التميز الإنساني
Humanitarian Excellence

الهيئة الخيرية الإسلامية العالمية
International Islamic Charity Organization

ISFD

IsDB
البنك الإسلامي للتنمية
Islamic Development Bank

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

3

الصف الثالث الأساسي

التميز الإنساني

الهيئة الخيرية الإسلامية العالمية

ISFD

IsDB
البنك الإسلامي للتنمية
Islamic Development Bank

الجهات المانحة

البنك الإسلامي للتنمية

صندوق التضامن الإسلامي

الهيئة الخيرية الإسلامية العالمية

الجهة المنفذة

جمعية التميز الإنساني بالكويت

اللجنة العليا للمشروع

م/ بحر سعود الصميط
المدير العام
الهيئة الخيرية الإسلامية العالمية

أ/ عبد الرحمن عبد العزيز المطوع
نائب المدير العام
الهيئة الخيرية الإسلامية العالمية

أ/ محمد الأمين محمد الهادي
قيادي القيرة والصمود والهشاشة
البنك الإسلامي للتنمية

م/ محمد عبد السلام الأسطى
القائم بأعمال المكتب الإقليمي
للبنك الإسلامي للتنمية بالقاهرة

د/ خالد محمد الصبيحي
رئيس مجلس إدارة
جمعية التميز الإنساني

د / أشرف خدام
البنك الإسلامي للتنمية
المكتب الإقليمي للبنك بالقاهرة

أ/ محمد مصطفى الجوابرة
ممثل صندوق التضامن الإسلامي

د/ عبد الرحمن المعمري
عضو ومقرر اللجنة العليا
الهيئة الخيرية الإسلامية العالمية

الإشراف العلمي والإداري للمشروع

الإشراف العام للمشروع

د / خالد محمد الصبيحي

رئيس مجلس إدارة جمعية التميز الإنساني بالكويت

الإشراف الفني للمشروع

أ.د/ علي أحمد الجمل

استاذ المناهج والعميد الأسبق لكلية التربية -

جامعة عين شمس ومؤسس فكرة المشروع

الإشراف الإداري للمشروع

د/ مدحت محمود سليمان

مدير قطاع التعليم بجمعية التميز الإنساني

Slide 1

Learning Table

Topic: Basic Needs of human Body

What do you know? (K)	What do you want to know? (W)	What did you learn? (L)

Slide 2

Indicate by true or false:

No	Statements	True	False
1	The human body needs large amounts of water in summer and less water in winter.		
2	Drinking water is not important for the processes of the human body.		
3	It is preferable to drink water immediately after eating.		
4	A healthy balanced diet should contain only vitamins and carbohydrates.		
5	Fats, carbohydrates and sugars are harmful food for the body.		
6	It is preferable to exercise in summer to lose more weight.		
7	Sleeping for long periods of time protects the body from diseases.		
8	Drinking juices and eating sugar in large quantities give the body high energy.		
9	All diseases are contagious.		
10	All diseases are caused by germs.		
11	Fever is one of the most important symptoms for common cold.		
12	Pneumonia and cold are the same.		
13	Cold is the advanced degree of influenza.		
14	The antibodies we get from breast milk are natural immunity.		
15	Influenza vaccine is unhelpful for athletes.		
16	Measles vaccine is fatal.		
17	White Blood Cells are a form of acquired immunity.		
18	We don't get the flu when we're in contact with infected people as long as we've had the flu vaccine.		
19	Burger is an example on healthy food.		

Worksheet 1

Draw in the following table an example on your healthy and unhealthy habits

Healthy Habits	Unhealthy Habits

Worksheet 2

Choose the appropriate disease name for each picture.

Cough- Ear ache- Sneezing- Fever- Headache- Toothache- Stomach pain- Common cold- Runny nose- Sore throat

Worksheet 3

Healthy Habits

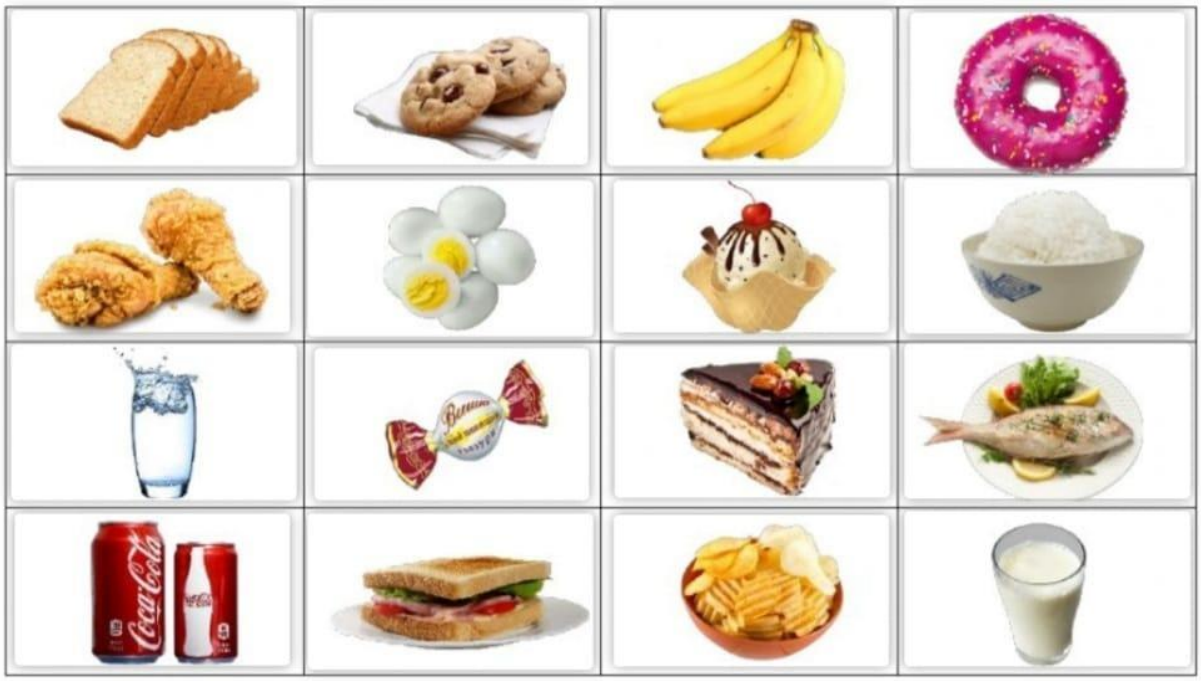
Cut and paste each one in the appropriate place in the table:

Healthy Habits	Unhealthy Habits

Worksheet 4

Healthy Food and Unhealthy Food

Cut and paste each in the appropriate place in the table:



Healthy food	Unhealthy food

Worksheet 5

Nutrients

After watching the video played by your teacher, match the words of column (A) with the appropriate pictures in column (B) (note that you can match more than one picture with the same word).

(A)

(B)

Fats

Proteins

Vitamins

Dairy products

Carbohydrates

Worksheet 6

Balanced Meal

Use these foods and make three balanced meals that contain different nutrients.

Meal	Components
First Meal	
Second Meal	
Third Meal	

Worksheet 7

Human Body Systems

After watching the video played by your teacher about the importance of nutrients to the human body, use the words in the boxes to answer the following questions:

Warm	Growth of body	Energy
Vitamins	Water	Dairy

1. ……..……help protect teeth and bones.

2. Proteins help in the.....

3. The essential component of the human body is: .....

4. Carbohydrates give the body.....

5..... make the body stronger.

6. Proteins help keep.....

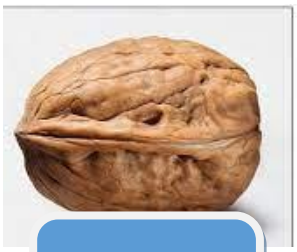
Worksheet 8

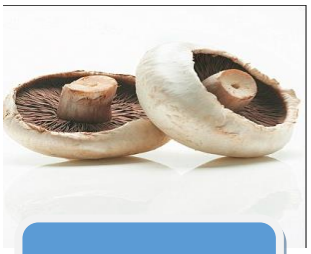
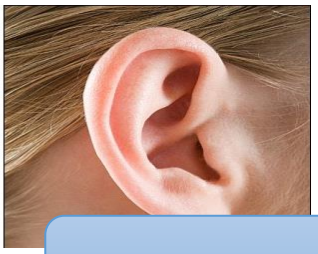
Importance of Food to the Human Body

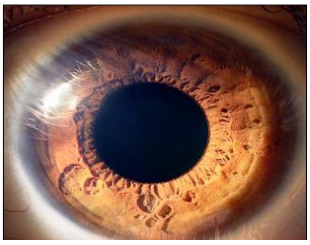
Use these pictures and write the name of the organ in your body and the food useful for it:









Slide 3

Watch your friends playing the following roles and note the dialogue between them, then answer the following questions in worksheet (9):

Dialogue between (Mother, Ahmed and Dalia) about the importance of water for the human body:

Ahmed: Good evening Mom, today in science class, we learned that water is very important to the human body.

Mother: Yes, Ahmed. Water makes up from 50% to 70% of our body weight. It has many benefits. It helps in the performance of vital processes in the body such as breathing, digestion, maintaining a normal body temperature, and protecting tissues.

Dalia: Does the lack of water in the body cause health problems, mom?

Mother: Yes, Dahlia, lack of water in the body causes dehydration, a condition that occurs when the body does not have enough water to do its normal functions.

Ahmed: Our science teacher told us, "People think that they don't need to drink a lot of water in winter because they don't sweat," but she said, "This belief is wrong. Why is that, Mom?"

Mother: Yes, Ahmed, it is a misbelieve because the body needs to drink 8 cups of water per day, but people do not drink this amount in winter because they do not sweat, but drinking this amount of water in winter protects the body from dehydration and weight gain and protects the immune system.

Dalia: mom, I read in one of the books that the appropriate time to drink water is immediately after eating, and we should not drink water while eating so that we do not have a rumen.

Mother: No, Dalia, it is preferable to drink water before and during food, and this has nothing to do with the formation of the rumen, but it helps in the digestion and makes us feel full.

Ahmed: So, mom, water is the basis of human life, and it has a role in his immunity and protection from disease.

Mother: Yes, water is the basis of life for all living things, whether human, animal or plant.

Worksheet 9

Importance of Water to the Human Body

Indicate the role that your friends played:

1- The percentage of water in the human body is .....

2- Use simple words from the roles your colleagues played to explain the relationship between water and the vital processes in the body.

....

3- Lack of water in the body leads to .....

4- A person needs to drink ..... cups of water daily.

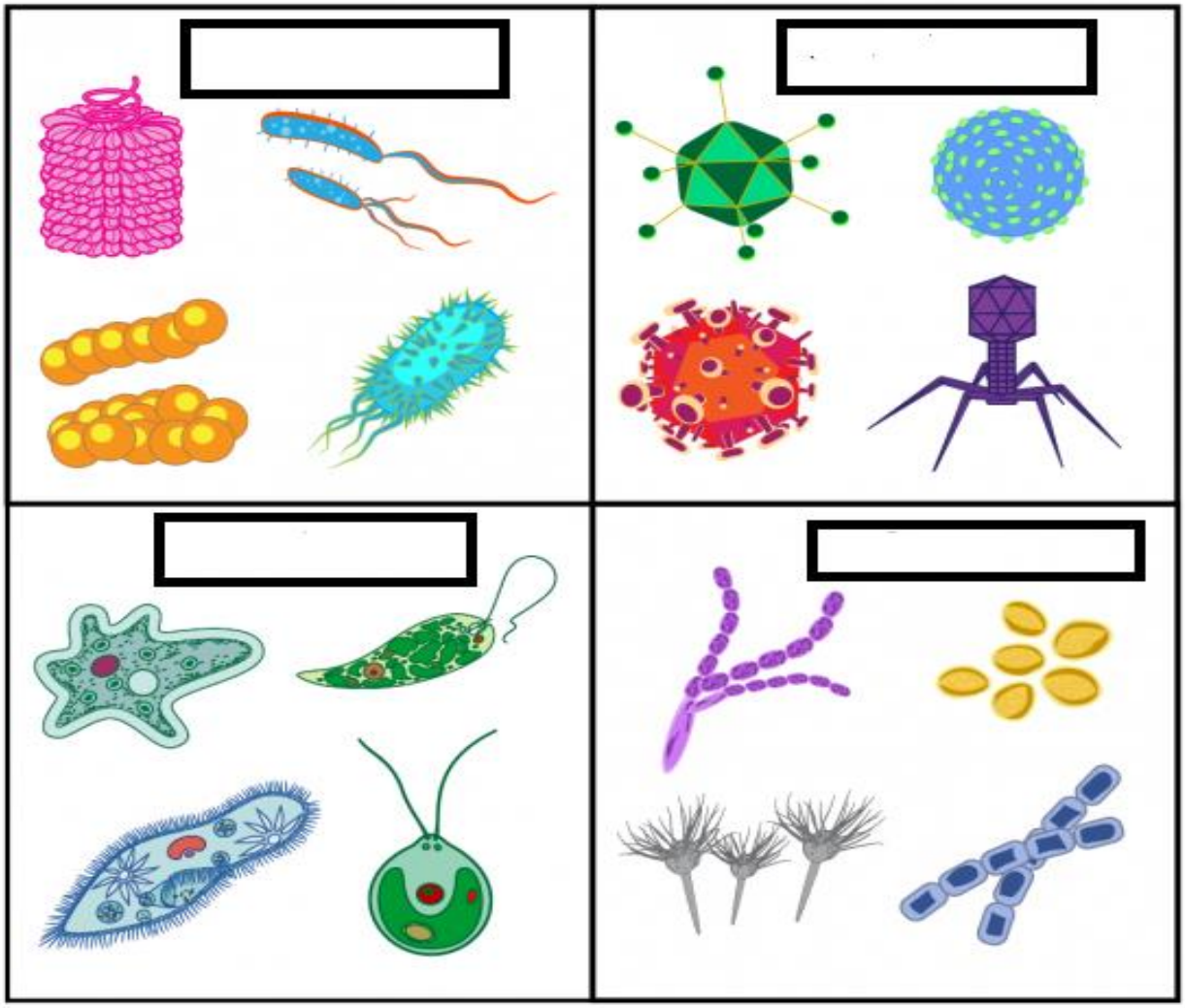
5- Use simple words from the roles your colleagues played to explain the importance of drinking water in winter.

....

Worksheet 10

Note the following pictures that show the most important causes of infection with diseases then choose the appropriate name for each cause and write it below the appropriate picture.

Causes of infection with diseases (bacteria - viruses - fungi - protozoa)



Worksheet 11

Observe the following pictures for the contagious and non-contagious diseases, cut and paste them in the appropriate place in the table:

Contagious Diseases	Non-Contagious Diseases

Worksheet 12

Observe the following pictures and identify the pathological symptoms for each person. Then, discuss with your teacher the name of the disease that causes this symptom, whether cold - flu - pneumonia. Write these symptoms in the following table:

Fever – Sneezing –Headache– Cough– Stomach pain – Ear ache– Sore throat– Chest pain

Symptoms of Cold, Flu and Pneumonia

Cold Symptoms	Flu Symptoms	Pneumonia Symptoms

Worksheet 13

Emergency Cases that Require First Aid

Circle the image of an emergency case that requires an emergency call.

Cases of unconsciousness 	The TV suddenly stopped 	Knee injury 
Disagreement between brothers 	House fire 	A colleague who doesn't want to play 
Losing our games 	Someone who feels suffocated 	Broken windows 

Someone who drank chlorine 	Electric shock 	Dislocation of one of the milk molars 

Worksheet 14

Doctor's Tools

Circle the tools the doctor uses to perform his task of examining patients:

Stethoscope

Electric lightbulb

Fire locker

First aid bag

Hammer

Syringes and drugs

Rake

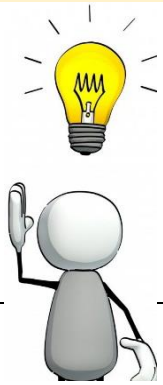
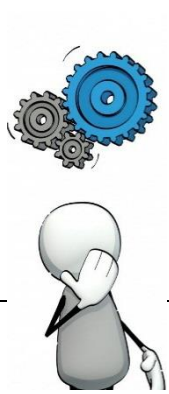
Thermometer

X-ray image

Slide (1)

Learning Table

Topic: Animals

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

Worksheet (1)

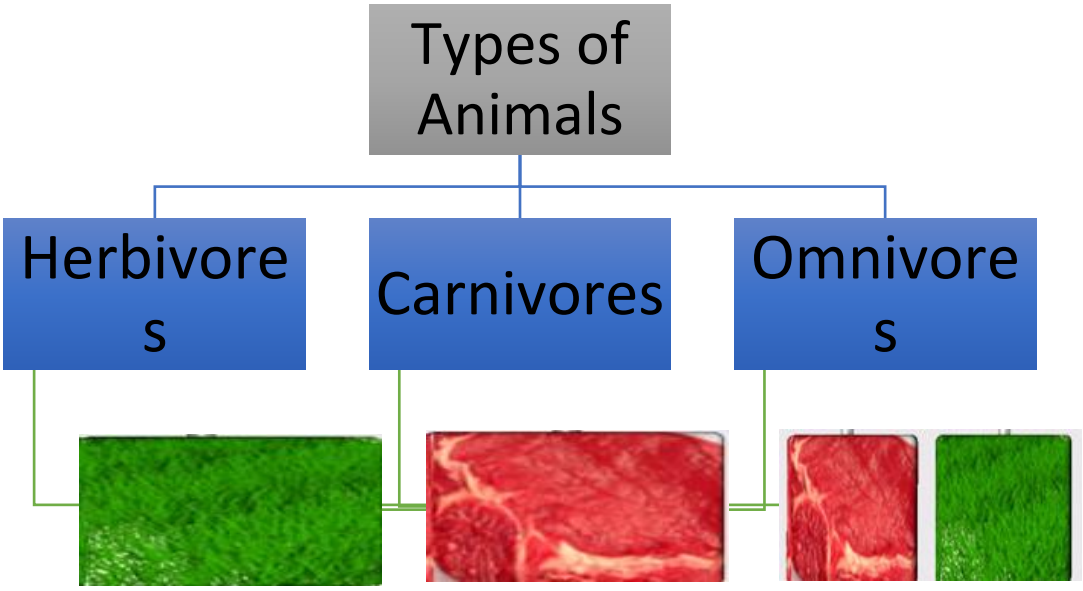
Identifying Difficulties

Indicate by true or false:

No	Phrase		
1	**Herbivores eat meat only.**		
2	**Omnivores eat meat and herbs.**		
3	**The function of molars is to shred food.**		
4	**Herbivores use incisors to cut grass and do not have fangs.**		
5	**There is no relationship between the type of animal teeth and the type of food.**		
6	**The digestive system differs among animal species according to the type of food they eat.**		
7	**The digestive system of herbivores is longer than that of carnivores.**		
8	**There is no difference between animals that live in one natural environment.**		
9	**All animals live in one habitat.**		
10	**Every animal adapts in its habitat to satisfy its needs.**		
11	**Chameleons change color in their home.**		

Slide (2)

Classification of animals according to the variety of their diet:



Worksheet (2)

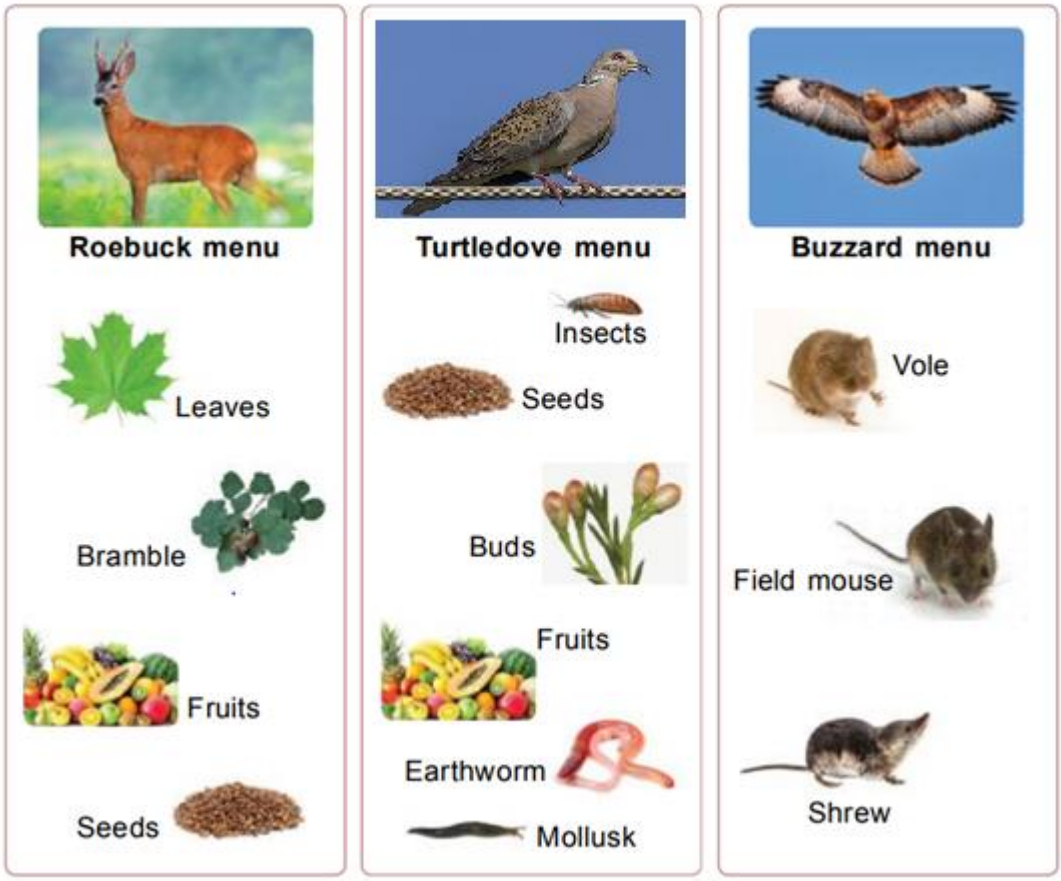
Classification of Animals According to Nutrition

1. Observe the following pictures that represent the food list of each animal, then classify each animal according to its type of food

1. Buzzard is …….. , because it feeds on……..

2. Turtledove is ……., because it feeds on……

3. The Roebuck is ……., because it feeds on…….

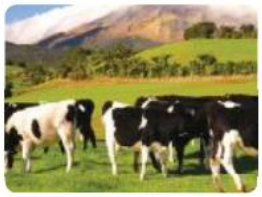


2. Match each animal to its appropriate food, and indicate the group to which each animal belongs.

.....

Grass

.....



.....

Fruits

.....

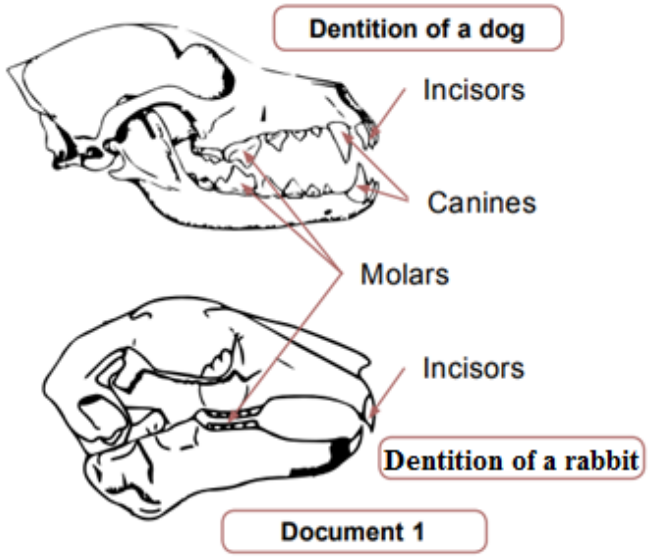
.....

Seeds

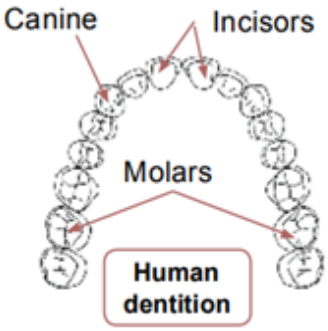
.....

Slide (3)

Animal Teeth



Document 1

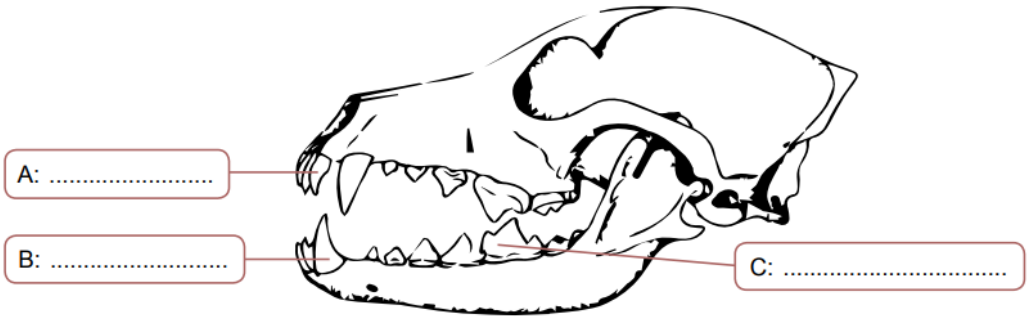


Document 2

Worksheet (3)

Types of Teeth

The following diagram represents teeth of an animal.



1. Name each type of tooth:

   A: ……

   B: ……

   C: ……..

2. Classify this animal as herbivorous or carnivorous:

……
……

3. Match each type of tooth to its function

A	•	• Cutting food
B	•	• Grinding food
C	•	• Tearing food

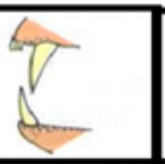
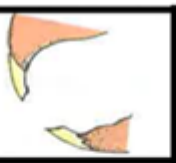
4. Give an example of this animal

   ……

Worksheet (4)

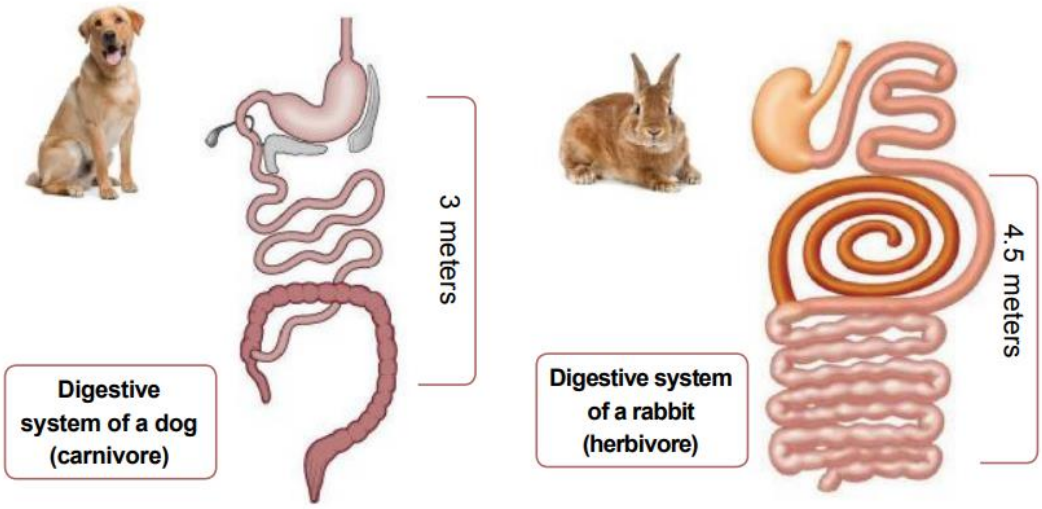
Types of Teeth

Complete the following table:

				
Type of teeth: **Function:** **Another Example:**				

Slide (4)

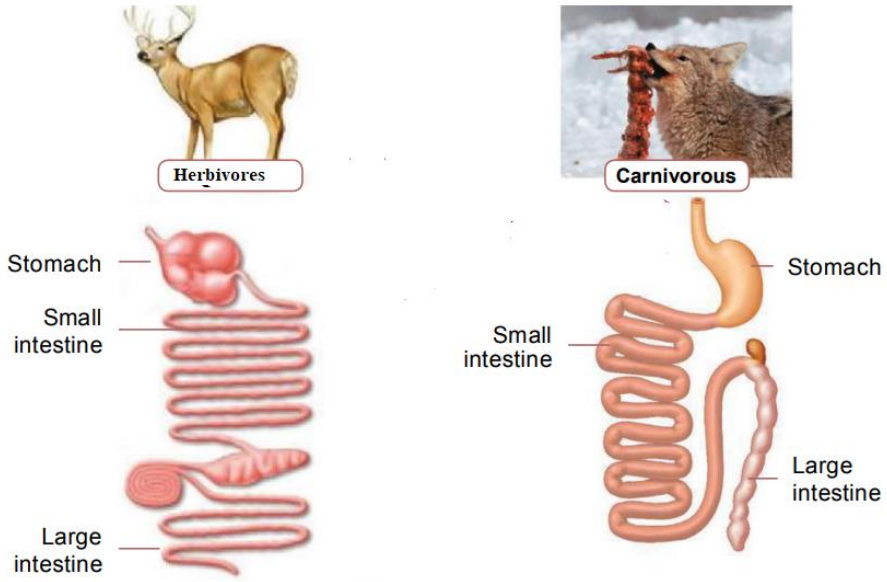
Digestive System of Animals



Worksheet (5)

The Digestive System of Animals

All animals eat from their natural environment and from its surroundings. Does the digestive system of animals differ according to their diet? Observe the following document and then answer the questions that follow:



1. What do herbivores eat? ……..

2. What do carnivores eat? ……

3. How many organs are there in the digestive system? ……

4. Compare the digestive system of herbivores and carnivores.

.....

5. Justify why the digestive system differs in length among herbivores than in carnivores.

.....

.....

.....

Worksheet (6)

Animal Habitat

Fill in the blanks with the appropriate name of habitat:

Grassland -Forest- Desert- aquatic – Arctic

Worksheet (7)

Assessment

1. Match each phrase with its appropriate habitat:

Arctic habitat ○	○ Hot dry habitat with little rain
Forest ○	○ Home characterized by the presence of snow, cold
Desert ○	○ Home with abundant trees and plants
Aquatic habitat ○	○ Rich in water

2. Match each animal with its habitat








Worksheet (8)

Animal Adaptation

Match the animal with its adaptation

A long hose in which it searches for ants and insects under the surface of the earth

Big eyes to see at night. Long fingers to search for food

Change its color to hide from enemies

Long neck to eat leaves high in the mountains

Slide (5)

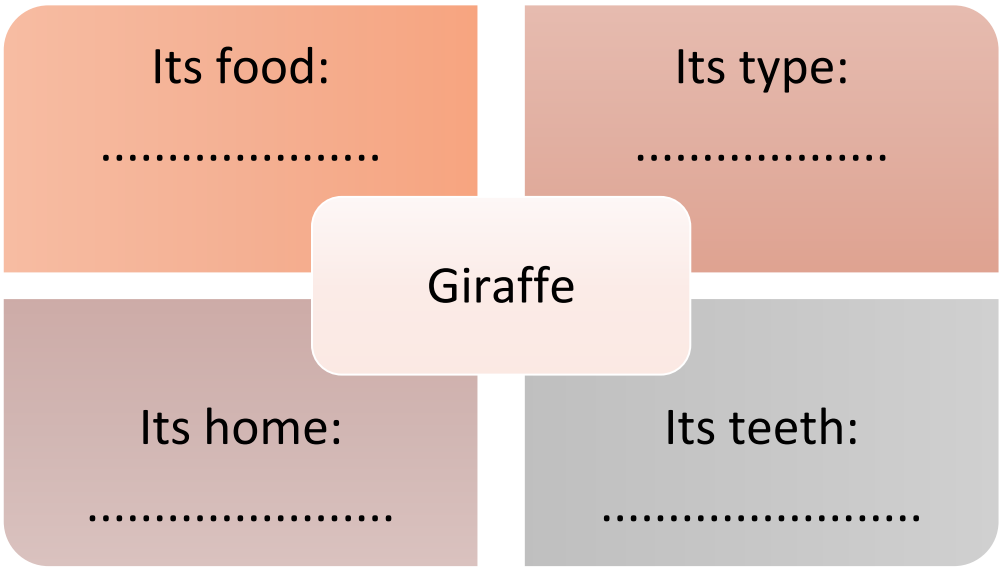

Adaptation Purposes
1) Protect from enemies
Camouflage
Deception
Mimicry
2) Weather Protection
Body covers
Migration
Hibernation
3) Getting food
Long neck
Long-Sticky Tongue

Worksheet (9)

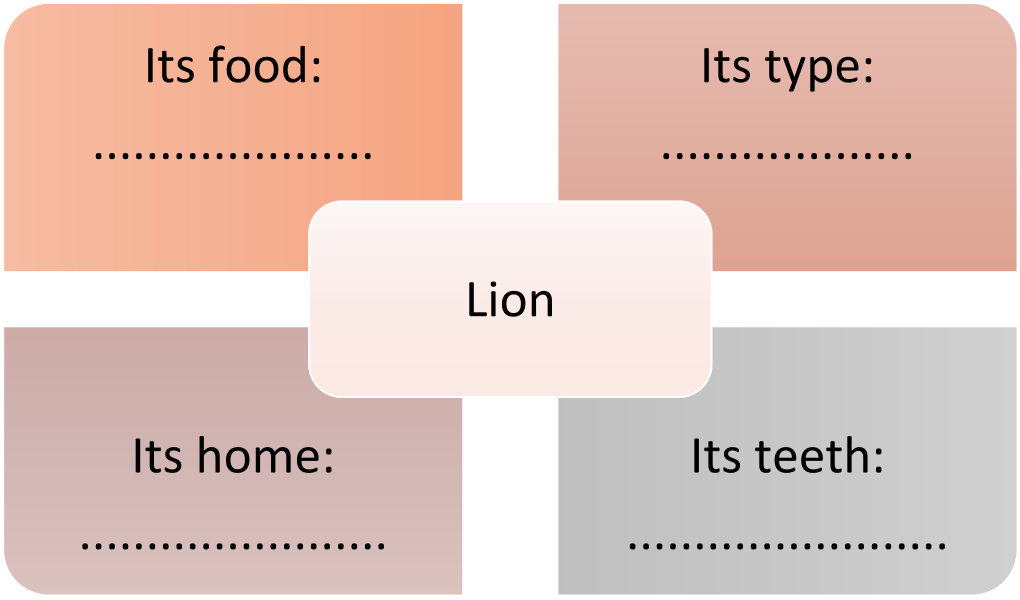
Final Assessment

Complete the charts according to their diet, and compare the digestive systems of the two animals

1. The giraffe



2. The lion



Worksheet 1

Learning Table

Topic: Plants

K W L

What do you know about plants' needs?	What do you want to know about plants' needs?	What did you learn about plants' needs?
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

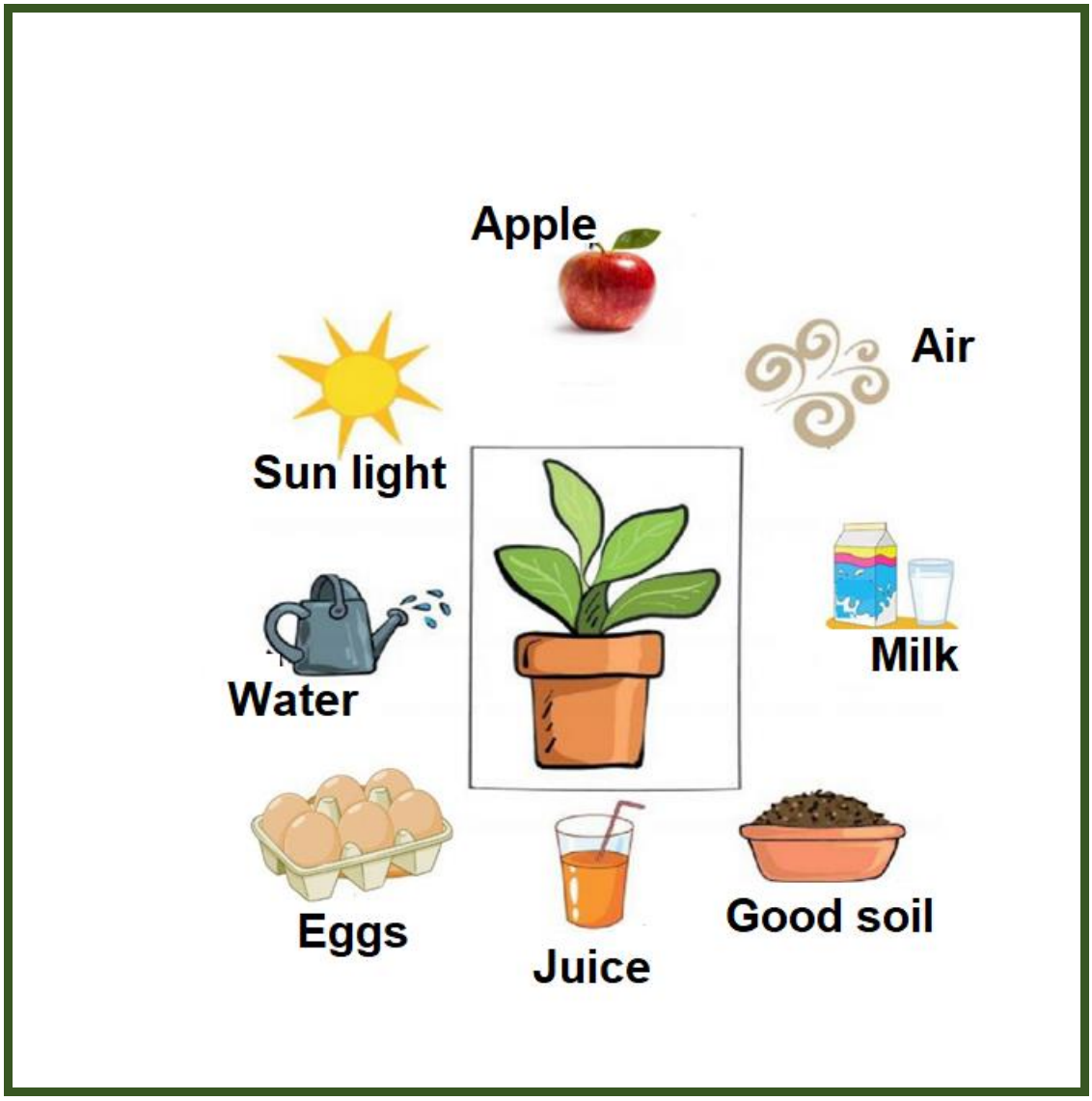
Worksheet 2

Indicate by true or false:

No.	statement	True	False
1	Plants get their food from the environment instead of making their own food.		
2	Plants get water and minerals from the soil through the root.		
3	Plants breathe carbon dioxide during the day.		
4	Plants breathe day and night.		
5	Plants perform photosynthesis day and night.		
6	Animals perform photosynthesis to make their own food.		
7	The oxygen we breathe comes from plants.		
8	The energy source for plants is carbon dioxide.		

Worksheet 3:

Circle the things needed by the plant in the following pictures:



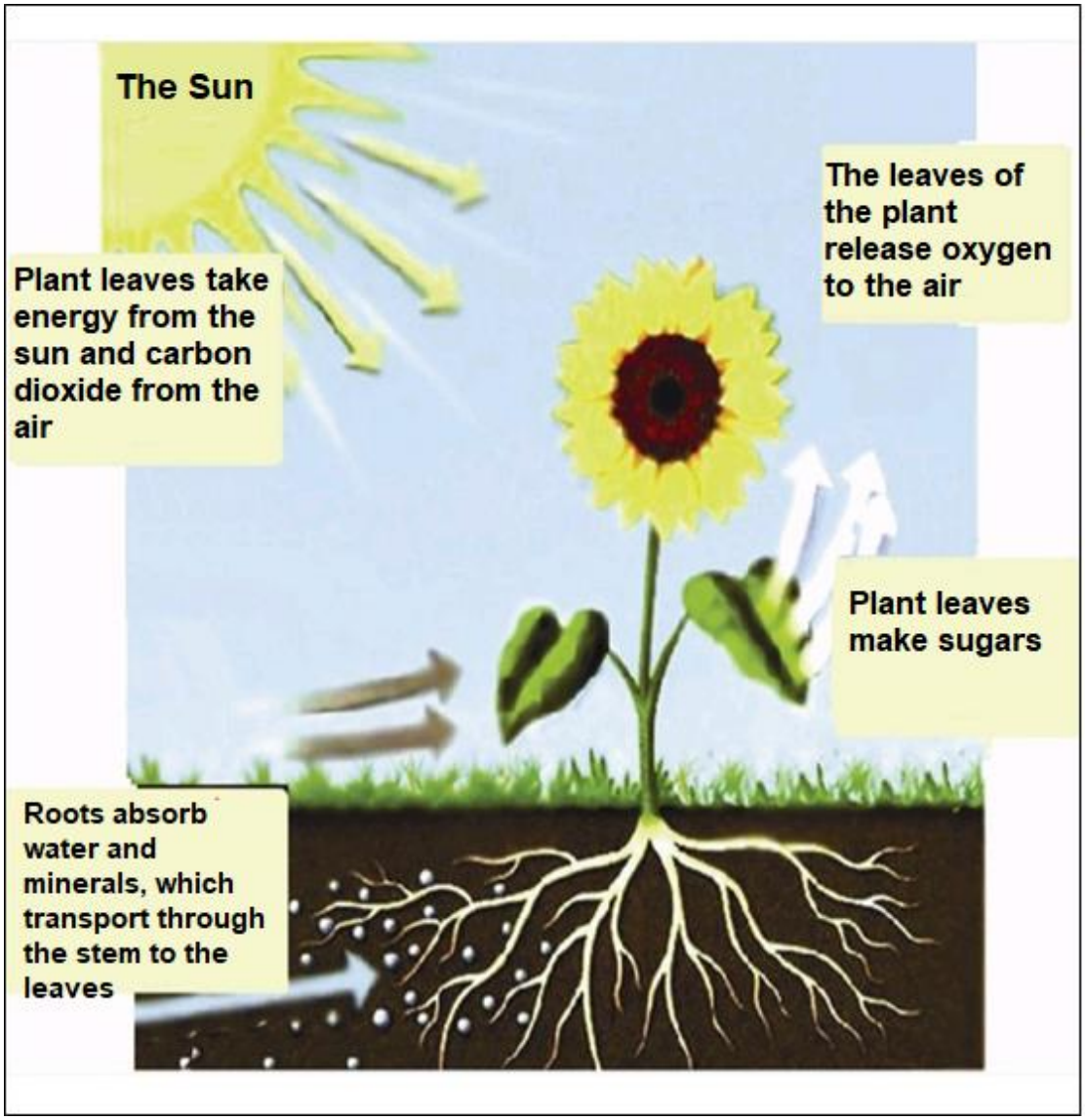
Worksheet 4

Fill in the table with the appropriate words for both respiration and photosynthesis in plants:

Oxygen - carbon dioxide - water - sunlight

Plant needs for respiration	Plant needs for photosynthesis

Slide (1)


The Sun
The leaves of the plant release oxygen to the air
Plant leaves take energy from the sun and carbon dioxide from the air
Plant leaves make sugars
Roots absorb water and minerals, which transport through the stem to the leaves

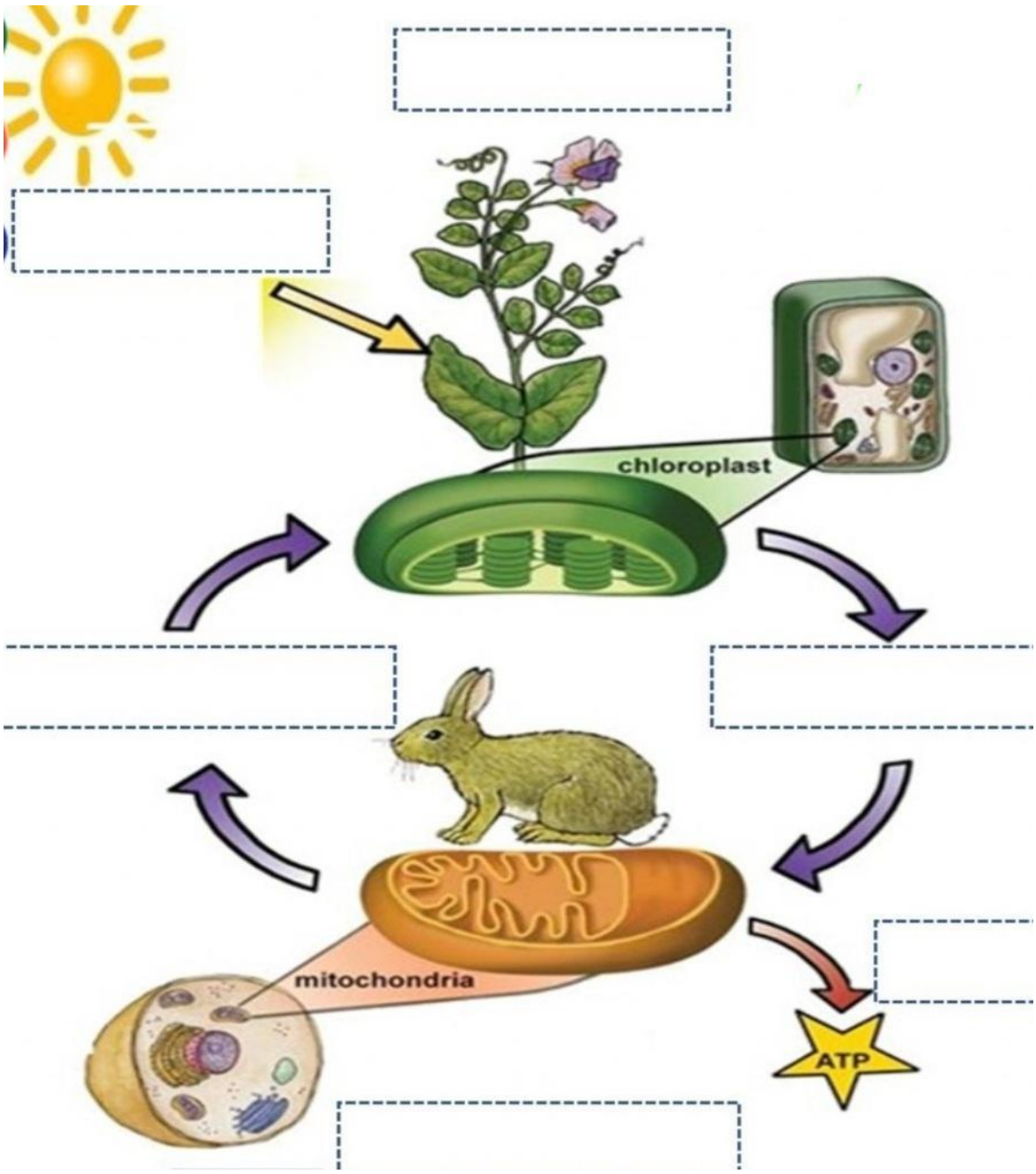
Worksheet 5

Complete the table to compare the photosynthesis and respiration

	Photosynthesis	Respiration
When it happens		
Need for light		
Gas consumed by the plant		
Gas released by the plant		

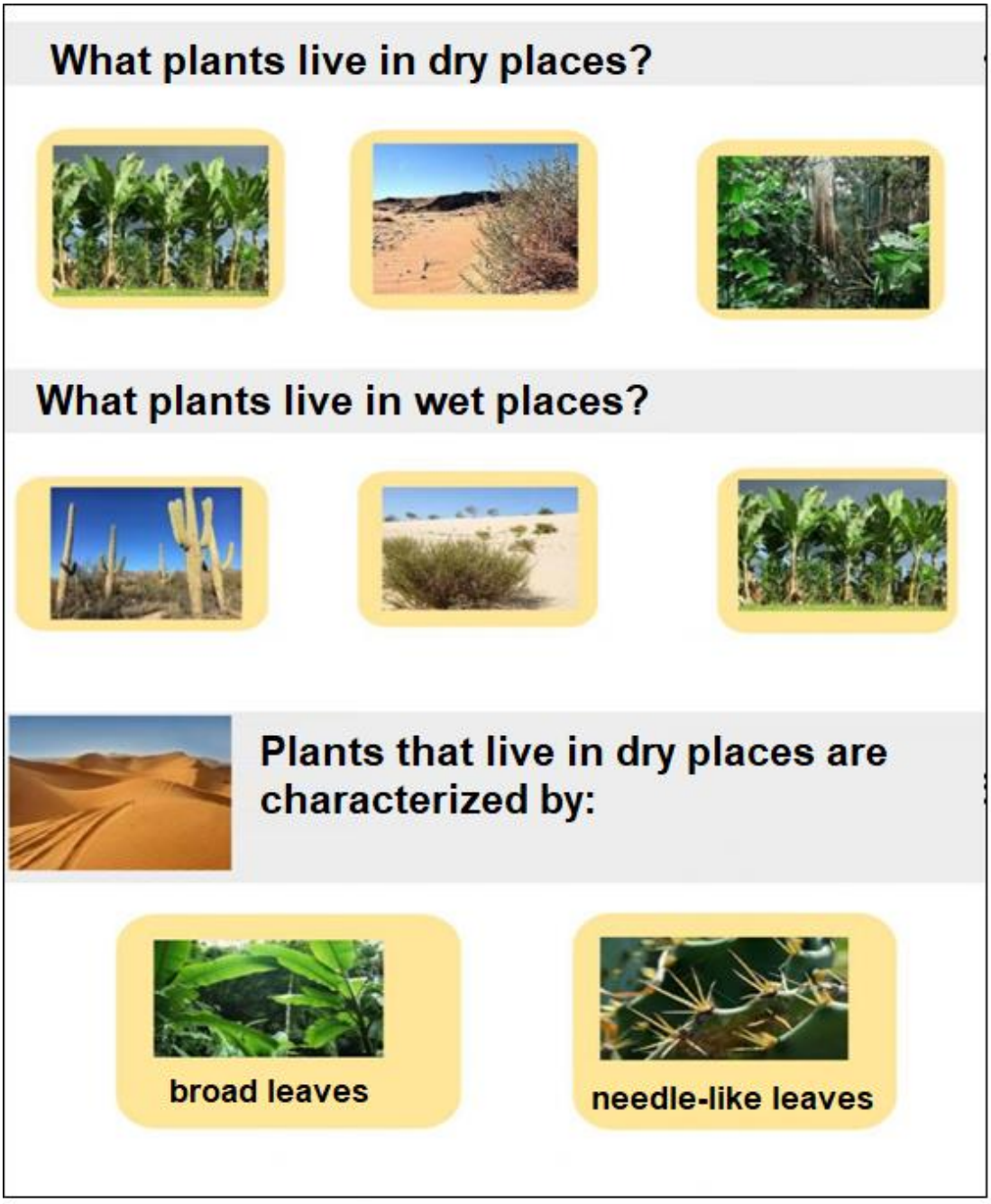
Worksheet 6

Fill in the blanks with the following appropriate words: (sugar and oxygen-carbon dioxide and water - solar energy - photosynthesis – respiration - energy)



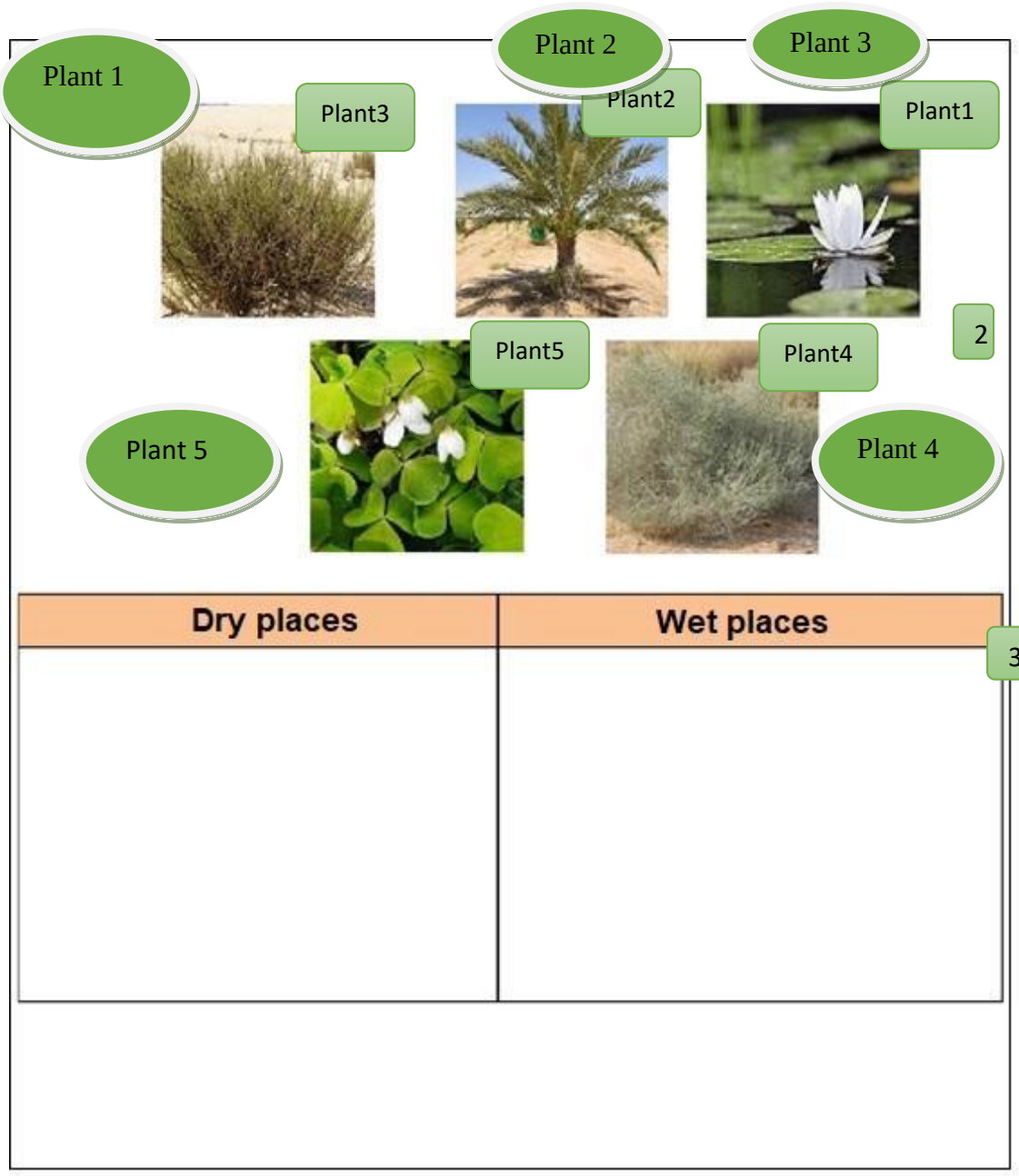
Worksheet 7

Circle the appropriate picture to answer each question:



Worksheet8:

1 **Put each plant in the habitat it lives in:**

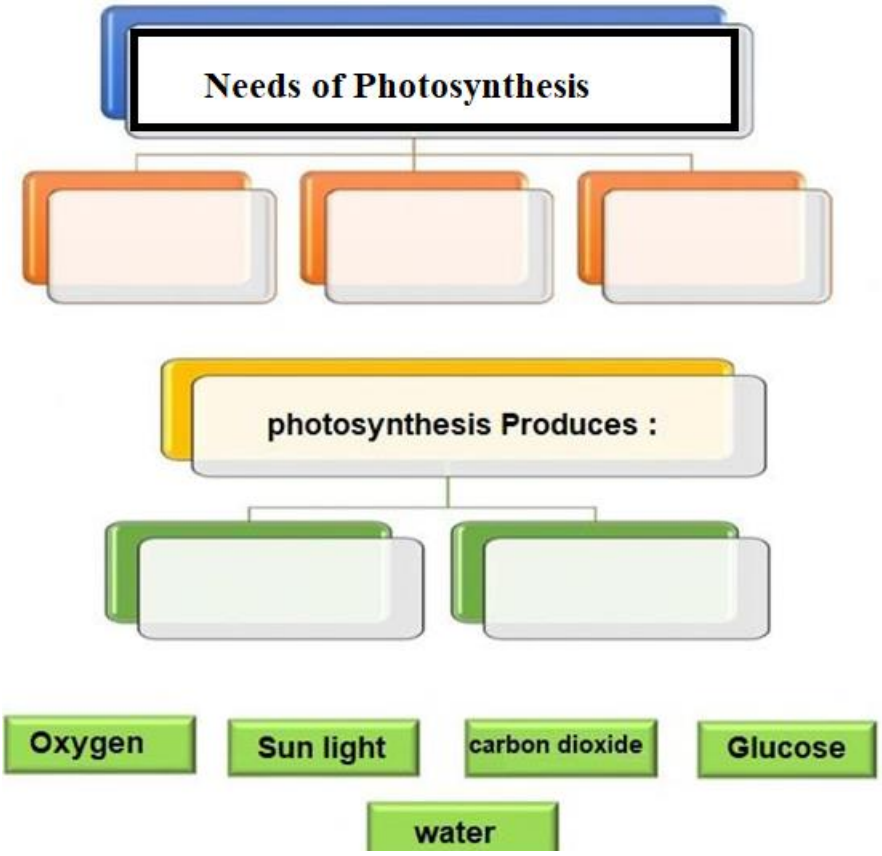


Dry places	Wet places

3

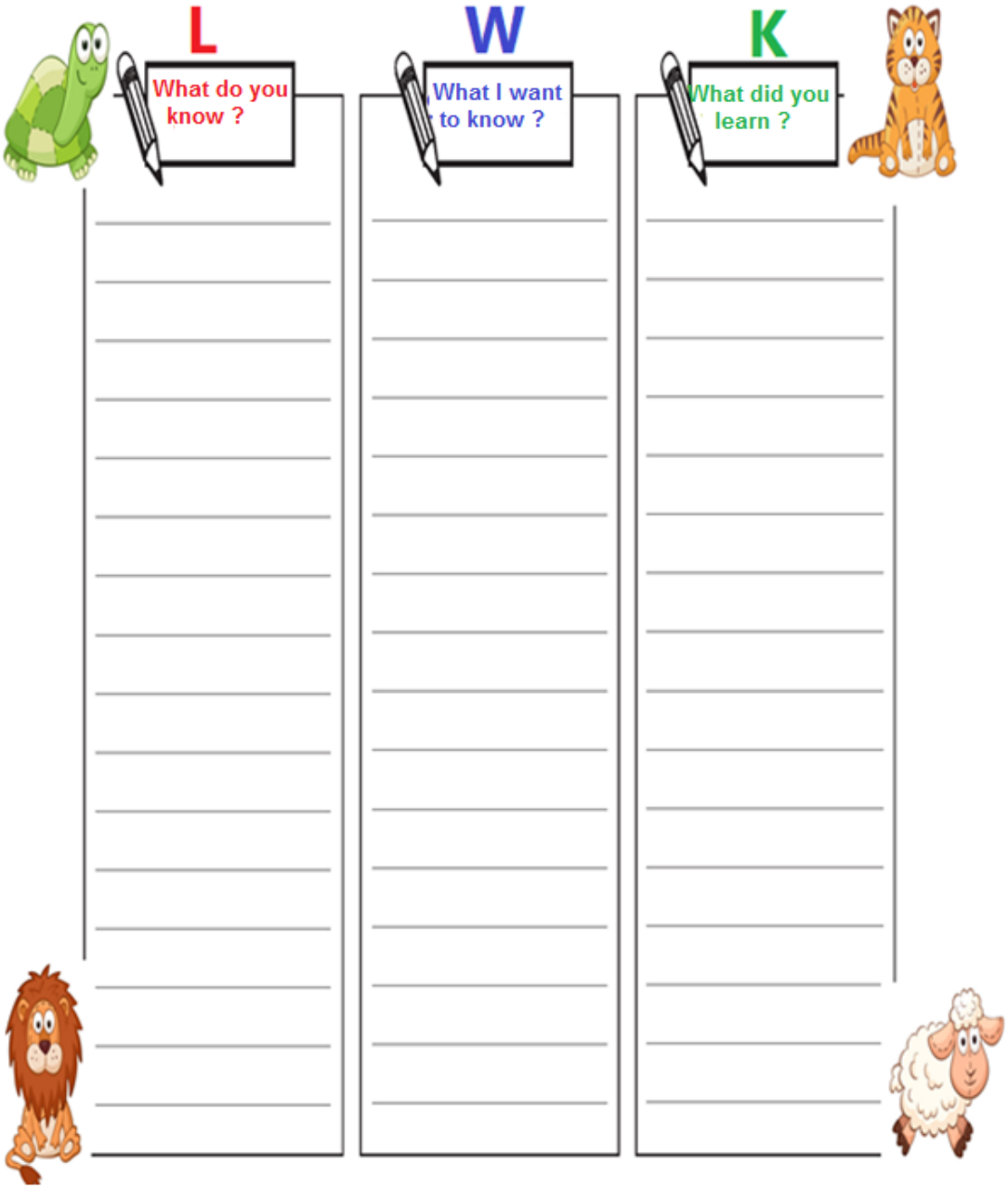
Worksheet 9

Complete the concept map with the appropriate words below:



Slide 1

Table of Learning



Worksheet 2

Circle the correct word that is suitable for the picture as follows:

	Predator	Prey
	**Bear** **Fish**	**Bear** **Fish**
	**Tiger** **Gazelle**	**Tiger** **Gazelle**
	**Whale** **Fish**	**Whale** **Fish**
	**Cat** **Vole**	**cat** **vole**

Worksheet 3

Indicate by true or false:

Number	Phrase	True	False
1	A snake is an animal predator.		
2	All predators are oversized.		
3	Predators are found only on land.		
4	There are no plant predators.		
5	All living things benefit from each other.		
6	Microorganisms cause harm.		
7	There are some beneficial microorganisms.		


Worksheet (4

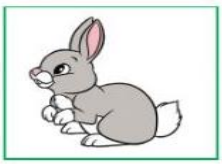
Match between predator and prey in the following:







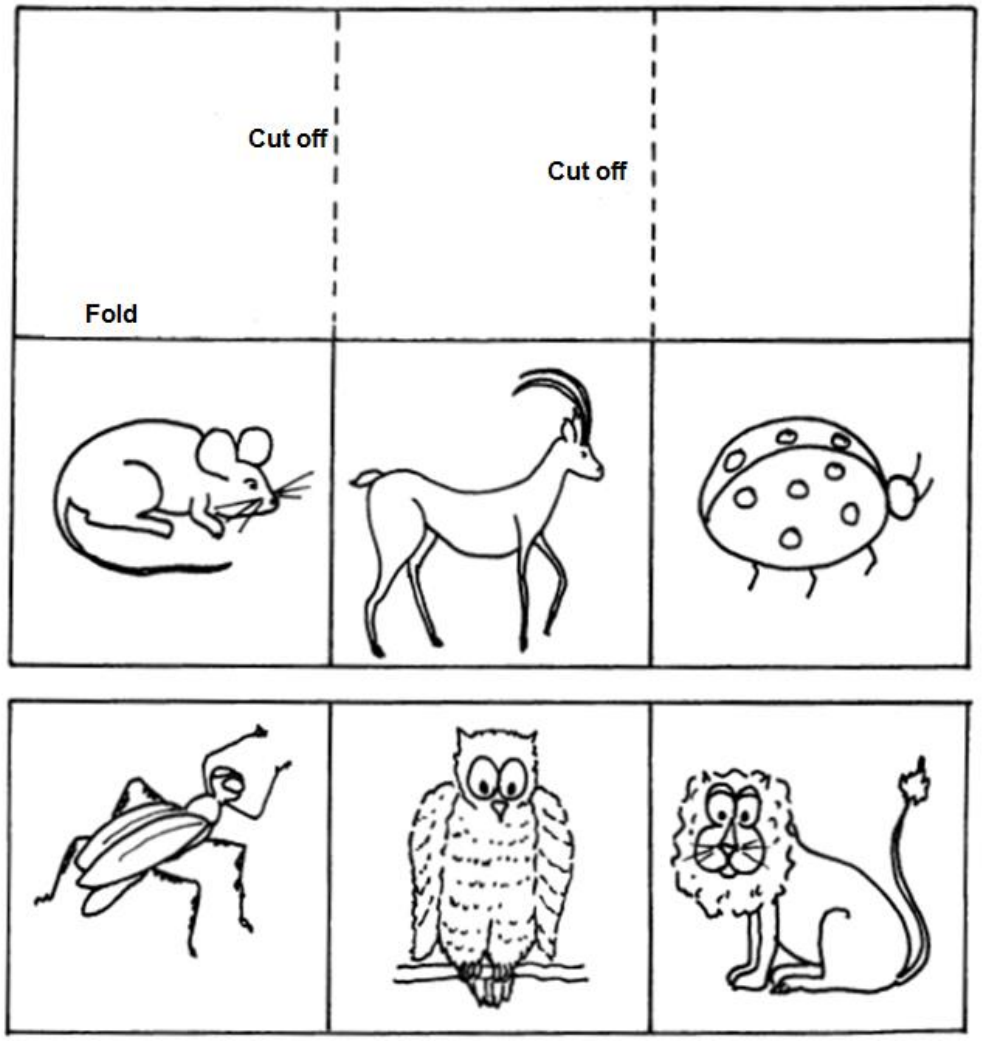




Worksheet 5

Color the following animal pictures, then cut the pictures below that represent animal predator and stick it opposite to the prey it feeds on. Then fold it to represent a folded site as shown in the figure.



Worksheet 6

Shadow the word letters that fill the blank in each sentence below, and then discover the secret word shaded.

T	R	E	E							
C	O	M	M	E	N	S	A	L	I	S	M
M	U	T	U	A	L	I	S	M		
S	L	I	C	E						
P	A	R	A	S	I	T	I	S	M	E

1. **The relationship between the sparrow and……. is a commensalism relationship.**
2. **The relationship between gazelle and sparrow is a …….. relationship.**
3. **The relationship between crocodile and sparrow is a ……..relationship.**
4. **The relationship between …….. and human is a parasitism relationship.**
5. **The relationship between mosquito and human is a …… relationship**

Worksheet 7

Circle the images of things that can be broken down by living organisms into simpler materials.

Banana peels

Trees branches

Plant leaves

Books

Plastic shoes

Metal can

Vegetables

Grasses

Fish bones

Paint

Piece of an apple

Oil

Worksheet 8

Put the symbol (✓) or (×) in the space provided under the image that represents the decomposers:

( )

( )

( )

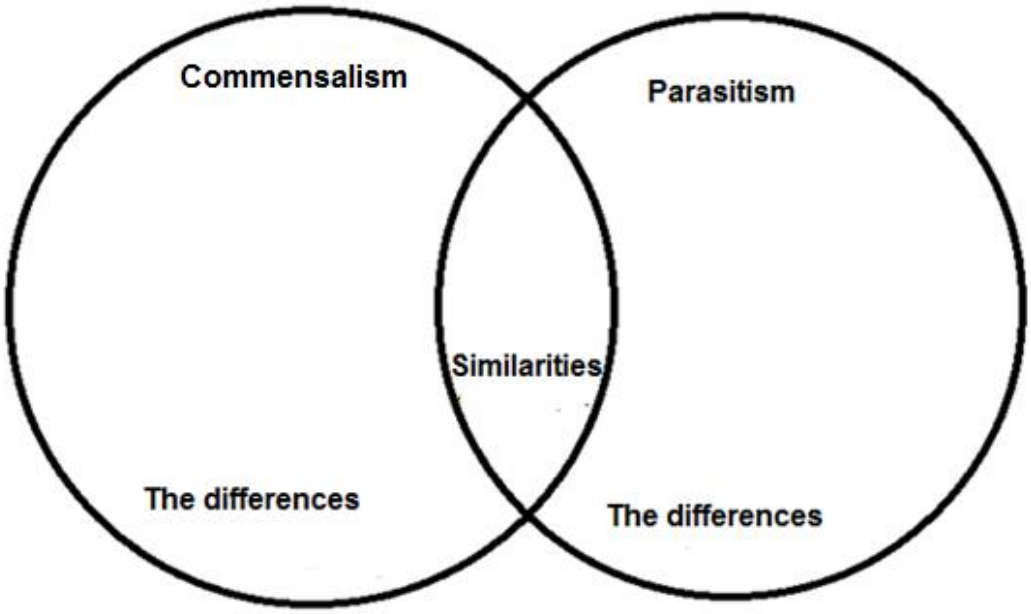
( )

( )

( )

Worksheet 9

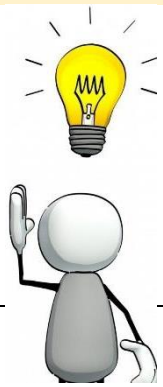
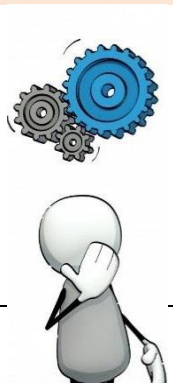
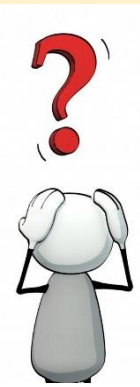
Compare between the relationships of parasitism and commensalism using the following venn-diagram:



Slide 1

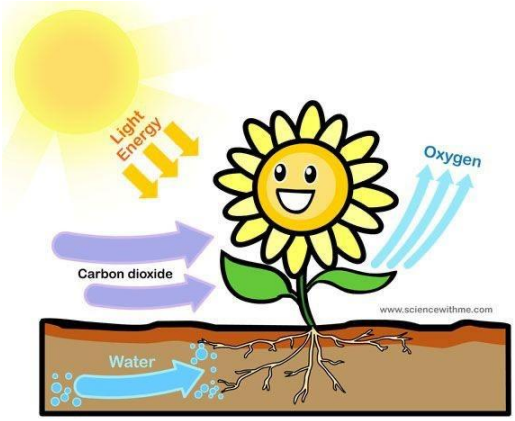
Learning Table:

Topic :
Energy

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

Slide 2

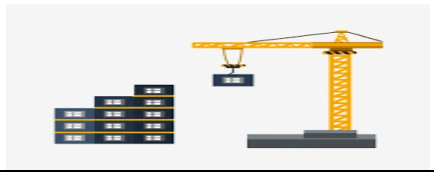
The Importance of Energy



Worksheet 1

The Importance of Energy to Human

Match the importance of energy to human as represented:

Picture	Importance
	Lightening
	Construction works
	Transportation
	Heating in winter
	Making food
	Growth

Worksheet 2

Non-Renewable Energy Sources

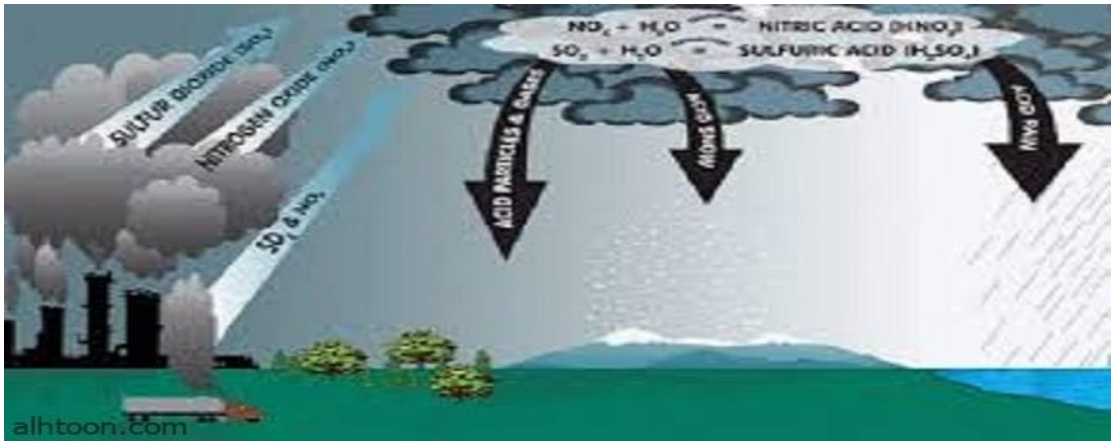
Match the image of the non-renewable energy source with its name.

	Electricity
	Natural gas
	Petrol
	Coal

Fossil Fuels have bad effects on the Environment.

Air Pollution:

Acid Rain:



Global Warming:

Polar Snow melts and sea Level Rising:

Worksheet 3

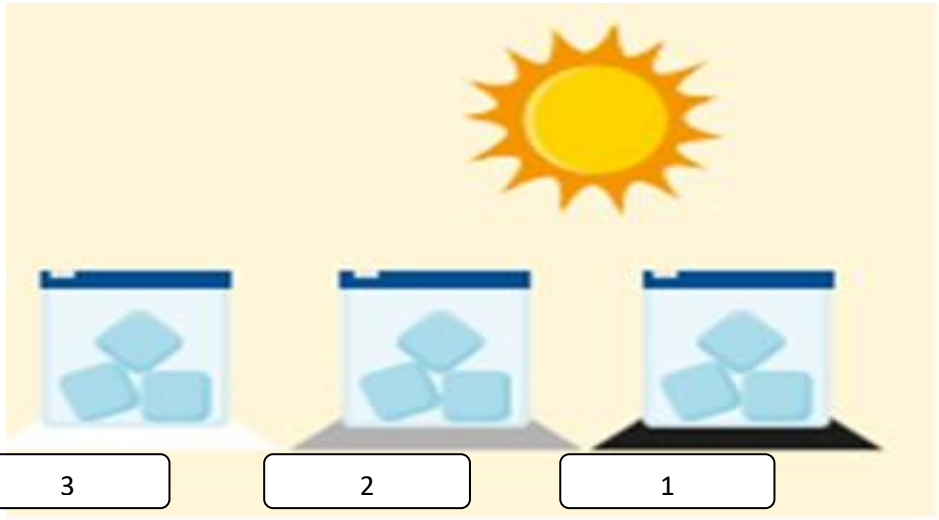
Negative effects of fossil fuel use.

Match the type of fossil fuel result with the sentence that represents the negative effect on the environment.

Negative effect	Type
Acid rain harms the plant life and food chains.	Air pollution
Rising oceans affect both ecosystems and human settlements in low-lying areas.	Global warming
Depletion of ozone, thus increasing the rate of skin cancer.	Acid rain
The Earth's surface temperature is increasing dramatically, and thus disturbing the ecosystems.	Sea water level rising

Worksheet 4

Sunlight as a Source of Energy



Describe state 1: .....

Describe state 2: .....

Describe state 3: .....

At the end of the experiment:

Which ice cubes melted first? and why?

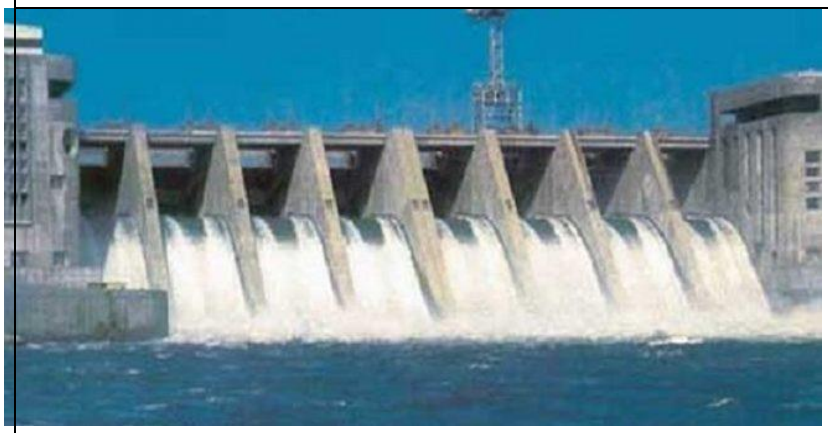
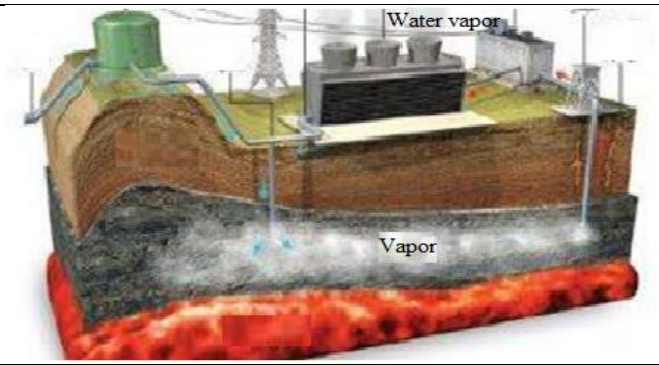
.....

.....

.....

The Main Renewable Energy Sources

Match the name of the power source to its picture:

Power source	Name
	Solar energy
	Wind Energy
	Geothermal energy

	**Biomass energy**
	**Hydroelectricity**

Slide 5

Renewable and Non-Renewable Energy Sources

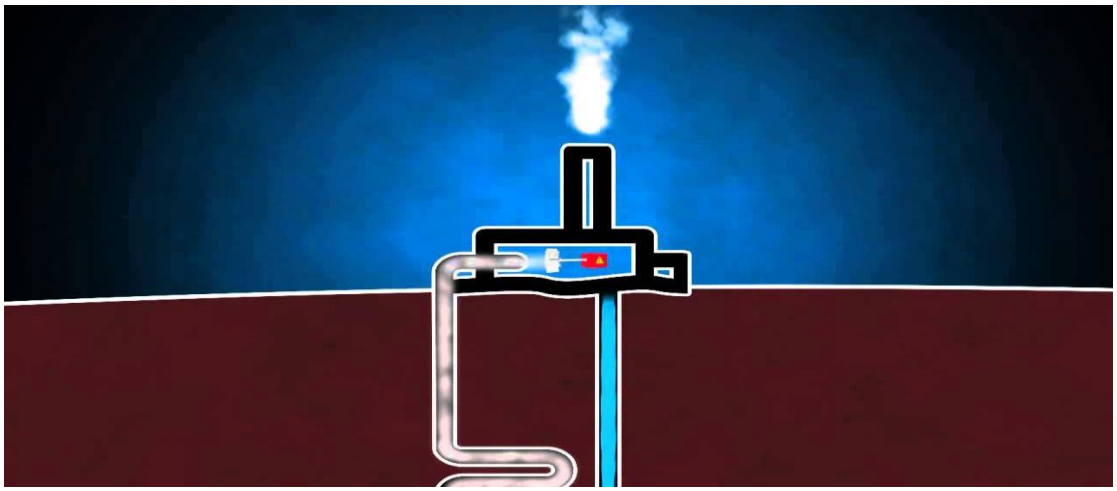
Classify the following energy sources into renewable and non-renewable sources:

Coal energy

Hydroelectricity

Fuel energy

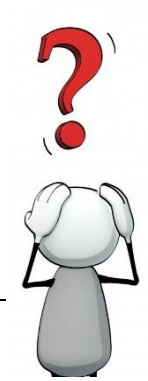
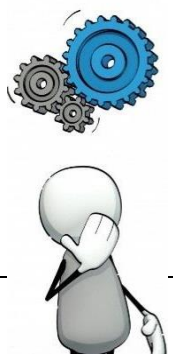
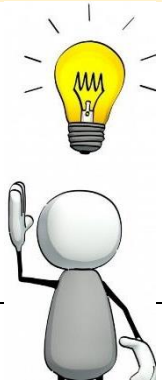
Earth's heat energy



Natural gas energy

Learning Table

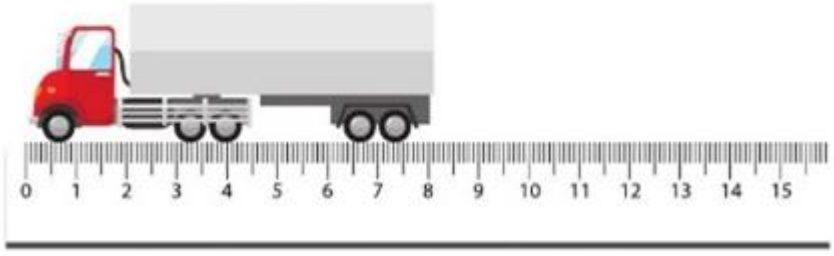
Topic: Length and Volume

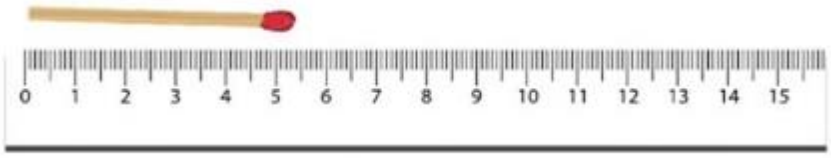
K What do you know about measuring Length and Volume?	W What do you want to know about measuring Length and Volume?	L What did you learn about measuring Length and Volume?
		

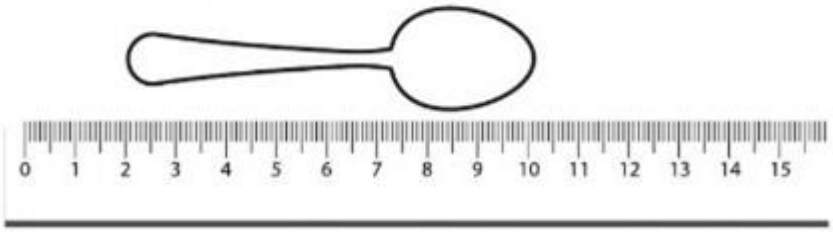
Worksheet 1

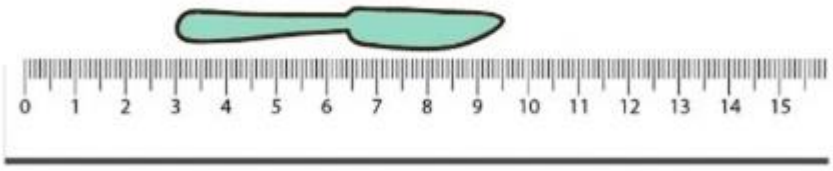
Test Yourself

Write the length of each object in the square beside:









Diagnosis Assessment

Indicate by true or false:

No	Phrase	True	False
1	**The measurement of a substance depends on the specific means of measurement.**		
2	**Volume is an expression for the body shape.**		
3	**Volume is the mass of the body.**		
4	**Volume is measured by the balance.**		
5	**Gram is the unit of volume.**		
6	**Atmospheric air has no volume, it does not occupy space.**		
7	**The volume of all objects is measured using the graduated cylinder and water.**		
8	**The volume of the box is calculated by adding its dimensions.**		

Worksheet 2

Measurement Units of Length

What are the measurement units of length?

Meter (m)
Equal to the height of the chair approximately

1 m =100cm

Centimeter (cm)
Equal to the width of the button approximately

1 cm = $\frac{1}{100}$ m

Convert:

12 m = …….cm

120 cm = …….m

15 m = ……..cm

7 m + 200 cm =…… m

150 cm + 3.5 m = …….cm

Worksheet 3

Length Measurement

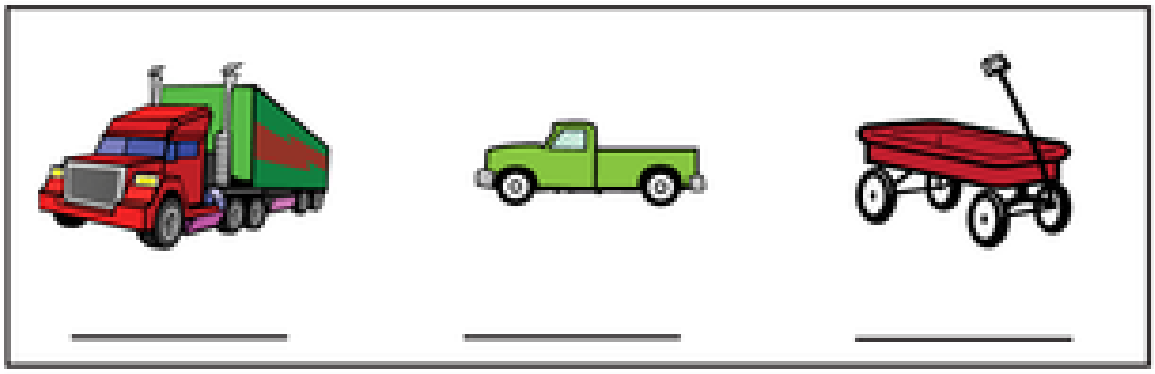
Indicate the appropriate unit and tool to measure the lengths of objects in the following table and then use the graduated ruler to calculate their lengths.

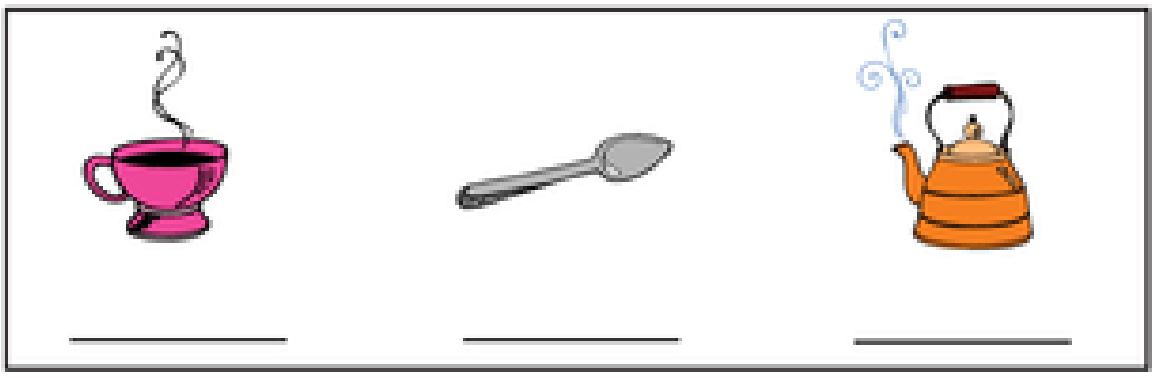
Object	Appropriate measuring tool	Appropriate unit of measure	Measured length
Scissors	.....	.....	.....
Pin	.....	.....	.....
Class width	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Worksheet 4

Arranging Volume

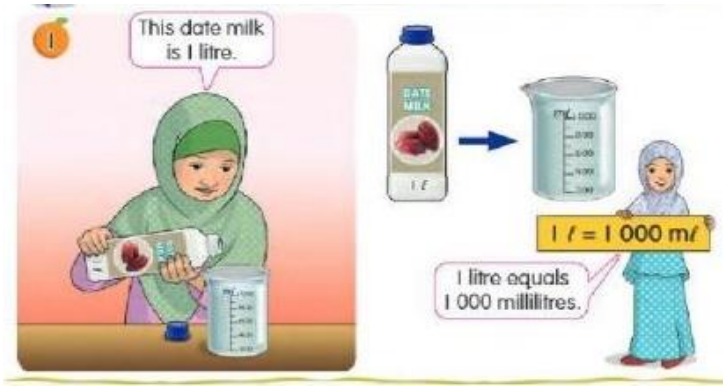
Number the following objects from 1 to 3 in increasing order of their volume:





Worksheet 5

Conversion of Units

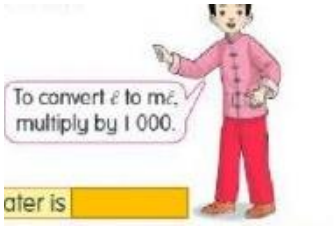


1 liter = 1000 milliliters

1 milliliter = $\frac{1}{1000}$ liter

1 milliliter = 1 cm^3

Solved example: A container has a volume of 2 liters, find its volume in milliliters.



2 liters =2 □ 1000 milliliters

2 liters = 2000 milliliters

Complete the following:

5 L ..... = ml

1500 cm^3 ..... = ml

2000 ml + 3000 cm^3 ..... = L

3 L + 2000 cm^3=..... L

Worksheet 6

Units of Volume

Write the appropriate unit of volume (liter - cm^3) for each of the following:







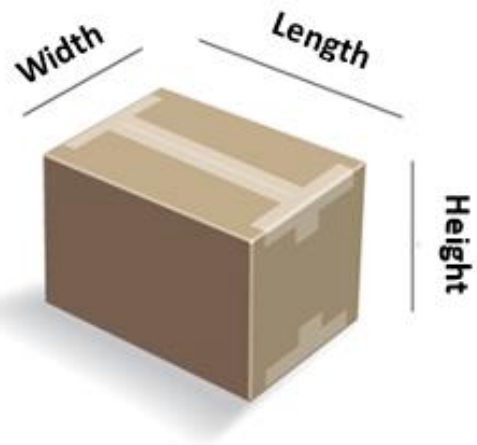



Worksheet 7

Measurement of the Volume of Regular Shaped Solids

Research question: Which of the following biscuit boxes is the largest?

Tools: Biscuit boxes - graduated ruler or Tape Measure.



Procedure:

- Collect a number of different biscuit boxes.
- Use the graduated ruler or tape Measure to measure the length, width, and height of each box.
- Use the following equation to calculate the volume of the box:

Volume of the box = Length X Width X Height

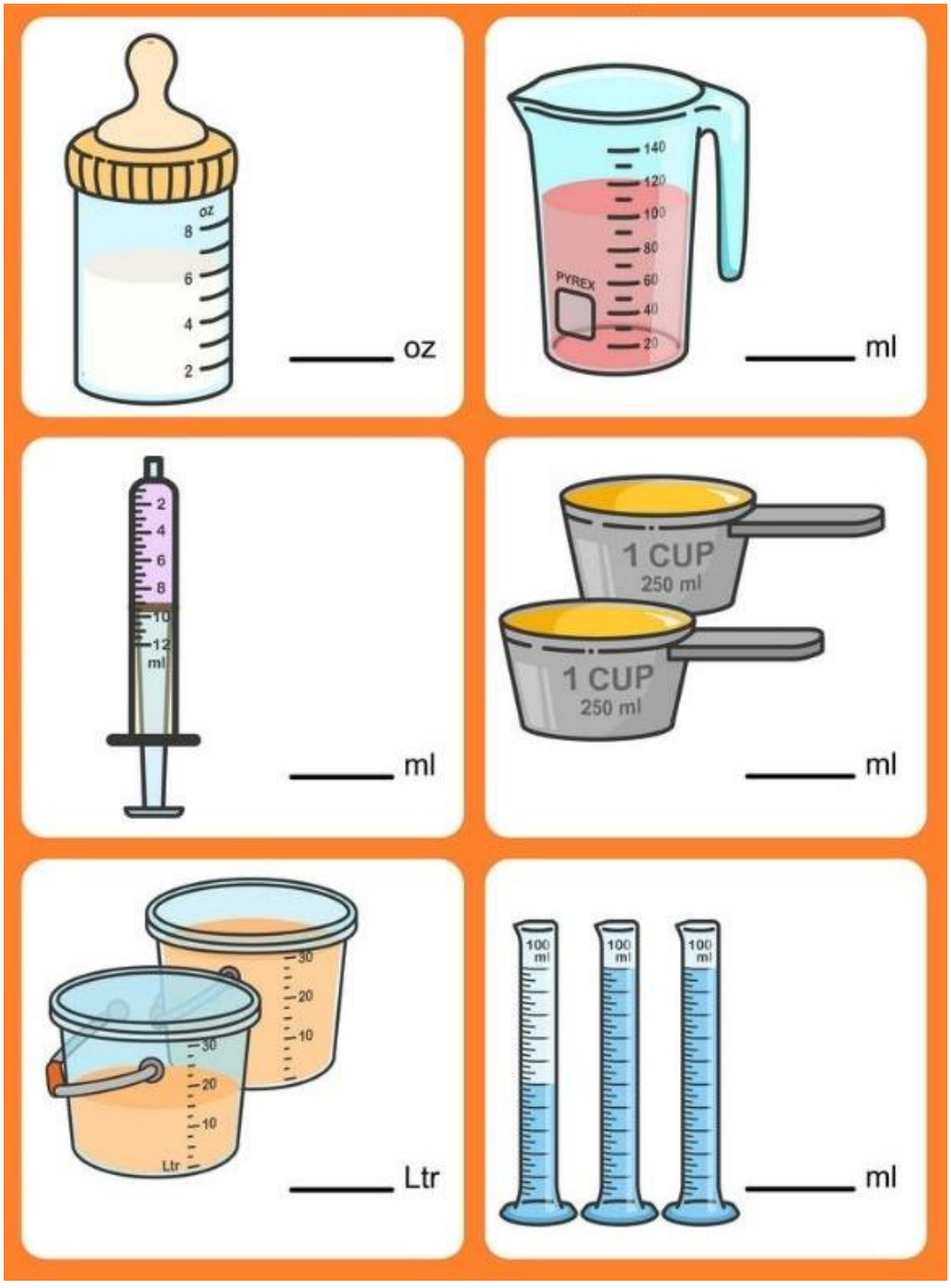
Volume of the box =..... X..... X ..... = ... cm^3

- Indicate which of the boxes is the largest.

Worksheet 8

Measurement of Volume of Liquids

Find the volume of each liquid:



Worksheet 9

Measurement of the Volume of Irregular Shaped Solids

To measure the volume of an irregular shaped solid, follow the steps:

1- **Pour a quantity of water in the graduated beaker.**

2- **Read the volume of water in the beaker before placing the irregular shaped solid.**

Volume of water in the beaker =…….milliliters

3- **Attach the irregular shaped solid with a thin string and carefully place it inside the graduated beaker so that it does not break.**

4- **Observe the reading of the water level after placing the irregular shaped solid.**

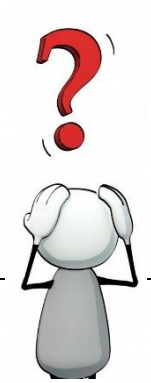
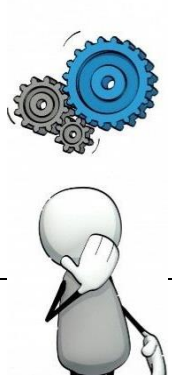
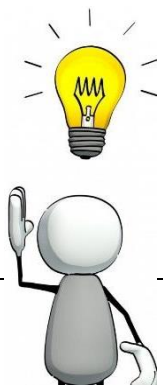
The volume of water in the beaker after immersing the body completely in water is = ... milliliters.

5- **Calculate the difference between the two readings, which represents the volume of the irregular shaped solid.**

Volume of body = difference in water volume =..... - .....= ... .ml

Slide 1: **K-W-L Table**

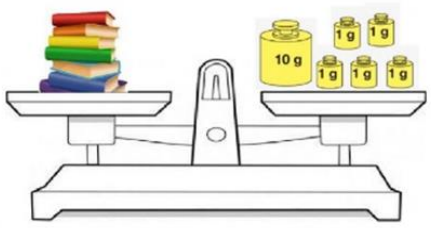
Topic:
Mass and Weight

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

Worksheet 1

Mass and Weight Measurement

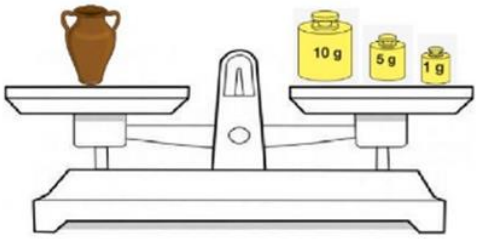
Write the measure of weight and mass for each body in the following:



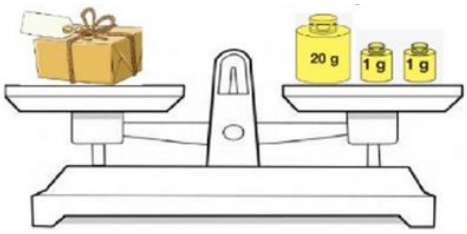
Mass: ……../ Weight: ……

Mass: ……../ Weight: ……

Mass: ……../ Weight: ……



Mass: ……../ Weight: ……



Mass: ……../ Weight: ……

Mass: ……../ Weight: ……

Worksheet 2

Unit of Mass

Identify which of these objects are measured by gram and which by kilogram:

Pencil – Ring – brick – child – boat – toys – chocolate – paper pin – soap ….etc.

Kilogram	Gram

Types of Balance

Two-pans balance

To measure mass of vegetables

Digital sensitive balance

To measure mass of jewelry

One pans balance

To measure mass of birds

One pans digital balance to measure chemical substance

Worksheet 3

Unit of Mass

Observe the difference between gram and kilogram

Gram

Kilogram

Write a list of objects measured in gram and in kilogram:

Objects measured in gram	Objects measured in kilogram
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....
.....	.....

Worksheet 4

Mass Measurement

Write the measure of mass for each object:

Mass: ……..

Mass: .....

Mass: .....

Mass: .....

Mass: .....

Mass: .....

Worksheet 5

Mass Measurement

Measure the mass of each body using these three balances (two-pan balance – one-pan balance – one-pan digital balance), then write the result in the following table:

Body	One -pan balance	Two-pan balance	One –pan digital balance
			
Brick	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Worksheet 6

Mass Estimation

1. **Collect groups of things found in class or in laboratories**

Designer notes: put picture of groups of different things, examples: pencils – booklets – bags … etc.

2. **Predict the mass of these things using your hands to know the mass.**
3. **Use the balance to indicate the mass of these objects.**
4. **Compare between the masses of these objects.**
5. **Write your notes in the table below:**

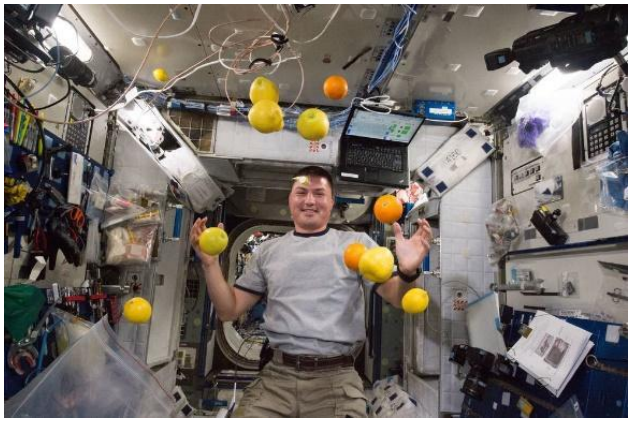
Object	Mass		Difference
	Hand prediction	Balance measurement	
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....
.....	.....	.....	.....

Worksheet 7

Mass

Observe the following pictures, and then answer the questions:

The children are on the earth



The astronaut is on the International Space Station

1. **Does the astronaut fall down when jumping from a high place? (Yes – No)**
2. **If the astronaut picks up an object and then lets it go, does the object fall down? (Yes – No)**
3. **Does the person fall down when he jumps up on the ground? (Yes – No)**
4. **If you hold your pen and then leave it on the ground, will the pen fall down? (Yes – No)**
5. **What causes objects to fall toward the earth?**

   ……

Worksheet 8

Relation between Mass and Weight

1. **Determine the mass of the first body using the ordinary scale.**
2. **Determine the weight of the first body using a spring balance.**
3. **Repeat the previous two steps with the rest of the objects.**
4. **Write down the results in the following table:**

Measured object	**Mass measured by ordinary balance** 	**Weight measured by a spring balance** 
Watch 		
Book 		
Pencil case 		
Ball 		
Bag 		

What do you conclude?

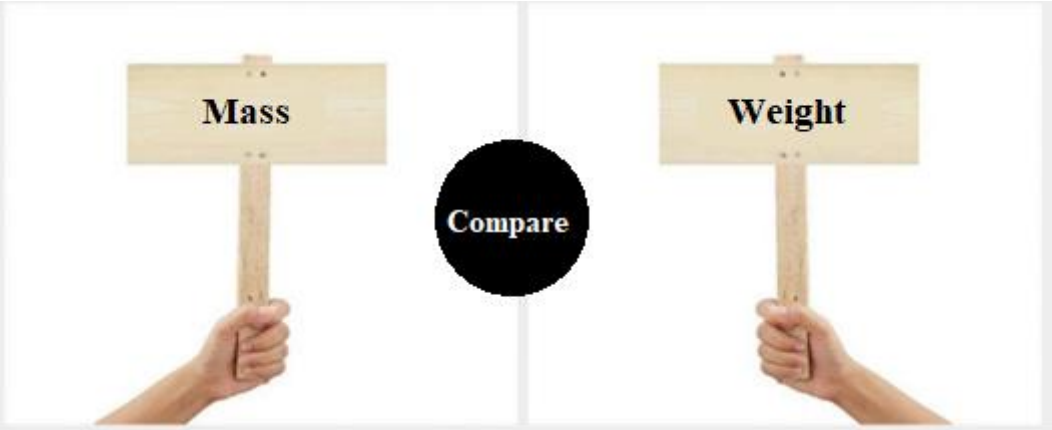
.....

Worksheet 9

Comparison between Mass and Weight

Compare the mass and weight using the following statements:

- It is measured by two-pan balance.
- The unit is kilograms.
- Force of attraction toward the earth.
- Amount of material in the body.
- It is measured by spring balance.
- The unit is Newton.

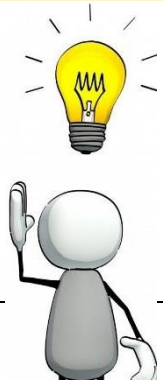
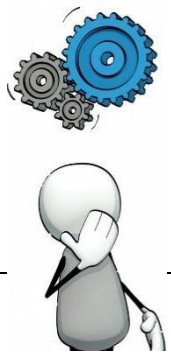
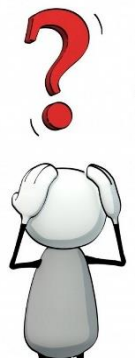


.....	.....
.....	.....
.....	.....
.....	.....

Slide 1

Learning table

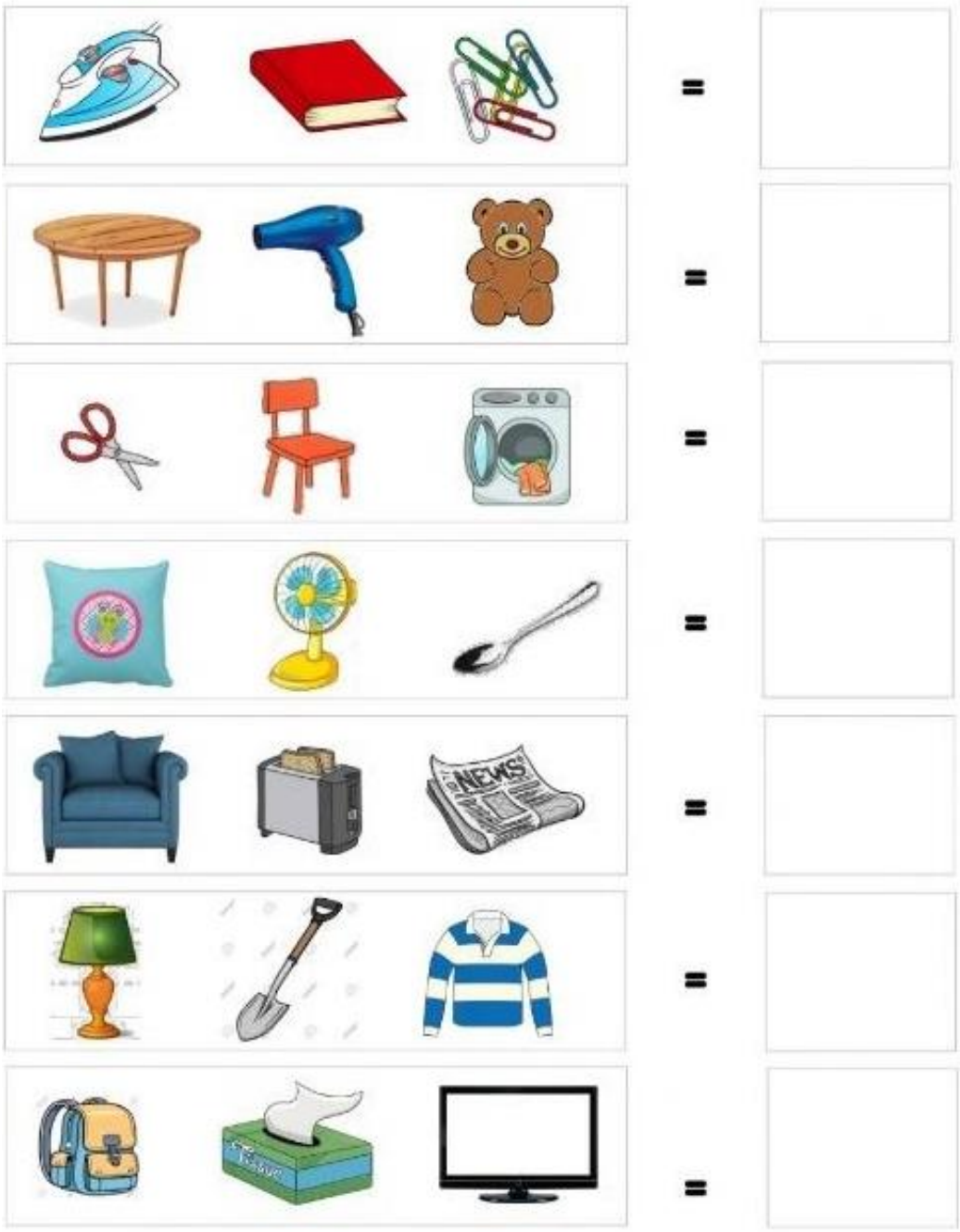
Topic: Electricity in our life

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

Worksheet 1

Electrical devices

Choose the electrically powered device:



Worksheet 2:

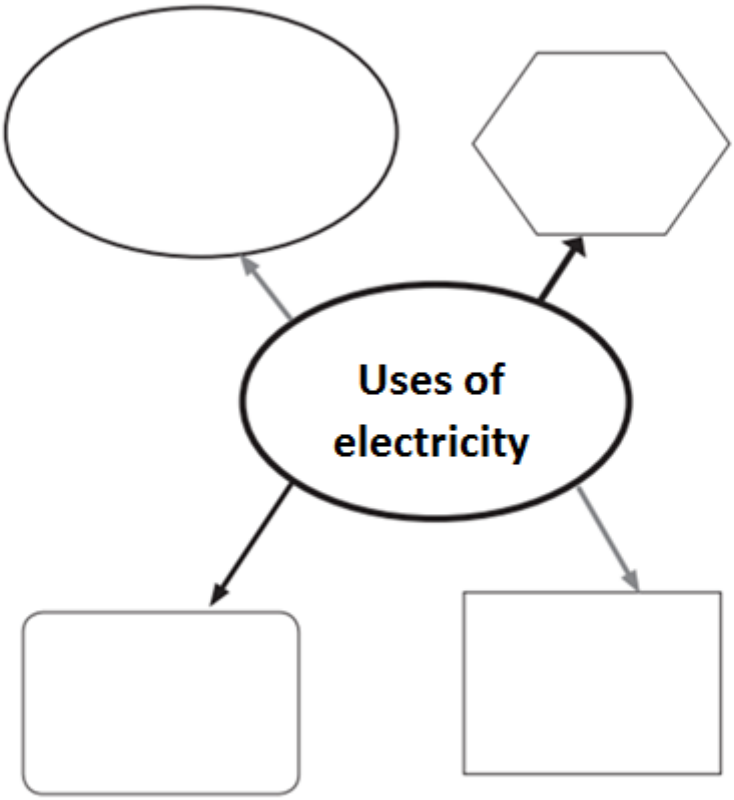
Select the risk

Put (X) under the wrong behavior while working with electricity:

Worksheet 3:

Uses of electricity

Write your different uses of electricity from morning until now:



Worksheet 4

The Importance of Electricity

Complete the table below:

Name of device	What happens to this device it the power is cut off?
Fridge	Food spoilage
TV	Can't watch TV programs.
Radio	……..
Computer	……
…… ……	Difficulty in cleaning the floors.
…… ……	No ironing for clothes
…… ……	Difficulty in cleaning clothes.
Blender	……

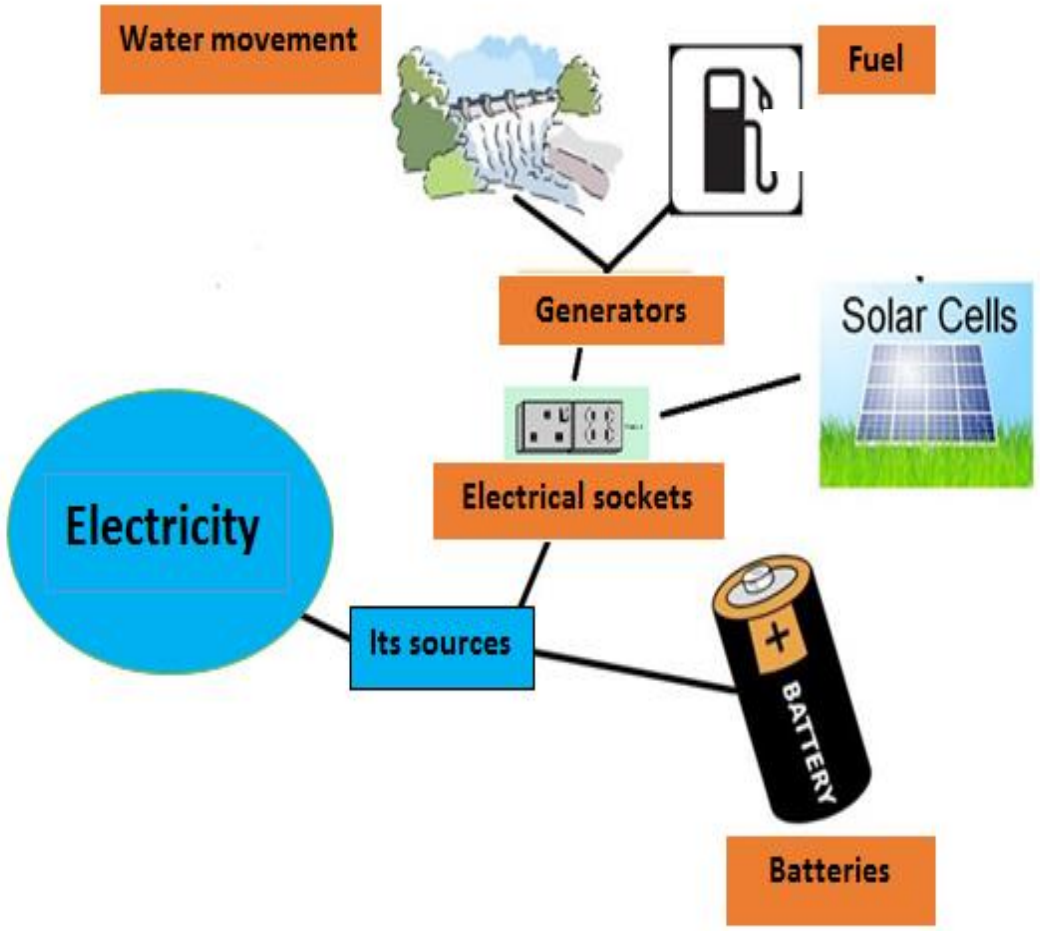
Assessment 1

The Importance of Electricity

Indicate which devices use electricity and what each device does, and what happens if the power is cut off.

Slide 2

Electricity Sources



Worksheet 5

Device classification

Classify the following devices into three groups as shown in the table:


Calculator


Iron


Screwdriver


Washing machine

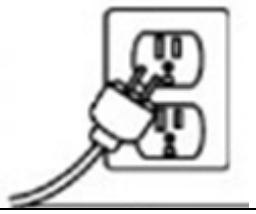

Bicycle


Watch


Stapler


Torch

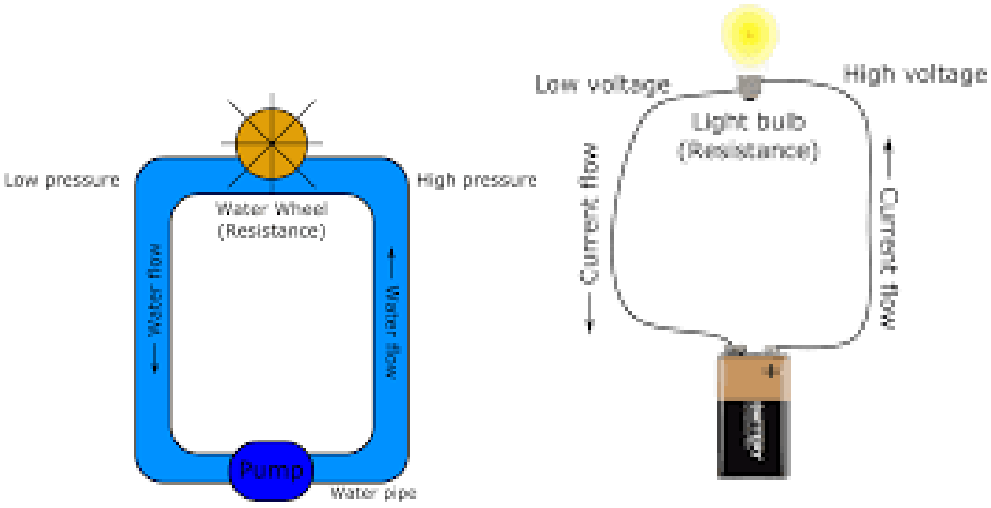

Hair dryer

Need electricity from battery	Need electricity from the socket	No need for electricity
		

Worksheet 6

Electric battery work

Observe the picture of the water pump and the electric battery, and then identify the similarities and differences between them:

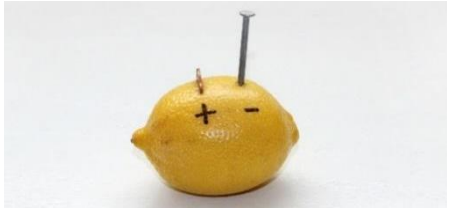


Similarities	Differences

Worksheet 7

Lemon Electric Battery Design

- **Put a coin and a nail inside some kind of green, like a lemon; they don't touch each other.**



- **Connect the coin to a copper wire using a metal clip, and connect the nail to another wire.**
- **To increase the intensity of the outgoing current, connect more than one lemon together as in the following figure.**
- **Connect the ends of the two wires connected to the nail and the coin to the light-emitting diode, what do you notice?**

.....

- **Repeat the previous steps using other types of vegetables, such as: tomatoes and potatoes. What do you notice?**

.....
.....

Worksheet 8:

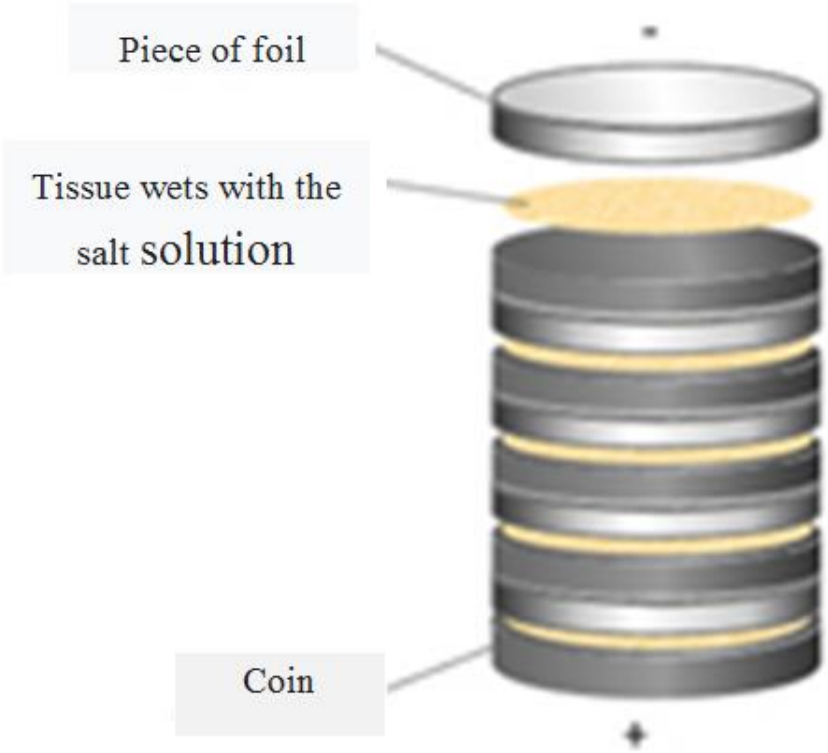
Volta Cylinder design

- **Cut the tissue and foil so that they are the same shape as a coin.**
- **Moisten the tissue with the salt solution.**
- **Place a piece of tissue between each coin and a piece of foil to form the cylinder shown in the figure.**
- **Attach an electrical wire to the first coin, and another wire to a piece of foil.**
- **Connect the two ends of the wires to the LED, what do you notice?**

.....

.....

.....



Electricity Risks

The passage of electric current in the human body as a result of its contact with current-carrying parts causes dangerous effects on humans, including:

A. **Electric shock: It occurs if a person touches electric wires, which results in severe damage to this person, as this leads to stop breathing, unconsciousness and death.**

B. **Burns: the passage of electric current in the body causes severe burns, which may be deep and very dangerous**.

C. **Indirect injuries: These are caused by a person falling from a high place as a result of being subjected to electric shock, which may lead to injuries and fractures.**

D. **Electricity may also cause explosions and fires in facilities or damage to equipment when a short circuit occurs between electrical wires**.

Worksheet 9

Dealing with Electricity

Draw a circle around the wrong behavior with electricity.

Worksheet 10:

Rationalization of electricity consumption

Write one of the following statements below the appropriate picture:

- **Turn off the lights before sleep.** - **Dry clothes in the sun instead of in the dryer.** - **Rationalize the consumption of hot water while showering.**	- **Unplug devices from sockets after use.** - **Avoid leaving the refrigerator door open.** - **Using a fan instead of air conditioning in the classroom.**

1.

2.

3.

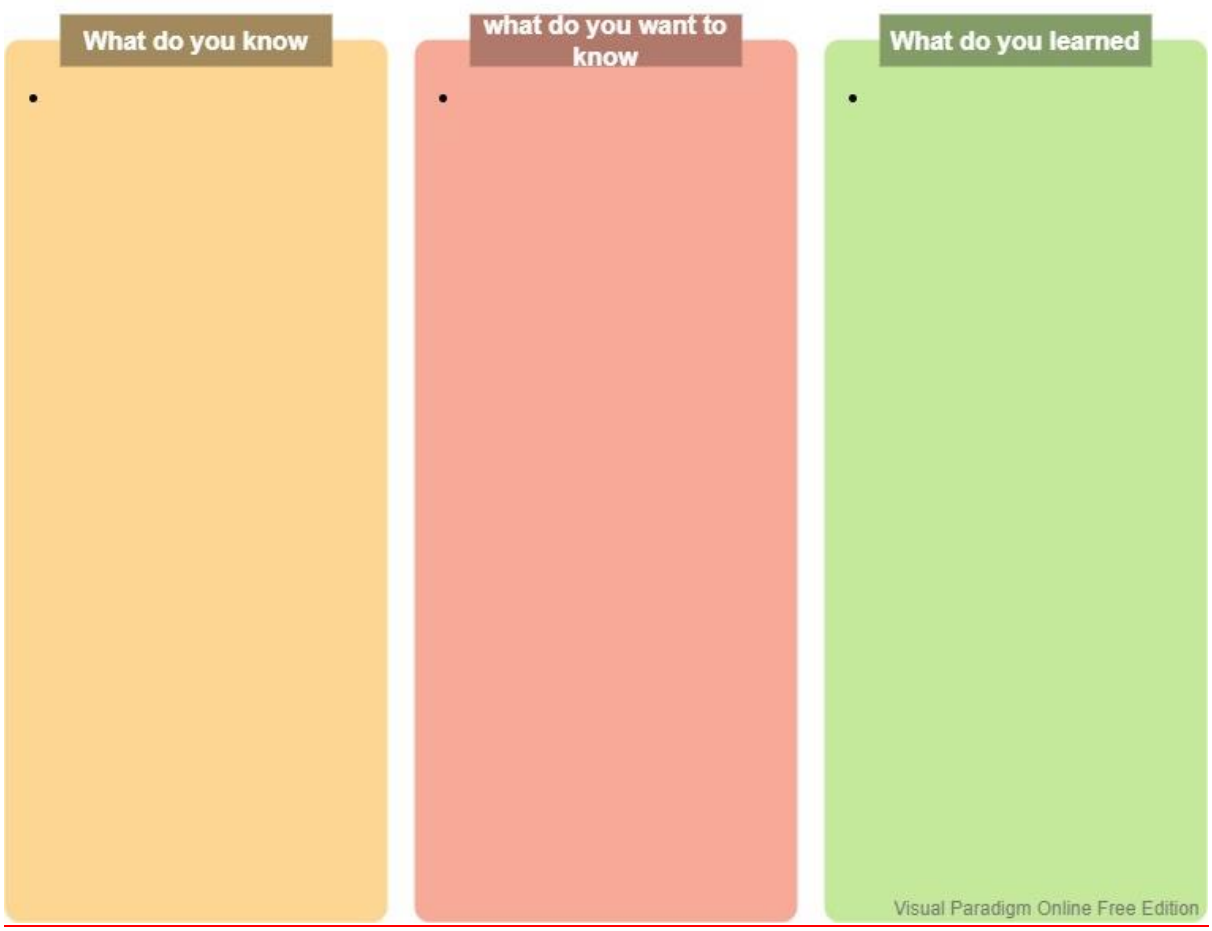
4.

5.

6.

Slide (1)

KWL Table for Sound characteristics / Topic: Sound characteristics



Worksheet (1)

Identification of High Sound and Low Sound

Write under each picture the suitable symbol, (L) for loud sounds, (S) for soft sounds, and (X) for silent sounds.

(.....) (.....) (.....)

(.....) (.....) (.....)

(.....) (.....) (.....)

Draw the wave of loud sounds.

Draw the wave of soft sounds

The cause of the loud or soft sounds is related to the (Wave propagation – Volume of sounds)

Worksheet (2)

Different Sounds According to their Pitch

Classification of sounds according to their pitch.

Write (H) for high in pitch sounds, and (L) for low in pitch sounds

(.....) (.....) (.....) (.....)

(.....) (.....) (.....)

(.....) (.....) (.....)

High in pitch Sound has

- High-frequency
- High amplitude of the sound wave
- High-speed sound

Low in pitch sound has

- High-frequency
- High amplitude of the sound wave
- High-speed sound

Slide (2)

Indicate by True or false.

No	Statements	True	False
1	Sound is produced by our vocal cords.		
2	Women's voice is classified as low in pitch sound.		
3	Cow's voice is classified as a high in pitch sound.		
4	We can hear the sounds and hear them		
5	The speed of sound is greater than the speed of light.		
6	Sound propagates in air medium faster than in solid material.		
7	Light travels in vacuum and other mediums.		
8	Echo sound is caused by sound propagation in all directions.		
9	The echo sound is present in vacuum.		
10	The difference in sounds pitch is due to the difference in the speed of sound		
11	Loud sound has a faster big sound.		
12	The sound of television is not heard when we are in the adjacent rooms.		
13	The sound propagates in air medium and does not propagate in woods		
14	The speed of high in pitch sound is high		

Worksheet (3)

Amplitude of Sound Wave

Draw the amplitude of the wave propagation for each picture:

Picture	The amplitude it expresses

Worksheet (4)

Waves of Soft Sound

Circle the volume of sound pitch (high pitched - low pitched) and circle the sound wave that describes it.

Picture	Sound Pitch	Drawing of wave
	high pitched - low pitched	
	high pitched - low pitched	
	high pitched - low pitched	
	high pitched - low pitched	
	high pitched - low pitched	

Worksheet (5)

Sound Pitch: High and Low

Observe the following pictures, and then determine the pitch and volume of the sound by knowing how high and low each sound is:

Sound wave	Sound Pitch	Sound Volume
A	High in pitch - Low in pitch	Soft - Loud
B	High in pitch - Low in pitch	Soft - Loud
C	High in pitch - Low in pitch	Soft - Loud
D	High in pitch - Low in pitch	Soft - Loud

Worksheet (6)

Rearranging the Speed of Sound in the Solid, Liquid, and Gas State

Study the following table and rearrange the medium material according to the speed of sounds in decreasing order:

Medium	Sound speed
Dry air	343m/s
Wood	3850 m/s
Water	1437 m/s

Rearrange in decreasing order: ……..

-Which medium has a faster sound speed? (Solid – liquid – gas)

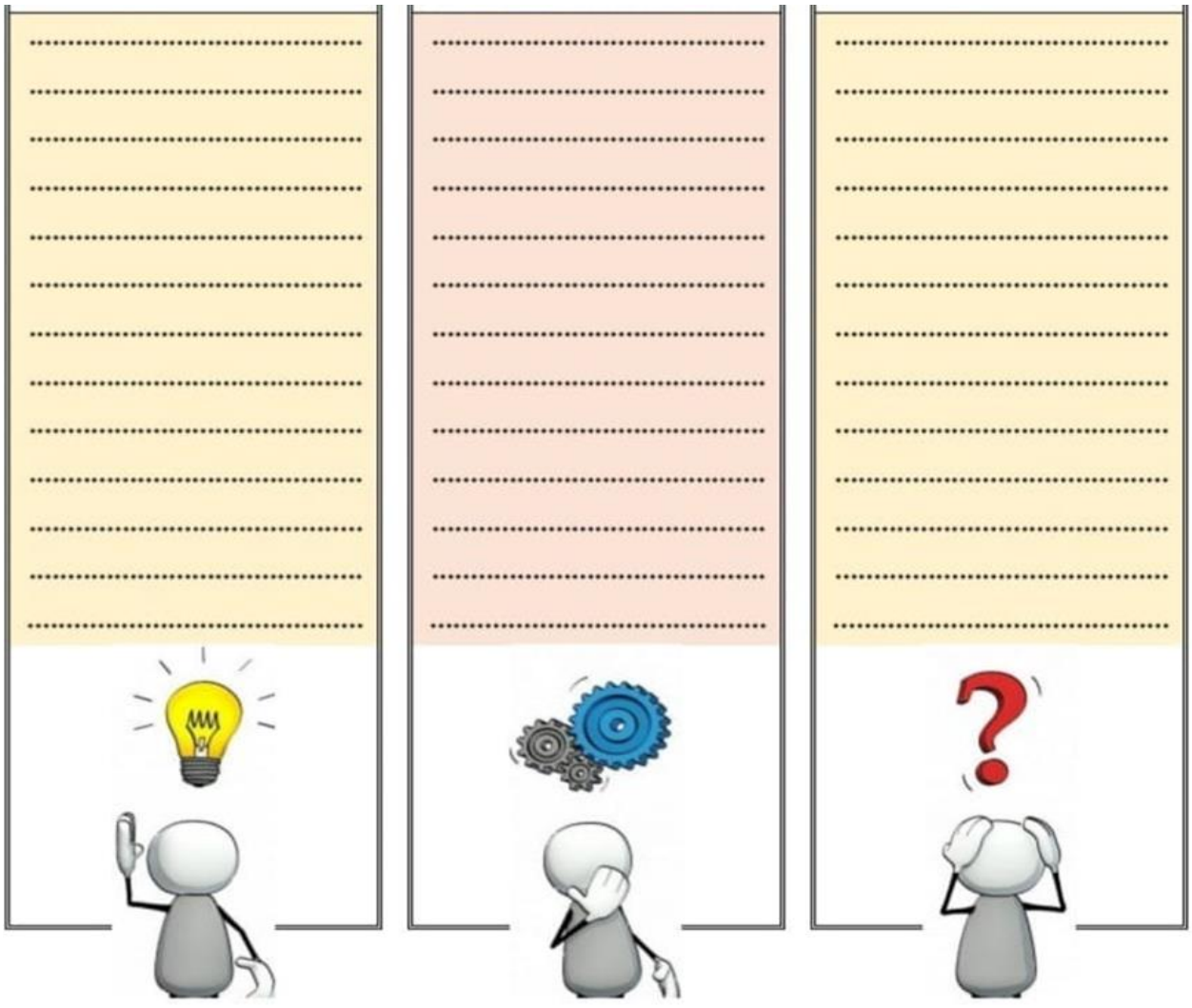
- In your opinion the sound travels faster in glass or air?
- Sound travels faster in water or aluminum?

Slide (1)

Table of Learning

Topic: Heat Effect on Materials

K What do you know about the effect of heat on materials?	W What do you want to know about the effect of heat on materials?	L What did you learn about the effect of heat on materials?



Slide 2

Indicate by true or false:

N0	Phrase	True	False
1	Thermal expansion occurs in solids only.		
2	All solids turn into liquids when heated.		
3	Hot air balloons are not affected by heat and bulge with electricity.		
4	heat helps increase the size of the material particles.		
5	The extension of the substance is the expansion of its particles due to the increasing the spaces between those molecules.		
6	The refrigerator and iron temperatures are fixed and cannot be changed.		
7	All liquids evaporate at the same temperature when heated		
8	The fluids expand when cooled.		
9	The freezing and condensation processes do not depend on heat transmission.		
10	There is no relationship between the dew on plant leaves or clothing drying and the effects of heat.		

Worksheet 1

Heat Effects on materials

Use the following picture to answer the following questions:

Butter pat

Charcoal

Oil

Papers

Chocolate

Sand

1- Which materials will melt when heated?

.....

.....

.....

2- Which materials will burn when heated?

.....

.....

.....

3- Which materials will not change when heated?

.....

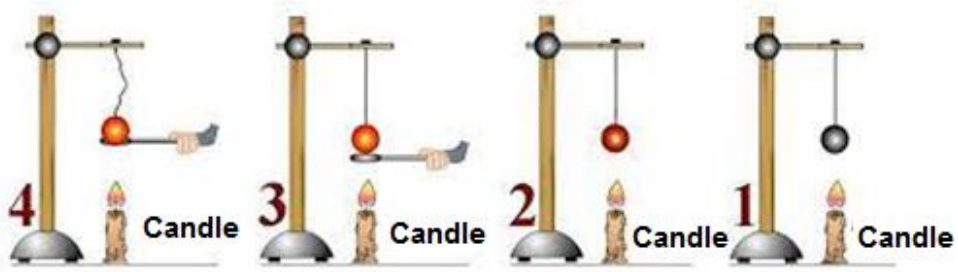
.....

.....

4- Will all materials change their conditions when heated?

.....
....

Worksheet 2
Metals Expansion



After your teacher demonstrates you the experiment between the ball and the ring, write your feedback and conclusion:

Shrink | Runs out | Expand | Heating

In all directions | Cold | Never runs out

Remark: When heating the ball, it …… of the loop.

Conclusion: Solid matter ……

Remark: When cooling the ball, it …… of the loop.

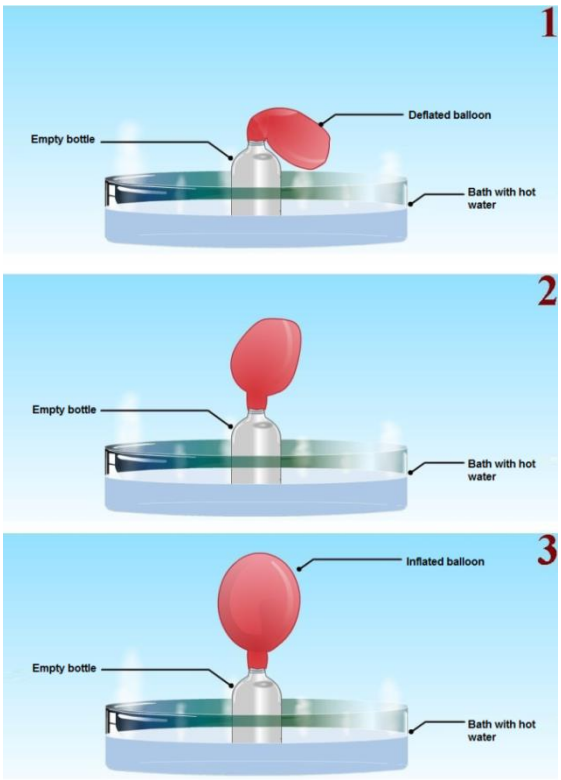
Conclusion: Solid matter.....

Worksheet 3

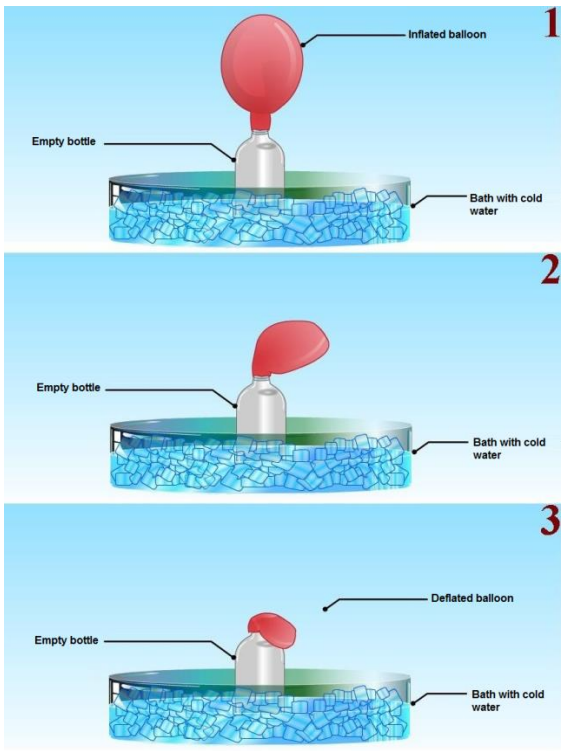
Thermal Expansion in Gases

Describe what happens to the balloon in each of the following cases:

First case



Second case



First case:

.....

.....

.....

.....

Second case:

.....

.....

.....

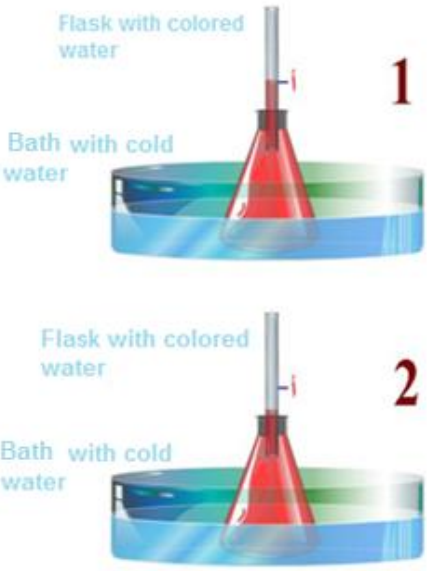
.....

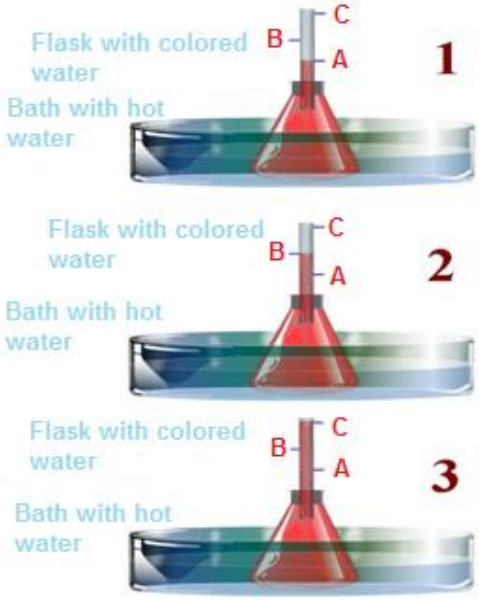
Worksheet 4

Thermal Expansion in Liquids

Describe what happens to the colored liquid in each of the following cases:

First case **Second case**





First case:

.....

.....

.....

.....

Second case:

.....

.....

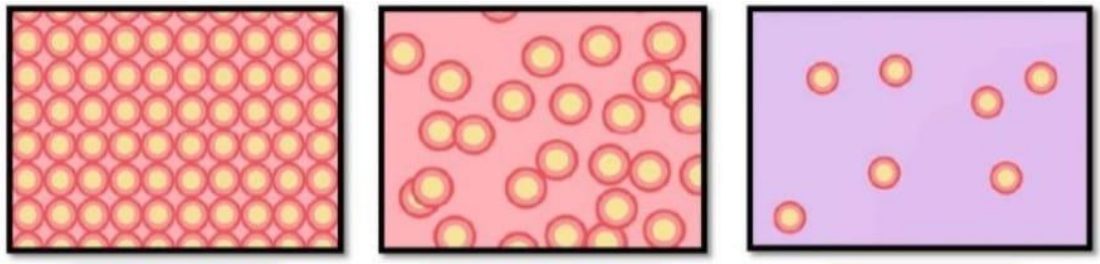
.....

.....

Worksheet 5

The Relationship between the Temperature and Volume of Matter

Conclude what will happen to matter particles when heating after watching the video.



Solid Liquid Gases

.....

.....

.....

.....

Answer the following questions by (yes) or (no):

1- When a substance is heated, the size of its particles increases ( )

2- Solid substance transforms into a gaseous substance by cooling ( )

3- The distances between liquid molecules increase due to heating ( )

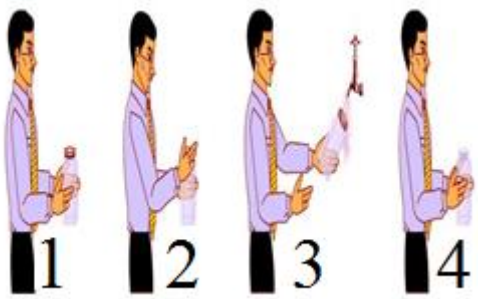
4- Gaseous molecules move freely ( )

5- Heating increases the liquid particles size ( )

Worksheet 6

Applications on Thermal Expansion

Explain your observation according what you learned from your teacher about thermal expansion.



1. **The spaces between metal bridges**

……
……
……

2. **Using hot water to open closed jars**

……
……
…..

3. **Loosen electrical wires**

……
……
……

4. **Using a flame in a hot air balloon**

……
……
…….

Worksheet 7

Solid and Heat

Indicate what will happen to each of the following substances when heated, and which will turn into a liquid and which will not.

Worksheet 8

Liquid and Heat

Conclude what will happen to each of the following substances when heated after watching the video

Worksheet 9

Thermal Changes of Matter

Indicate the type of phase change in each picture, using the following words:

Condensation | Fusion | Freezing | Evaporation

Putting ice cubes in hot mint makes ice

……

The formation of ice cubes from the water makes water

……

…..

A piece of butter on hot bread makes

……

Drying wetlands is a process of

……

The formation of dew on the leaves of plants is a process of

……

……

Drying wet clothes happen with

……

……