



Republic of the Philippines
Department of Education
Region III – Central Luzon
SCHOOLS DIVISION OFFICE OF BALANGA CITY

NAME: _____ SCHOOL: _____

ACTIVITY SHEET IN SCIENCE -5
1st Quarter, Week 1-2 – (Use the properties of materials
whether they are useful or harmful)

ACTIVITY 1

1. Visit your kitchen and your bathroom.
2. List 5 materials that you saw in those places.
3. Write down the materials in the first column and opposite write whether the material is useful or harmful.

Materials	Useful/ Harmful

Questions :

- ❖ Why is towel used to dry up our body after taking a bath?
- ❖ Why is glass used to make windows and jars ?
- ❖ Why do we need to take extra care in handling materials made of glass?
- ❖ Why are materials made of wood used to make tables, chairs and doors?
- ❖ What do you call materials that can be bent easily?
- ❖ Why do we use casseroles, frying pan, and pots made of metal in cooking our food?
- ❖ How are they being used? Are they useful or harmful?
- ❖ How can these materials become harmful?

ACTIVITY 2

What to do ?

Directions: Identify which properties are intended for the following materials. Check the chart below.

Material	Properties of Materials				
	Durable	Flexible	Transparent	Malleable	Ductile
1. window pane					
2. copper wire					
3. rubber sandals					
4. silver ring					
5. wooden table					

ACTIVITY 3

Directions: Classify the following materials based on the properties that they possess. Write **Malleability**, **Ductility**, **Elasticity**, **Brittleness** and **Hardness** on the blank.

- _____ 1. gold bracelet
- _____ 2. chewing gum
- _____ 3. chopping board
- _____ 4. flower vase
- _____ 5. concrete tiles

ACTIVITY 4

Directions: Classify the following household materials based on their hazardous property. Write **F** on the blank for flammable, **C** for corrosive or **T** for toxic.

- _____ 1. paint thinner
- _____ 2. muriatic acid
- _____ 3. kerosene
- _____ 4. LPG tanks
- _____ 5. medicines
- _____ 6. battery acid
- _____ 7. rust remover
- _____ 8. cooking oil
- _____ 9. rat poison
- _____ 10. insecticide

ACTIVITY 5

TRUE or FALSE

Direction: Write **T** if the statement is true and **F** if it is false.

- _____ 1. For man's convenience and comfort, household materials are created
- _____ 2. The properties of materials determine their uses.
- _____ 3. All household materials are useful.
- _____ 4. Many of the household materials have harmful effects than useful effects.
- _____ 5. Accidents can be avoided if household materials are used and stored properly.

ACTIVITY 6

Directions: Examine the following materials carefully. Describe how each material can be useful or harmful.

Material	How is it useful ?	How is it harmful?
Example : knife	Used for cutting ,slicing & carving	May caused injuries when not used properly.
1. rust remover		
2. insecticide		
3. medicine		
4. gasoline		
5. scissors		



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ACTIVITY SHEET IN SCIENCE-5
1st Quarter, Week 3-4 – (Investigate changes that happen in materials under the following conditions: Presence or lack of oxygen)

ACTIVITY 1

Direction: To understand the meaning of combustion or the changes in the material due to the relationship of fuel, heat and presence or absence of oxygen in the surroundings, do this simple activity.

(Let's Unfire It Up !)

Science Skills : Observing, Investigating

Time Frame : 15 – 20 minutes

Materials : - 4 jars in different sizes
- 4 small candles with same size
- match or lighter
- timer or watch
- ruler



What to Do :

1. Light one of the candles.
2. Cover it with the smallest jar.
3. Using a timer or watch, measure how many seconds it takes for the flame of the candle to be put out.
4. Measure the length of the candle after it burns out.
5. Repeat the procedure using the next size of the jar up to the largest jar.
6. Find out in which jar has the shortest and longest time of putting out the flame of the candle.
7. Find out also the shortest and longest candle after burning by measuring it by using a ruler.
8. Record your findings on the chart below.

Jars	Time of the flame was put out	Length of the candle after burning
1		
2		
3		
4		

ACTIVITY 2

("The Rust Be with You")

You will need two tin covers of bottles and two nails. The nails should have no rust and must look the same with each other. In one tin cover, place one nail. This is our set-up A. In another tin cover, place the other nail. But this time submerge half of the nail's body in water. This is set-up B. Write your observations here.

Day	Set-up A	Set-up B
1		
2		
3		
4		
5		

ACTIVITY 3

Find Your Match!!!

Directions: Find the definition of the italicized word in each sentence by choosing the letter of the correct answer to the box below. Write your answer in the blank before each number.

- _____ 1. *Oxygen* is released by the plants during photosynthesis and it is mixed in the air that we breathe.
- _____ 2. In the gasoline station, we can buy gasoline which is a kind of *fuel*, so it is dangerous to put fire in there.
- _____ 3. The boy and girl scouts sit around the campfire so that they will be warmed by the *heat* coming from it.
- _____ 4. My clothes were dirtied by *rust* as I passed on the old iron gate of my classmate's house.
- _____ 5. The farmer is now planting sweet potato instead of rice for a *change*.

a. the feeling or sensation of warmth or hotness.

b. the act or fact of altering or being substituted to another

d. any substance burned as a source of heat or power, such as coal or petrol

c. an element, a gas without taste, colour or smell, forming part of the air

e. Any of various powdery or scaly reddish-brown or reddish-yellow hydrated ferric oxides and hydroxides formed on iron and iron-containing materials by low-temperature oxidation in the presence of water.

ACTIVITY 4

Direction: Complete the following science facts by putting up the correct words/word phrases in the blanks by choosing from the word cards below.

Fire triangle

rusting

oxygen

iron

irreversible

combustion

1. The presence or absence of oxygen, when put together with fuel and heat, can bring changes to material through the process of _____ or burning.
2. The _____ represents the three elements needed in the combustion process – fuel, oxygen and heat.
3. The presence or absence of _____ in materials can also produce changes in color, taste and composition of the materials.
4. There is always a new material formed or produced after the combustion or burning process. The changes brought to the original material is _____ or cannot be brought back.
5. Rusting is also a change in a metallic material through the reaction of _____ with oxygen which is present in the air of the surroundings.
6. The changes in a metallic material are irreversible or cannot be brought back when _____ takes place.

ACTIVITY 5

A. "Changes in Materials due to Presence / Absence of Oxygen"

Direction: Write your findings or observations in the spaces below each situation.

1. Using the same jars, put one naphthalene ball in each of the four jars. Make sure that there will be no air coming inside the jars. Observe what will happen to the naphthalene balls for the next few days.

2. Suppose that a piece of mango was left at a table. Investigate for how many days the mango will change its color and decays.

3. What is produced after you burned a piece of charcoal using a match and a few used paper? Try to cover it with a plastic Tupperware. Observe what will happen to the flames and smoke of the charcoal.

4. Your class will be having a science experiment on investigating the different boiling points of different liquids. Aside from the alcohol lamp which has no fuel and matchstick, what do you think is missing in the materials that you need? Why?

ACTIVITY 6

B : “Changes in Materials due to Rusting”

Direction: Write your findings or observations in the spaces below each problem.

1. Using a copper wire, submerge it to a basin of water. After a few days, observe what is produced in the copper wire.

2. Gold, silver and platinum are some of the metallic elements that do not rust, calling them the **noble metals**. What do you think these materials do not have so that they will not rust even if there is oxygen in the environment or even if they are being wet with water?

3. Take a look at the iron wires in your backyard being used as a clothesline for your family’s washed laundry. Do they rust? Why?

4. Iron fasteners fell on the ground and are exposed to air and water for a few days.

5. You have noticed that the steel wool that your mother is using in washing the dishes is already having rust. What will you suggest to your mother about it and why?



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ACTIVITY SHEET IN SCIENCE -5
1st Quarter, Week 3-4 – (Investigate changes that happen in materials under the following conditions: Application of heat)

ACTIVITY 1

Direction: To understand the changes in the material brought by application of heat, do these simple activities.

“Changes May Go Back All Over Again”

Science Skills : Observing, Investigating, Describing

Time Frame : 15 – 20 minutes

Materials : - alcohol lamp or candle
- 2 cooking pans
- glue stick
- soldering lead (if available)
- match or lighter

What to Do :

- 1) Light the alcohol lamp or candle using the match or lighter.
- 2) Get the two pans and place a glue stick on the first pan and soldering lead on the other pan.
- 3) Heat both pans over a low fire.
- 4) Observe what will happen to the glue stick and the soldering lead.
- 5) Record your observations by answering the questions below.

Material	Phase / State of Matter before the Activity (solid, liquid, or gas)	Observational Changes After Heating
glue stick		
soldering lead		

6) Remove the pans away from the heat and let it cool for a few seconds. What happens to the glue stick and soldering lead? Answer the questions in the chart below.

Material	Phase / State of Matter After the Activity (solid, liquid, or gas)	Observational Changes After Removing from the Heat and Cooling Down
glue stick		
soldering lead		

Answer the following questions :

What happens to the glue stick and soldering lead when they are still heated in the pan? What changes took place when the two materials are heated? Explain.

What happens to the materials when they are put out of the heat and let cool? Do they go back to their solid-state? Are there new materials formed ? Why or why not? Explain.

Are the materials shown physical change? Is physical change made by the application of heat can be reversed into its original form or state?

ACTIVITY 2

“Changes are Permanent “

Science Skills : Observing, Investigating, Describing

Time Frame : 15 – 20 minutes

Materials : - alcohol lamp or candle
- 2 cooking pans
- sugar
- egg
- match or lighter

What to Do :

- 1) Light the alcohol lamp or candle using the match or lighter.
- 2) Get the two pans and place a tablespoon of sugar on the first pan and a piece of egg on the other pan.
- 3) Heat both pans over a low fire.
- 4) Observe what will happen to the sugar and the egg.
- 5) Record your observations by answering the questions below.

Material	Phase / State of Matter before the Activity (solid, liquid, or gas)	Observational Changes After Heating
Sugar		
Egg		

- 6) Remove the pans away from the heat and let it cool for a few seconds. What happens to the glue stick and soldering lead? Answer the questions in the chart below.

Material	Phase / State of Matter After the Activity (solid, liquid, or gas)	Can You Bring It Back to Its Original Form (YES/NO)
Sugar		
Egg		

Answer the following questions :

What happens to the sugar and egg when they are still heated in the pan? What changes took place when the two materials are heated? Explain.

As you observed, the sugar caramelized into a liquidlike form and the egg coagulated when heated in the pan. Are there new materials formed ? Why or why not? Explain.

Are the materials shown chemical change? Is chemical change made by application of heat can be reversed into its original form or state?

ACTIVITY 3

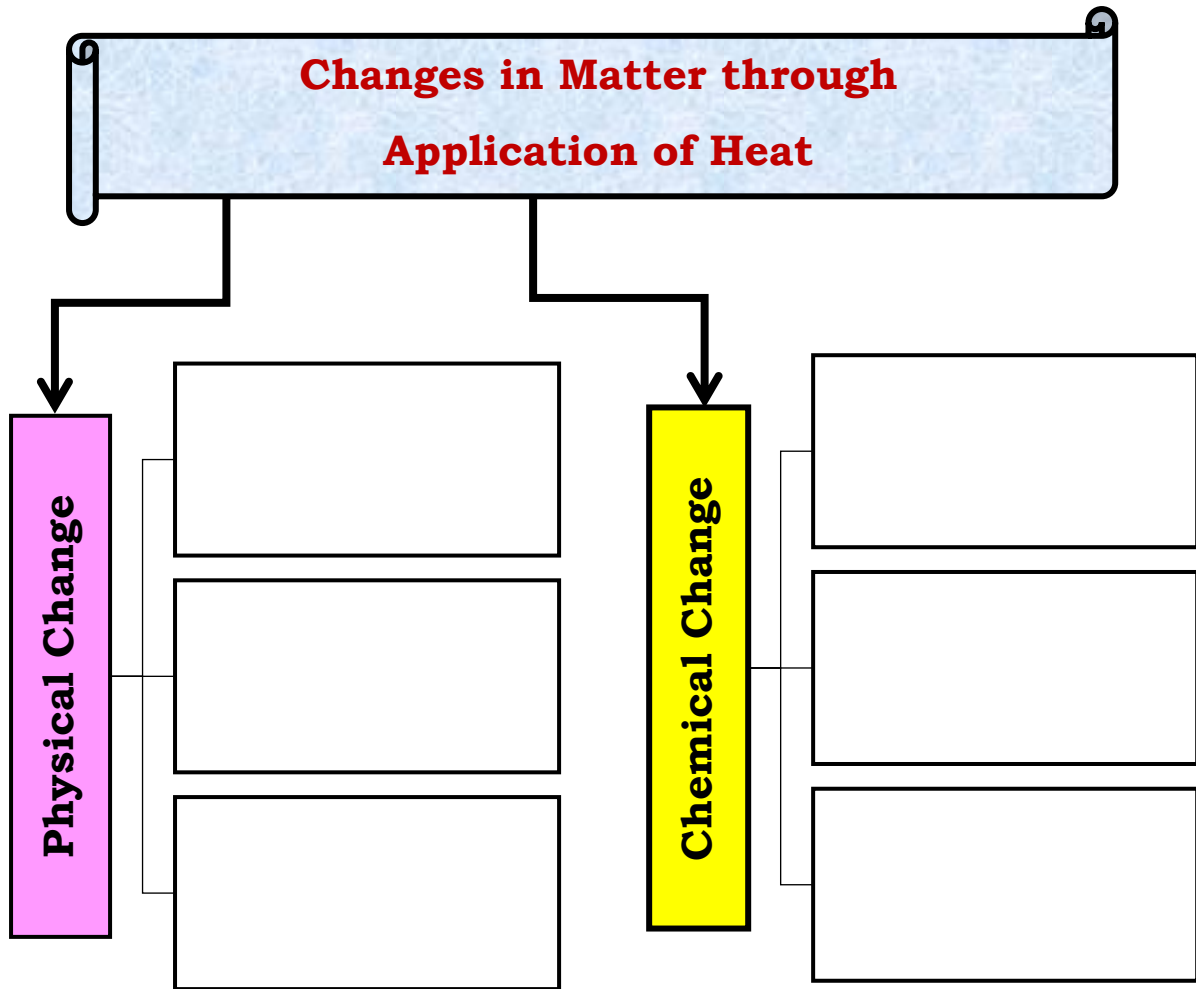
Direction: Complete the statement below by choosing the possible answers from the box beside the questions.

1. In chemical change through the application of heat, there is _____ formed.
2. Through the application of heat, in _____, the size and shape of the material is changed.
3. The _____ causes physical or chemical change in the material.
4. In physical change through the application of heat, there is _____ formed.
5. By applying heat to a material, resulting to _____, the size and shape and composition of the material is changed.

- No new material
- Chemical Change
- Physical change
- Application of heat
- New Material

ACTIVITY 4

Write your own examples of changes in materials due to application of heat - physically or chemically in the blocks under the two properties.



Answer the following questions:

1. How the application of heat affects physical property of a material?
2. What are the possible sources of heat that you may use at home or at school?
3. What are the uses of application of heat that may result to positive changes in the materials?
4. Why is application of heat important in our everyday lives?

ACTIVITY 5

Are you willing to help our nature and community in conserving our limited natural resources? Think of any possible means of how the heat will be used to make these materials/processes. You can refer to your textbooks or your local community.



✚ Welding of metallic products

:



Vulcanizing rubber interior of a flat tire

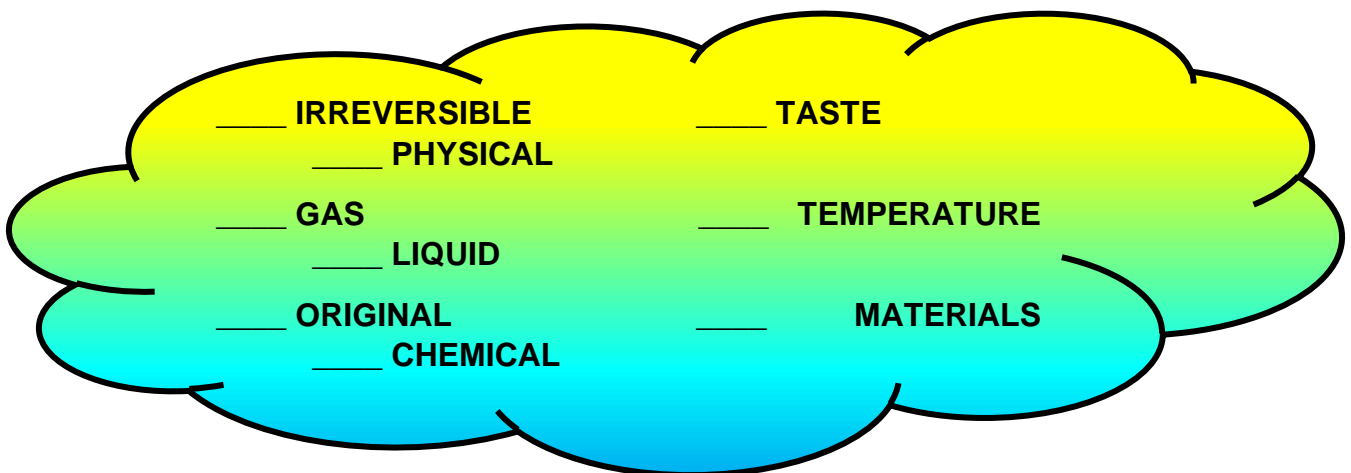


✚ Burning organic polymers in making plastic products like bottles

ACTIVITY 6

Direction: Encircle the science words that you have learned through this puzzle. You may do this horizontally or vertically. Once you found the word, check the blanks beside the words inside the cloud below.

Q	Z	T	H	E	R	M	O	M	E	T	E	R
Y	B	E	V	Z	K	O	H	J	G	A	S	L
S	X	M	A	T	E	R	I	A	L	S	P	O
F	R	P	H	Y	S	I	C	A	L	T	F	I
O	K	E	Z	F	V	G	N	Q	Y	E	B	S
L	W	R	R	P	L	I	Q	U	I	D	Q	E
H	E	A	T	O	P	N	P	K	N	F	Z	L
D	Z	T	M	C	H	A	N	G	E	T	U	X
X	C	U	Y	S	O	L	I	D	W	V	R	H
I	R	R	E	V	E	R	S	I	B	L	E	A
C	H	E	M	I	C	A	L	K	G	R	F	W





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ACTIVITY SHEET IN SCIENCE -5
1st Quarter, Week 5-6 – (Design a product out of local, recyclable solid and /or liquid materials in making useful products)

ACTIVITY 1

Direction: Arrange the steps in designing a product by writing numbers 1-9 on the blank.

- | | |
|---------------------------------------|----------------------------|
| ___ Materials needed | ___ Results and discussion |
| ___ Product objective | ___ Drawing |
| ___ Recommendation | ___ Procedure |
| ___ Time needed to finish the product | ___ Title of the product |
| ___ Conclusion | |

ACTIVITY 2

Direction: Connect each waste material to its proper trash bin.

bottle

Empty box

Old jar

can

Old newspaper

Biodegradable



Non-Biodegradable



ACTIVITY 3

What can we do with bottles, empty box, old jar, can, and newspaper?

Look at the pictures.



Answer the following questions:

- What recyclable materials are used to produce these products?
- Where can we find these materials? Is it available in your home or community?
- What other products can you create out of these materials?
- What do we call the process of turning old or used material into a new one to make it reusable?
- Why is recycling very important?

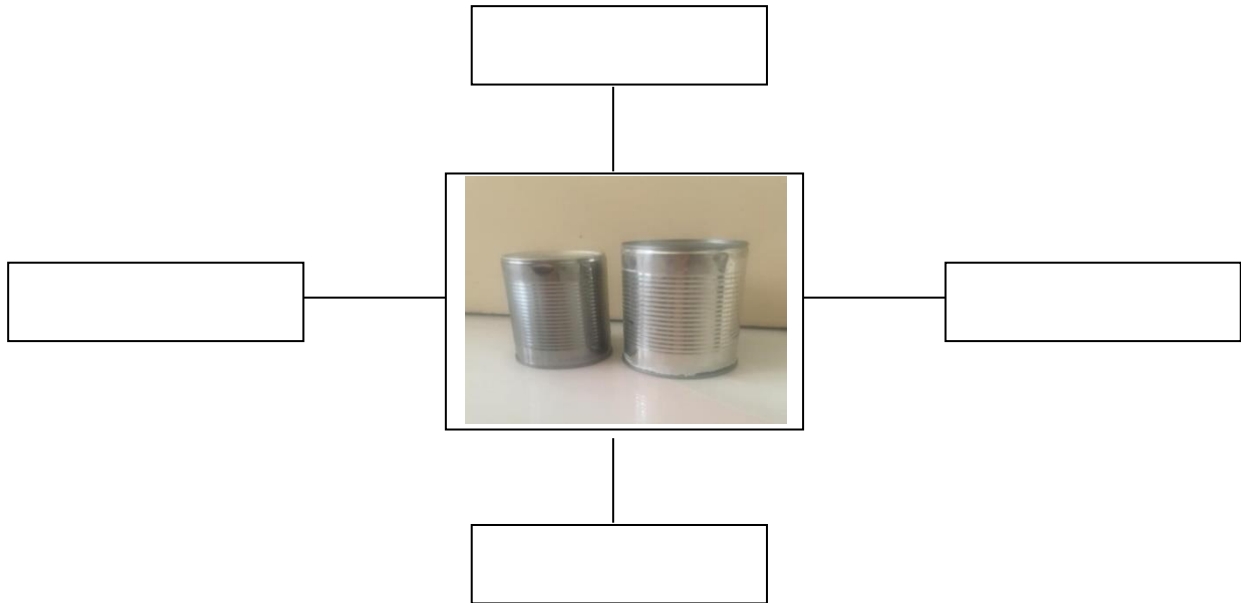
ACTIVITY 4

Directions: List down at least 3 local recyclable solid/liquid materials that are common in your community. Then think of other products that can be made out of these materials. Fill in the table below.

Recyclable Materials	Useful Products that can be Made out of the Material
Example: coconut rib	broom, basket
1.	
2.	
3.	

ACTIVITY 5

Directions: Identify useful products that can be made out of the given recyclable material.



Before you proceed with next activity be sensible with the following safety rules:

1. Read and follow instructions carefully.
2. Do not play with the materials.
3. Be careful in using scissor or cutter.
4. Wear a protective glove if you have to.

ACTIVITY 6

Directions: Try to make a Plastic Bottle Trowel by following the procedures below. Take a picture of your finished product and paste it on a short coupon bond.

Plastic Bottle Trowel

Materials Needed:

- Plastic bottles/container
- Scissors and/or a cutter
- Permanent marker

Procedures:

1. Mark a circular line from the top of the handle.
2. Draw a scoopy shaped like triangle across the bottom of the handle.
3. Make a starting hole using a cutter and cut along the marked line with scissors.
4. Tidy up your cut and you have a plastic bottle trowel.

