth.		
٦	Stars have a fixed place in the sky.		
٧	Stars are used to know the future.		
٨	The sun is not a star, but a giant planet or glowing ball.		
٩	Stars are part of our solar system.		
١٠	Stars are much smaller than our sun.		
١١	Earth is the largest cosmic object in space.		
١٢	The sun revolves around the earth.		
١٣	The earth is carried by something (such as an ox's horn or water.....).		
١٤	The moon and the sun have the same size.		
١٥	The sun and the moon produce light in the same way.		
١٦	All space objects emit light by themselves.		

Worksheet 3

Similarities and Differences between Sun and Stars

Complete the Venn Diagram by using the following:

Closer to the earth	Gives light and heat	Gives heat for the earth	Farther from the earth
appears as a huge ball from the earth	Appears as a bright spot from the earth	Is present during the day	looks very luminous
Can be seen at night	Can be seen during the day	consists of glowing sphere of hot gas	Its position changes in the sky



Other stars Sun

Similarities

Worksheet 4

Determination of Shape of Planet's Orbit.

Procedure:

- Fix the two pins on a wooden board covered with drawing paper so that the distance between the two pins is 12 cm.
- Wrap 30 cm of thread around the pins.
- Fix the tip of a pencil in the middle of the thread, then move the thread while pulling it with the tip of the pencil to rotate around the pin in one turn.
- Note the line that the pen draws on the paper.

What do you observe?

- ……
- ……

What do you conclude?

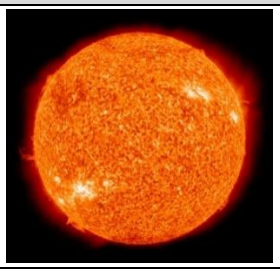
- ……
- ……

Worksheet 5

Comparison between Sun, Earth and Moon

Use the following statements to complete the table:

It revolves around the center of the galaxy once in 225 million years	It is located 150 million km from the sun	Its size is less than the size of quarter of the earth
It's a dark space object	It orbits the Earth once in about 28 days in an elliptical orbit.	It is 384403 kilometers away from the Earth.
The size of the sun is million times the size of the earth.	It's a luminous gas ball	It revolves around the sun once in 365.25 days in an elliptical orbit
It's a dark space object	It is located near the edge of the Milky Way	It's a star of medium size

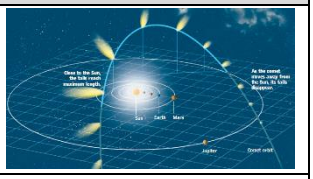
Basis for Comparison	Sun	Earth	Moon
Image			
Composition	....	....	....
Size	....	....	....
Location	....	....	....
Movement	....	....	....

Worksheet 6

Comparison between Asteroid, Meteor and Comet

Use the following statements to complete the table.

It ranges in size from pinhead to large	It's a dark small rocky objects	They fall through the atmosphere and burn up
They are blocks of rock, ice and frozen gases	It approaches and moves away from the sun during its rotation	Most of them are less than 200 km in diameter
It is located close to the earth	It orbits around the sun	It is located between Mars and Jupiter
It's small in size	It revolves around the Sun in extremely elongated elliptical orbits	It's a dark small rocky object

Basis of Comparison	Asteroid	Meteor	Comet
Image			
Composition	....	....	....
Size	....	....	....
Location	....	....	....
Movement	....	....	....

Worksheet 7

Solar Eclipse

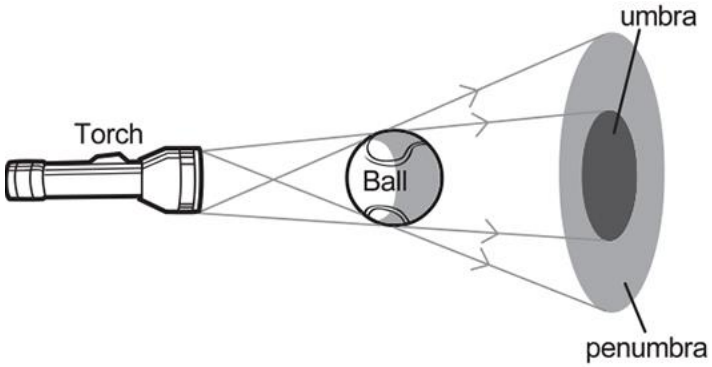
Procedure:

- Use a torch to represent the sun, a football to represent the earth, and a tennis ball to represent the moon.
- Place the baseball (the moon) between the torch and the football in a straight line so that the shadow of the baseball falls on the football.

- **Does the torch light (sun) reach the football (earth)?**
- **Do the inhabitants of the Earth see the sun?**

What do you observe?

- ……
- ……



What do you conclude?

- ……
- ……

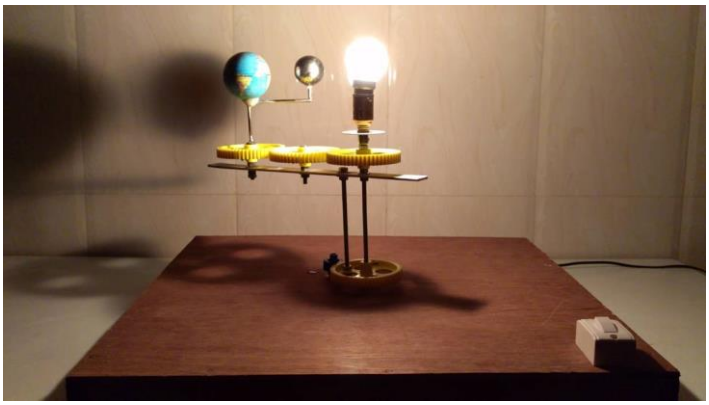
Worksheet 8

Lunar Eclipse

Procedure:

- **Use the model shown, which consists of a lamp representing the sun, a big ball representing the earth, and a small one representing the moon.**

- **Move the big ball (the earth) so that it becomes between the lamp (the sun) and the small ball (the moon), as they are all on the same line.**
- **Does the light of the lamp (the sun) reach the small ball (the moon)?**
- **Do the earth's inhabitants see the moon?**



What do you observe?

- .....
- .....

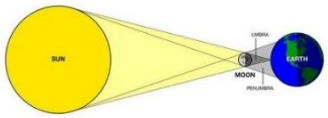
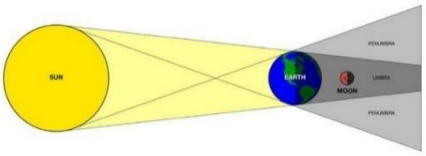
What do you conclude?

- .....
- .....

Slide 1

Comparison between Solar Eclipse and Lunar Eclipse

The most important differences and similarities between Solar and Lunar eclipses can be summarized in the following table:

Property	Solar eclipse	Lunar eclipse
Image		
Description	Unable to see the sun partially or completely	Unable to see the moon partially or completely
Condition of occurrence	Occurs when the moon is between the earth and the sun, and on the same straight line	Occurs when the earth is between the sun and the moon, and on the same straight line
Explanation	The moon blocks out the sunlight from the earth	The earth blocks out the sunlight from the moon
Time of occurrence	Day	Night
Duration of occurrence	It does not exceed seven minutes and few seconds	It may last for more than two hours
Types	Total – Partial - Annular	Total - Partial
Dangers	Watching the Solar eclipse directly with the eye may cause significant damage to the retina	Watching an Lunar eclipse does not cause any damage
Prediction	It is predictable because it is repeated periodically	It is predictable because it is repeated periodically