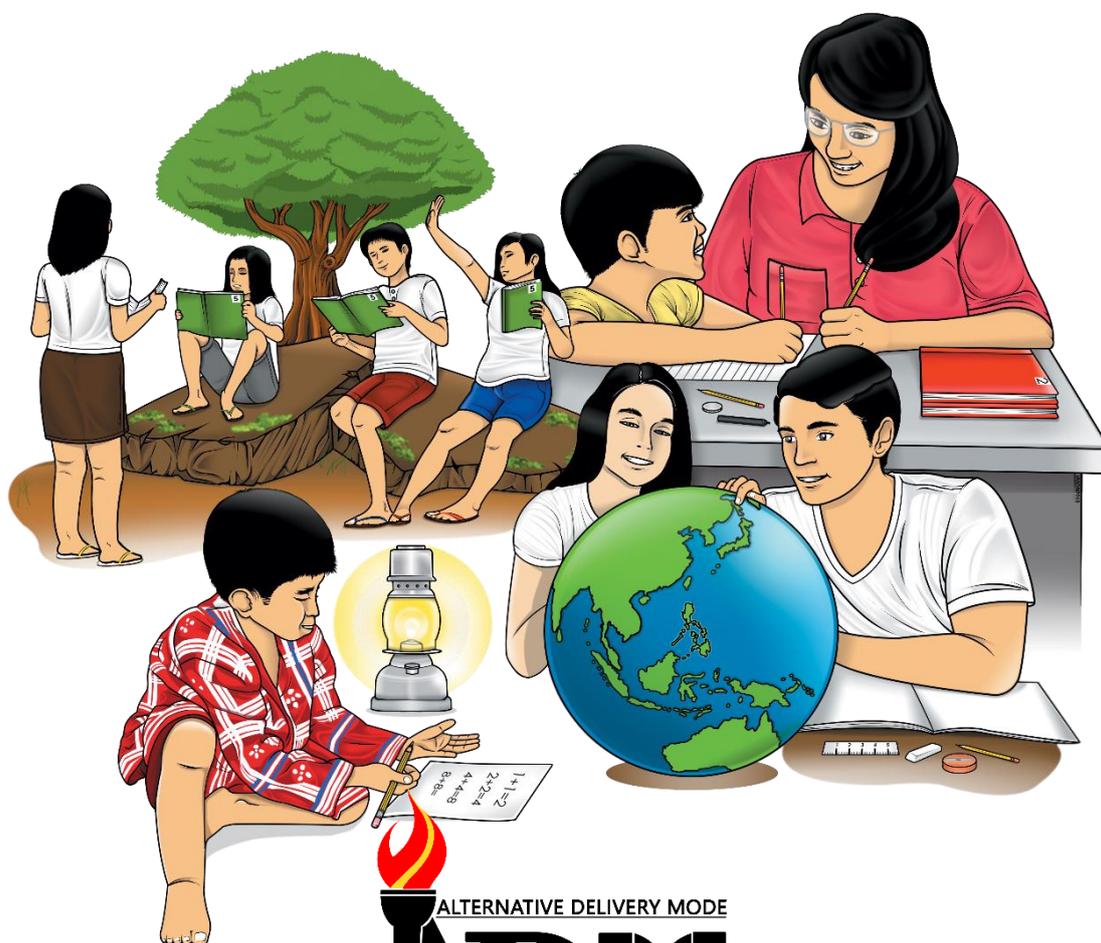


6

Science

Quarter 1 – Module 2

Lesson 2: Separating Mixtures through Evaporation



ALTERNATIVE DELIVERY MODE
ADM

GOVERNMENT PROPERTY
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Science – Grade 6
Alternative Delivery Mode
Quarter 1 – Module 2 Lesson 2: Separating Mixtures through Evaporation
First Edition, 2020

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6

Science

Quarter 1 – Module 2

**Lesson 2: Separating Mixtures
through Evaporation**

Introductory Message

For the facilitator:

Welcome to the **Science 6** Alternative Delivery Mode (ADM) Module on **Separating Mixtures through Evaporation!**

This module was collaboratively designed, developed and reviewed by educators both from public and private institutions to assist you, the teacher or facilitator in helping the learners meet the standards set by the K to 12 Curriculum while overcoming their personal, social, and economic constraints in schooling.

This learning resource hopes to engage the learners into guided and independent learning activities at their own pace and time. Furthermore, this also aims to help learners acquire the needed 21st century skills while taking into consideration their needs and circumstances.

As a facilitator, you are expected to orient the learners on how to use this module. You also need to keep track of the learners' progress while allowing them to manage their own learning. Furthermore, you are expected to encourage and assist the learners as they do the tasks included in the module.

For the learner:

Welcome to the **Science 6** Alternative Delivery Mode (ADM) Module on **Separating Mixtures through Evaporation!**

This module was designed to provide you with fun and meaningful opportunities for guided and independent learning at your own pace and time. You will be enabled to process the contents of the learning resource while being an active learner.

This module has the following parts and corresponding icons:



What I Need to Know

This will give you an idea of the skills or competencies you are expected to learn in the module.



What I Know

This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correct (100%), you may decide to skip this module.



What's In

This is a brief drill or review to help you link the current lesson with the previous one.



What's New

In this portion, the new lesson will be introduced to you in various ways; a story, a song, a poem, a problem opener, an activity or a situation.



What is It

This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.



What's More

This comprises activities for independent practice to solidify your understanding and skills of the topic. You may check the answers to the exercises using the Answer Key at the end of the module.



What I Have Learned

This includes questions or blank sentence/paragraph to be filled in to process what you learned from the lesson.



What I Can Do

This section provides an activity which will help you transfer your new knowledge or skill into real life situations or concerns.



Assessment

This is a task which aims to evaluate your level of mastery in achieving the learning competency.



Additional Activities

In this portion, another activity will be given to you to enrich your knowledge or skill of the lesson learned.



Answer Key

This contains answers to all activities in the module.

At the end of this module you will also find:

References

This is a list of all sources used in developing this module.

The following are some reminders in using this module:

1. Use the module with care. Do not put unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Don't forget to answer *What I Know* before moving on to the other activities included in the module.
3. Read the instruction carefully before doing each task.
4. Observe honesty and integrity in doing the tasks and checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator. Always bear in mind that you are not alone.

We hope that through this material, you will experience meaningful learning and gain deep understanding of the relevant competencies. You can do it!



What I Need to Know

This module was designed and written with you in mind. It is here to help you master the matter. The scope of this module permits it to be used in many different learning situations. The language used recognizes the diverse vocabulary level of students. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the module you are now using.

The module is about:

- separating mixtures through evaporation.

After going through this module, you are expected to be able to:

- identify mixtures that can be separated through evaporation;
- identify the process of separating mixtures which uses evaporation technique; and
- apply the evaporation technique in everyday life.



What I Know

Direction: Write the letter of the correct answer. Do it in your Science journal or notebook.

1. What method is used to obtain salt from sea water?
 - a. decantation
 - b. sedimentation
 - c. evaporation
 - d. filtering
2. Which of the following examples undergo evaporation process?
 - a. a pail of water under the heat of the sun
 - b. brushing your teeth after meal
 - c. ironing clothes every weekend
 - d. listening to the radio
3. It is the main factor that causes evaporation process in separating mixtures.
 - a. water
 - b. heat
 - c. smoke
 - d. light
4. Princess accidentally spill a glass of water in the salt container and she is thinking with of a solution on how she's going to recover salt from water. What will Princess do to return the salt to its original phase?
 - a. She will wrap it with newspaper tightly
 - b. She will throw it away in the waste can
 - c. She will hide it in a dark corner
 - d. She will boil the solution
5. While boiling water in a kettle, Gwayne noticed that there are smoke coming from the spout of a kettle. He asked his mother, "Why did the smoke rise upward"? What do you think will be the mother's answer?
 - a. because the water reached its cooling point
 - b. because the water reached its boiling point
 - c. because the water is heated and became water vapor
 - d. because the water is freezing

Write **E** if the following conditions undergo the evaporation technique of separating mixtures and **N** if not.

6. water in the canal becomes less after the rain - _____
7. doormat on the floor - _____
8. wet hair becomes dry - _____
9. chair on the ground - _____
10. cooling after sweating - _____

Lesson

2

Separating Mixtures through Evaporation

One of the main ingredients in cooking food is salt. Salt serves as an important element in our planet because of its many uses. We often see the crystal white color that adds savor to our everyday meal. The salt is also used as a component of other products sold in the market. But, have you ever wonder how salt is made? In this module we are going to learn about the evaporation process and its examples.



What's In

Direction: Identify the technique of separating **mixtures**. Write **F** for filtering and **S** for sieving. Use a separate sheet of paper.

1. powder milk with small stone - _____
2. sand from stone - _____
3. alcohol from coins - _____
4. grind rice from buttons - _____
5. grind coffee from hot water - _____



What's New

Heat is an important component to our environment as it makes green things live and grow abundantly, the presence of the sun's heat serves as the main source of energy in our planet as it brings many uses to the *biotic* known as living things and *abiotic* or non-living things components of our surroundings.

As heat is used by animals and plants as the main source of energy it is also useful in so many things in the process of evaporation as one of the techniques in separating mixtures.



Evaporation

Evaporation is a process of separating mixtures which involves heating the solution until the solvent evaporates leaving behind the solid residue.

Heat being the main component in this process separates the mixtures of solid from a liquid. As liquid goes in the air in a form of gas when heated, changing liquid to gas as an example of physical change.

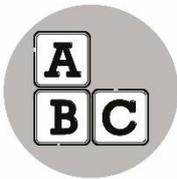
Some examples of evaporation are boiling water, drying clothes, and drying of wet roads after heavy rain.



What is It

Direction: From the short information that you have read, answer the following questions on the blank provided. Use a separate sheet of paper.

1. What is evaporation?
2. What is needed to achieve evaporation process?
3. Give 3 examples of situation where evaporation process was observed.
4. What kind of material was left behind when mixture was heated?
5. What kind of change is involve in evaporation process?



What's More

Direction: Read the conditions stated in the box. Pick out those that undergo evaporation process. Write your answer in your notebook.

burning paper	coloring a book
cooking noodles	cooling after sweating
writing	boiling mongo seeds
drying of sand after the rain	watching tv
drying of wet floor	salt making
drying of plate after washing	
cooking rice	



What I Have Learned

Complete the following ideas. Do it in your Science journal.

I learned that.....

Evaporation is a process of separating mixtures which involves _____ until the solvent _____ leaving behind the _____.



What I Can Do

Direction: Read the following. Write your answer in your journal.

1. In a Grade 6 Science class a group of pupils would like to separate salt from water. What method will they use to separate the mixture? Explain your answer.
2. In the illustration shown below, explain a few sentences the technique of separating mixtures and give the benefit of separating it.





Assessment

Direction: Choose the letter of the correct answer. Write your answer in your journal.

1.  Lester had noticed that the amount of water in a container with a plant becomes less as the days goes by. What do you think is the reason of decreasing amount of water in a container?
 - a. Some insects sipped the water.
 - b. Water in the container was not changed.
 - c. Water evaporated because of heat.
 - d. The plant has a stem.
2. Which of these examples show-evaporation process as technique of separating mixtures?
 - a. drying of water on the table
 - b. flooding of water in the river
 - c. cooling of water in the refrigerator
 - d. freezing of water in the ocean
3. What technique will Jocelyn use if she wants to separate salt mixed with water in a container?
 - a. filtering
 - b. evaporation
 - c. picking
 - d. sedimentation
4. In evaporation process, liquid becomes _____ when heated.
 - a. solid
 - b. ice cubes
 - c. plasma
 - d. vapor
5. It is a process of separating mixtures which involves heating leaving the solid residue in a container.
 - a. evaporation
 - b. precipitation
 - c. distillation
 - d. sedimentation

Direction: Put a ✓ before the number if the technique used is Evaporation and X if not.

_____ 6. water cycle

_____ 7. using cell phone

_____ 8. pulling a chair

_____ 9. drying of hair using hair dryer

_____ 10. boiling camote



Additional Activities

In your daily activities at home think of 5 chores where evaporation technique is involved in accomplishing your activity. Explain your answer using complete sentences. You can also draw or use picture in explaining your answer. Write them in your Science journal.



Answer Key

Additional Activity Answers may vary.	What I can do Answers may vary.	What's More Answers may vary.
<p>10. /</p> <p>9. /</p> <p>8. X</p> <p>7. X</p> <p>6. /</p> <p>5. a</p> <p>4. d</p> <p>3. b</p> <p>2. a</p> <p>1. c</p> <p>Assessment</p>	<p>Answers may vary.</p>	<p>What I have Learned</p> <p>Answers may vary.</p>
<p>What's In It</p> <p>1. It is a process of separating mixtures which involve heating the solution until the solvent evaporates leaving behind the solid residue.</p> <p>2. heat</p> <p>3. boiling water</p> <p>4. drying clothes</p> <p>5. drying of wet roads after a heavy rain</p> <p>6. cold</p> <p>7. physical change</p>	<p>What's In</p> <p>1.S</p> <p>2.S</p> <p>3.F</p> <p>4.S</p> <p>5.F</p>	<p>What I Know</p> <p>1. c</p> <p>2. a</p> <p>3. b</p> <p>4. d</p> <p>5. a</p> <p>6. e</p> <p>7. m</p> <p>8. e</p> <p>9. m</p> <p>10. e</p>

□

References:

K to 12 Curriculum Guide in Science

Padpad Evelyn, C. (2017). The New Science Links Worktext in Science and Technology 6. 856 Nicanor Reyes, Sr. St, Manila Philippines. Rex Book Store, Inc.

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