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

NAME: _____SCHOOL: _____

ACTIVITY SHEET IN SCIENCE -6
1st Quarter, Week 1-3 – (Describe the appearance and uses of homogeneous and heterogeneous mixtures)

ACTIVITY 1

Mystery Combinations

Materials: coffee powder, sugar, salt (table salt)
3 glasses half-filled with water, stirrer

Procedure: Using PROBEX (Predict, Observe, Explain)

1. Using the graphic organizer below, make predictions of what will happen if coffee, sugar and salt is added to each of the glass with water.

Mixtures	Predictions	Observation	Explain
Salt in water			
Coffee in water			
Sugar in water			

2. After giving your predictions, add the materials to the water.
3. Then write your observations.
   For every observation, give a reasonable explanation.

Answer the guide questions:

1. What are the states of materials used that were combined with water?
2. What happened to these materials when mixed with water?
3. What is the appearance of the combination of materials?
4. What can you conclude in doing this activity?

ACTIVITY 2

Mix It Up!

Materials: vinegar, cooking oil, water, pebbles, sand or soil soy sauce, powdered juice, 3 glasses and a plastic container, spoons

Procedure:

Directions: Mix the following and observe. Fill out the table below.

Label 1 – Put one cup of sand or soil and one cup of pebbles in a container.
Label 2 – Put 3 spoonful of cooking oil and 3 spoonful of water in a glass.
Label 3 – Put 3 spoonful vinegar and 3 spoonful soy sauce in a glass.
Label 4 – Put powdered juice in a glass of water.

Mixtures	Name of Substances	State of Matter	Changes observed
Label 1			
Label 2			
Label 3			
Label 4			

Answer the guide questions:

1. What do you think happened to the combined materials?
2. Which of the following mixture is/are homogeneous?
3. Which of the following mixture is/are heterogeneous?

ACTIVITY 3

A. Preparation of a Pickling Solution

Problem: To prepare a beneficial and useful mixture

Materials: 3 cups vinegar, 3 cups water, 1 ½ cups sugar, 1 teaspoon salt

Procedure:

1. Combine the vinegar, water, sugar and salt in a saucepan.
2. Bring to a boil and stir until the solid ingredients are dissolved.
3. Remove the saucepan from heat after 2 minutes of boiling.

Note: This pickling solution can be poured into a jar to preserve sliced vegetables or fruits especially this time of pandemic that your parents can go to market or grocery only once in a week.

B. Preparation of Herbal Drinks (Ginger Tea)

Materials: ginger, kettle or casserole, water

Procedure:

1. Wash and peel ginger.
2. Grate the ginger or cut it into small pieces then pound.
3. Heat ½ liter of water and add the grated or pounded ginger.
4. You can add turmeric powder if available.
5. Allow to boil in 3 – 4 minutes in low heat.
6. Put 2 teaspoons honey or sugar to taste in 1 cup of ginger tea.

Note: *Ginger tea is best for colds or sore throat. It makes our respiratory system healthy.*

Answer the guide questions:

1. What kind of mixture did you prepare?
2. Is it beneficial or not? Why?
3. What should you observe in preparing such kind of mixture in order to avoid health problem?

ACTIVITY 4

Experiment 4: **Describe the appearance and uses of suspensions**

Materials: ½ cup flour, 1 clear glass of water

Procedure:

1. Prepare a half cup of flour,
   1 clear glass with water.
2. Pour the flour into the glass of water.
3. Stir until the flour mix with the water.
4. Wait for 2 – 3 minutes and observe.
5. Draw the appearance of the mixture.

Answer the guide questions:

1. When the solute particles mixed with water, what do they become?
2. How do the solute particles behave after mixing with solvent?
3. Describe the appearance of the mixture done.
4. What kind of mixture did you make?
5. In what preparation can this mixture be useful?

ACTIVITY 5

Mixture Hunt

Directions: Encircle the 10 words related to mixtures that you can find in the puzzle. The words may be read downward, upward, backward, horizontally or diagonally.

Mixture
Homogeneous
Heterogeneous
Miscible
Immiscible
Solute
Solvent
Solution
Suspension
Colloid

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

ACTIVITY 6

Direction: Write √ on the blank if the mixture on the picture is **homogeneous** and **x** if it is **heterogeneous**.

____1. coffee

____2. lemon juice

____3. fruit salad

____4. spaghetti

____5. Sushi

____6. tea

____7. salt solution

____8. cooking oil and soy sauce

____9. orange juice

____10. mixed nuts

ACTIVITY 7

Direction: Write **D** on the blank if the solid dissolves in water, and **ND** if it does not.

_____1. sugar
_____2. clay
_____3. Iron filings
_____4. sawdust
_____5. Instant coffee
_____6. chicken cubes
_____7. salt
_____8. oil
_____9. sand
_____10. powdered juice

ACTIVITY 8

Directions: Match the factors affecting the solubility of the solute in a solvent in column A to the situations in column B. Write only the letter of the correct answer on the answer sheet.

Column A	Column B
1.Temperature of the solvent	**a**. Dissolving coffee in water using a spoon or a stick
2. Amount of solvent	**b**. Dissolving a tablespoonful of powdered milk in a cup of hot water.
3. Size of the solute particles	**c.** If you mix cooking oil with water, they will not completely mix with one another.
4. Immiscibility	**d.** Some grains of sugar settled at the bottom of the cup with water while instant coffee had already dissolved.
5. Manner of stirring	**e.** Powdered fruit juice dissolves slower in half glass of water than in a pitcher of water.

ACTIVITY 9

Directions: Identify the material if it is solute, solvent or solution. Put the words in their proper heading. Use your answer sheet.

1. salt, water, seawater
2. water, carbonated softdrinks, carbon dioxide
3. vinegar, acetic acid, water
4. nitrogen, other gases, air
5. steel bar, iron, carbon

Solvent	Solute	Solution
1.		
2.		
3.		
4.		
5.		

ACTIVITY 10

Directions: Colloids are useful and beneficial. Match them with their uses.

Column A	Column B
1. glue	a. Condiment enhancing food flavors
2. liquid soap	b. For application on skin allergy or cuts
3. catsup	c. Hygienic purposes and protection of the skin
4. ointment	d. For hair fixing and styling
5. gel	e. For binding papers, boards and cloth

Directions: Fill-in the blanks with the correct answer. Write your answers on your answer sheet.

6. _____ is the scattering of light of colloidal particles. One example of this is the sky that looks blue in daytime and red during sunset.

7. _____ are heterogeneous mixtures that seem to be homogeneous.

8. In a _____ mixture, the ingredients are so evenly distributed that they are not easily identifiable.

9. _____ liquids mix well with each other to form a solution.

10. A cloudy mixture in which some of its solutes end up settling at the bottom is called _____.

NAME: _____SCHOOL: _____

ACTIVITY SHEET IN SCIENCE -6
1st Quarter, Week 4-6 – (Describe techniques in separating mixtures through decantation,)

ACTIVITY 1

Separating Insoluble Solid from Liquid

Problem: How could you separate the mixture of sand and water?

What you need: 2 clear glass/plastic glass, water, sand, spoon

What you need to do:

1. In a glass of water, mix two spoonful of sand. Stir.
2. Allow the mixture to stand for 2 minutes.
3. Decant or pour the water into another glass.

What have you found out?

Draw how you separate the mixture. Use a separate sheet.

ACTIVITY 2

Separating Immiscible liquids

Problem: How could you separate soy sauce and oil?

What you need: 2 clear glass/plastic glass, soy sauce, oil, spoon

What you need to do:

1. Prepare a half glass of oil and a half glass of soy sauce.
2. Pour the soy sauce into the glass of oil.
3. Stir the mixture using the spoon.
4. Settle or let it stand for 2 minutes.
5. Scoop the oil using the spoon to separate the mixture.

What have you found out? Draw it.

1. What kind of mixture do you have?

   _____

2. What are the different components of your mixture?

   _____

3. Which is the less dense substance?

   _____

4. How did you separate the components of your mixture?

   _____

ACTIVITY 3

Directions: List down at least five other examples of mixture that can be separated by decantation. Use a separate sheet

1.
2.
3.
4.
5.

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

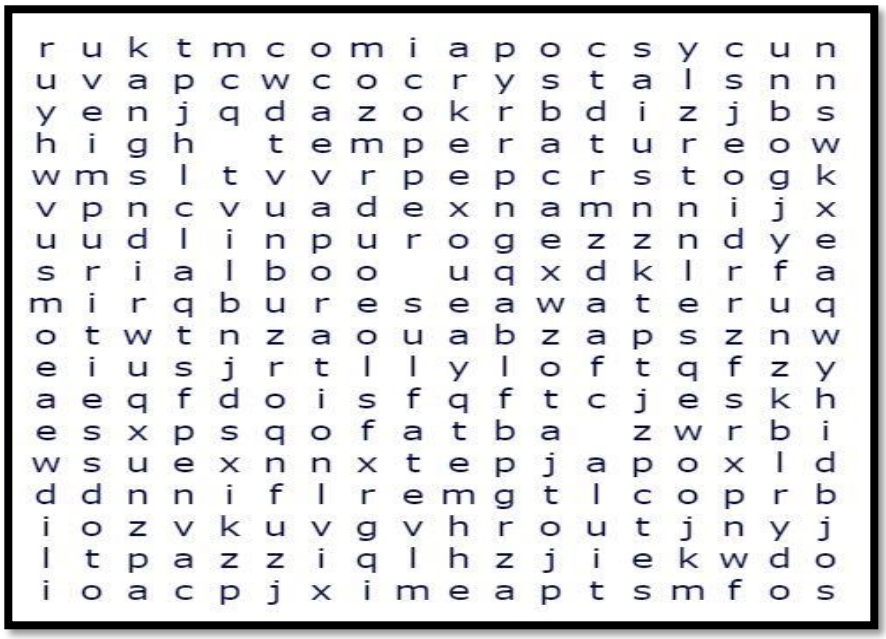
NAME: _____ **SCHOOL:** _____

ACTIVITY SHEET IN SCIENCE -6
1st Quarter, Week 4-6 – (Describe techniques in separating mixtures through evaporation)

ACTIVITY 1

Word Search

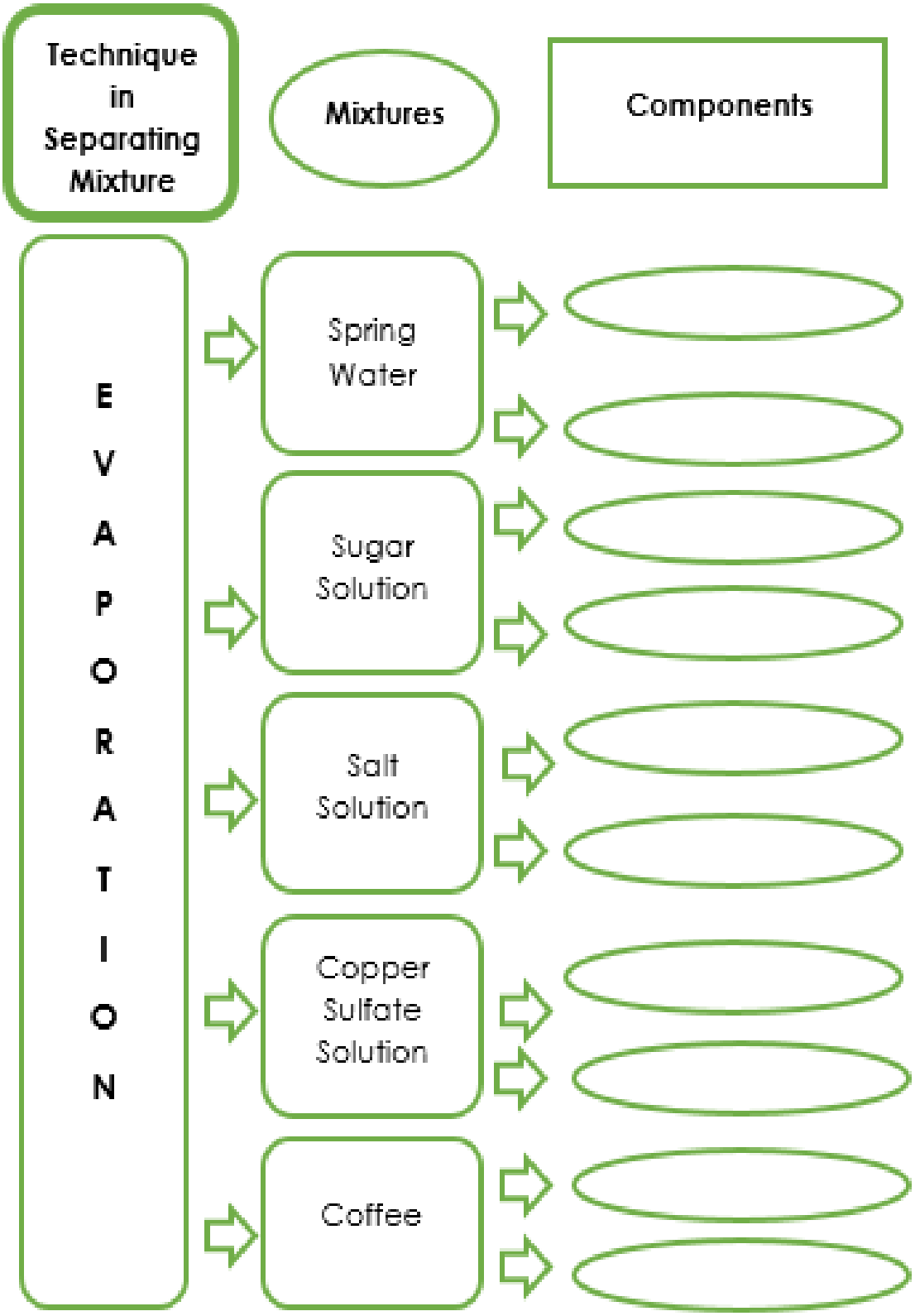
Below are selected science words that you met in this module. Find those science words hidden in the grid. They are positioned horizontally, vertically or diagonally. Encircle them.



evaporation	water	salt
sugar	copper sulfate	impurities
crystals	heat	seawater
high temperature	sun	salt ponds

ACTIVITY 2

Directions: Complete the graphic organizer. Write your answer in a separate sheet of paper.



ACTIVITY 3

Help Me!

Directions: Let us help the brown sugar get off the water. These questions would help you in your quest. Write your answer in a separate sheet of paper.

1. What are the materials that you need?

2. What are the steps that you should do?

3. Did you separate the brown sugar from the water? Explain your answer.

ACTIVITY 4

Directions:

A. Read carefully the given paragraph and answer the questions that follow. Write your answer on a separate sheet.

In a coastal barangay like Tortugas and Pto. Rivas, Balanga Ciy, Bataan, the main source of income is through fishing. Hence, the main product is fish both fresh and dried. This dried fish is a well – known delicacy in Bataan. They are usually given as token to the guests from other places.

1. What mixture so you think is present in the fish to be dried?

2. What happened to the mixture when the fish is exposed to sun's heat?

3. What is remained in the fish when the fishermen exposed them to let them dry? Why?

4. What happened to the water when it evaporates?

5. Is evaporation of water important? Why?

6. How do you think evaporation as a technique in separating mixtures helps the fishermen in making their products such as dried fish?

B. Complete the table below.

Mixture	Technique	Useful Product	Benefit
1. seawater			
2. sugar solution			
3. menthol solution			
4. copper sulfate solution			

ACTIVITY 5

A. Copy the item that does not belong to the group.

1. evaporation, boiling, high temperature, ethanol
2. heating, seawater, spring water, oil
3. impurities, salt, water, sugar
4. vaporization, tap water, acetone, alcohol
5. solution, mixture, homogeneous, salt water

B.

1. Write a short paragraph by answering the questions below. Write your answer in a separate sheet of paper.

a. Is spring water is a mixture?

b. Give the two components of this mixture?

c. How are you going to separate its components?

d. What technique in separating mixtures would you use? Why?

2. Illustrate the step by step procedure in separating this mixture through a diagram.

NAME: _____SCHOOL: _____

ACTIVITY SHEET IN SCIENCE -6
1st Quarter, Week 4-6 – (Describe techniques in separating mixtures through filtering)

ACTIVITY 1

I. Title: Separating mixtures through filtering.

II. Material: muddy water, filter paper/cloth

III. Procedures:

1. Check the apparatus/materials to be used.
2. Remember the standards to follow in doing an activity.
3. Filter the mixture using the filter paper/cloth.

IV. Questions:

1. What happened to the muddy water after filtering?
2. Are there remains of solid on the filter paper/cloth?

   What about the water where did it go?

ACTIVITY 2

Direction: Identify the following materials used in filtering mixtures.

1. 

2. 

3. 

4. 

5. 

ACTIVITY 3

At home we use many filtering devices. Most are used in the kitchen but there are many others that you may not have thought of as filtering devices. The pictures below show some of these devices. Can you name them? Choose your answer from the box. Write your answer on a separate sheet of paper.

Tea bag	Slotted spoon	Colander
Deep fry basket	Fly screen in window	Sink plug hole

1._____ 2._____ 3._____

4._____ 5._____ 6._____

ACTIVITY 4

You will need the following materials:

-mixture of sand and water

-plastic funnel

-2 glass jars

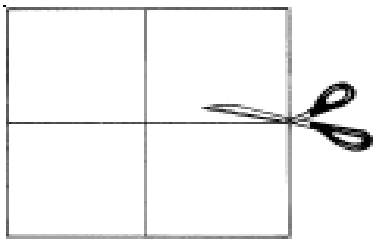
-sheet of long bond paper

Do the following:

(Remember the standards to follow in doing an activity.)

1. Put the sand and water mixture in one of the glass jars.
2. Let the mixture stand for around 10 minutes.
3. Prepare the filter paper from the bond paper as follows:

a. Fold the bond paper into four equal parts. Cut out one of the parts



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

NAME: _____ **SCHOOL:** _____

ACTIVITY SHEET IN SCIENCE -6
1st Quarter, Week 4-6 – (Describe techniques in separating mixtures through sieving)

ACTIVITY 1

Procedure: Perform sieving at home.

Materials: sieve and flour

Be careful in doing the acitivity

Direction: Describe the difference between the flour that goes through sieving procedure and the other are not.

Describe the flour that undergo sieving.

_____
_____
_____

Describe the flour that do not undergo sieving.

_____
_____
_____

ACTIVITY 2

Direction: Check True if the statement is correct and cross-out False if not.

	True	False
1. A sieve can hold liquid		
2. Through sieving mixture combined together		
3. Sieving makes our life easier in terms of separating two different useful components and removing useful components from harmful impurities.		
4. You can use a sieve if you are having a hard time in separating coconut milk/juice to its meat.		
5. Sieving the flour during baking makes the bread coarsely and unpleasant to eat.		

ACTIVITY 3

Direction: Match column A with column B.

1. A _____ is a tool used in sieving mixture.
2. Sieving is used in _____ mixtures.
3. The purpose of separating _____ is to remove two different useful and harmful components.
4. Separating flour from impurities usually applied in _____.
5. Sieving the sand from the stone is a sight in _____ site.

a. baking

b. construction

c. sieve

d. mixtures

e. separating

ACTIVITY 4

Direction: Read the following statement and look for the answer in the box below.

1. A sieve is made up of _____.
2. Sieve is usually _____ shape.
3. _____ is a tool used for sieving mixtures.
4. _____ is a simple technique for separating mixture of different particles and make our task easier.
5. Sieving mixture can be applied in our daily _____.

sieving	metal mesh	life	evaporation	round	sieve

NAME: _____SCHOOL: _____

ACTIVITY SHEET IN SCIENCE -6
1st Quarter, Week 4-6 – (Describe techniques in separating mixtures through using of magnet)

ACTIVITY 1

I. Title: Magnetic or Not?

II. Materials:

Small permanent magnet

Steel item (spoon)

Iron Item (concrete nail)

Aluminum item (tin can or soft drink can)

Plastic item (plastic spoon or plastic comb)

Wood item (pencil)

Procedure:

1. Gather the needed materials.

2. List all the materials to be tested in the Table 1.

3. Predict first if the materials you have is either magnetic or not magnetic based from its physical appearance. Write your prediction in Table 1.

4. Now, try to test if the materials are magnetic or not by testing if they can be attracted to a permanent magnet.

5. Upon completion of the tests, make a generalization.

No.	Materials	Magnetic or Non-magnetic	
		Prediction	Observation

Table 1: Magnetic Properties

Guide Questions:

1. Which materials are attracted to magnet? Why?

2. Which materials are not attracted to magnet? Why?

ACTIVITY 2

I. Title: Dare to Separate!
II. Materials:
salt, staple wires, plate, permanent magnet

III. Procedure:

1. Prepare the materials needed.
2. In a plate, combine the two substances, the salt and the staple wires to form a mixture.
3. Use a permanent magnet to separate the two substances.

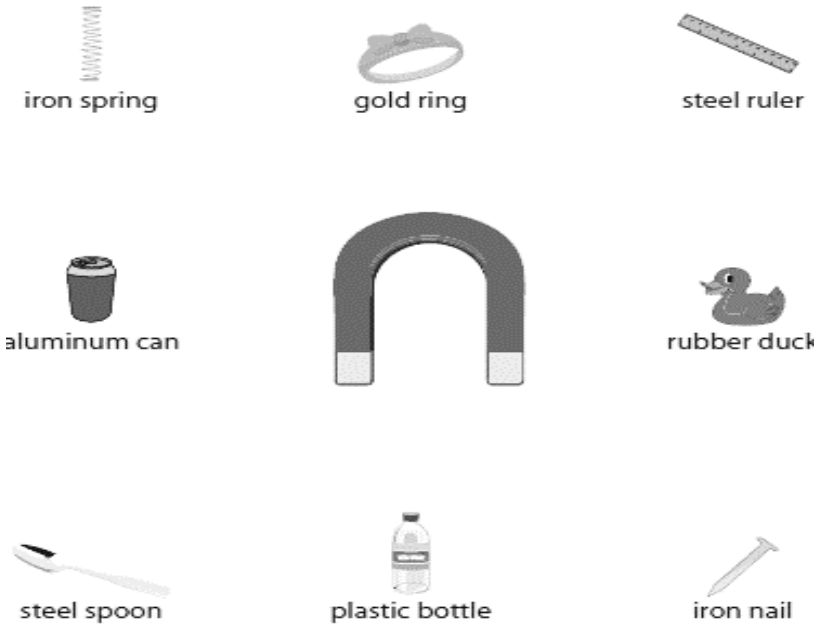
Guide Questions:

1. Which of the two substances attracted by magnet?
2. What do you call that substance?
3. Which of the two substances did not attract by magnet?
4. What do you call that substance?

ACTIVITY 3

Draw a line from a magnet to each magnetic object.

Please use the activity sheet provided.



ACTIVITY 4

Direction: Write Yes on the blank if the following mixture can be separated using a magnet and No if not.

_____1. staple wire and sand

_____2. calamansi juice

_____3. sawdust and nails

_____4. sand and shell

_____5. paper clips and cereal

_____6. pebbles and sand

_____7. iron filings and salt

_____8. mixed nuts

_____9. halo-halo

_____10. needle and sand

ACTIVITY 5

Directions: *Word hunt*: Find four materials that are magnetic. The words may be hidden in any direction. Please use the activity sheet provided.

W L Y B J C W T L I A N N Q T

Y G J Y V T Z C M O L H G X U

S G N I L I F A L U M I N U M

N E E D L E O L E E T S A Z N

U I R O N F I L I N G S G N S I

I U E K K J Z I S N Q I B U E D

ACTIVITY 6

Direction: Write **TRUE** if the statement is correct and **FALSE** if it is wrong.

_____1. Materials that are attracted to magnet are called magnetic materials.

_____2. We can use magnets in separating mixture consisting of magnetic and non-magnetic materials.

_____3. All metals are magnetic.

_____4. Magnetism is the ability of a magnet to attract magnetic materials.

_____5. Aluminum is magnetic.

ACTIVITY 7

Directions: Group the following materials into magnetic or non- magnetic. Write them in their proper column. Write your answer on a sheet of paper.

MATERIALS	
Magnetic	**Non-magnetic**

stone
iron filings
beans
petals
plastic bag
thumb tacks

ACTIVITY 8

Direction: Fill-in the blanks with the correct word/s to make the statement correct.

1. A magnet will attract any material that contains _____.
2. A heterogeneous mixture consisting of magnetic material and non-magnetic material can be separated using a _____.
3. Materials that are NOT attracted to magnet are called _____.
4. The _____ is the region around the magnet wherein a magnetic force is exerted.
5. _____ is the ability of a magnet to attract magnetic Materials.

ACTIVITY 9

Reflection on the experiment:

Give your answer to the following situation. Write your answer on a sheet of paper.

Based on the result of Activity 2, why was the salt not attracted to the magnet?

Can the same procedure be used to separate carpenter's nails from saw dust? Give a reason(s) for your answer.

_____
_____
_____
_____