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DEPARTMENT OF EDUCATION

Science
Quarter 1 – Module 1
Lesson 6: Suspensions and Their Characteristics

ALTERNATIVE DELIVERY MODE
ADM

Science – Grade 6
Alternative Delivery Mode
Quarter 1 – Module 1 Lesson 5: Colloids and Their Characteristics
First Edition, 2020

Published by the Department of Education
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Undersecretary: Diosdado M. San Antonio

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Printed in the Philippines by _____

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Quarter 1 – Module 1
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Introductory Message

For the facilitator:

Welcome to the Science Grade 6 Alternative Delivery Mode (ADM) Module on Colloids and Their Characteristics.

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.

In addition to the material in the main text, you will also see this box in the body of the module:

Notes to the Teacher

This contains helpful tips or strategies that will help you in guiding the learners.

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 Grade 6 Alternative Delivery Mode (ADM) Module on Colloids and Their Characteristics.

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 part will be your guide to learn in the specific lessons specifically your skills and competencies.
 ***What I Know***	. This contains a 10-item pre-test that will check what you already know.
 ***What's In***	. In this section, you will be given review questions or exercises that connect your previous lesson to the new one.
 ***What's New***	It is in this part that the new lesson will be introduced to you in different ways: a story, a poem, a problem opener, an activity, or a situation.
 ***What is It***	. This portion will give you the topic, information and concepts as a brief discussion for you to learn. You will be also be given specific instructions on how to go about the lesson.
 ***What's More***	. This provides you questions and exercises to help you deepen your understanding and find practical applications of the concept.
 ***What I Have Learned***	This includes a short fill-in the blanks summary of the topic. It is in this part that helps you generalize your understanding of the concepts.

 ***What I Can Do***	This section includes an activity or exercises that will help you apply your knowledge into real-life situations.
 ***Assessment***	This is composed of a 10-item exercises for you develop your mastery of the topic to and to assess if you have attained the learning competency.
 ***Additional Activities***	This part will be the last activity for you to enhance your skill of the lesson learned. It will give you step by step instructions to follow.
 ***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:

- the appearance and uses of suspensions.

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

- describe the appearance and uses of suspensions

What I Know

A. For numbers 1-5, write S if the material/materials are a suspension and N if not. Write your answer using your Science journal or notebook.

1. water and sand mixture
2. muddy water
3. dust and air mixture
4. salt and water mixture
5. soap

B. For numbers 6-10, answer it with TRUE if the statement is correct and FALSE if it is not.

_____6. Sand is insoluble to water.

_____7. A suspension consists of two or more substances that will mix together, but do not dissolve into each other to form new particles or compounds.

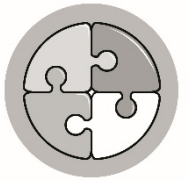
_____8. The mixture of a sugar and water is an example of a suspension.

_____9. Suspensions are insoluble mixture.

_____10. Suspensions are mixtures composed of materials that are visible to the naked eyes.

Lesson 6 Suspensions and Their Characteristics

Particles in the surrounding environment that suspend in air and water affect the characteristics of some substances when combined with it. When you put some flour in a glass of water and stir it, flour will not dissolve entirely in a water, but it will settle down when left undisturbed. Visible particles of flour can be seen to the naked eyes as it makes the water cloudy.



What's In

Write Insoluble or Soluble solution for the following mixtures. Write your answer using your journal or notebook.

1. gasoline in water
2. acetone in nail polished
3. salt in alcohol
4. oil in vinegar
5. tawas in water

What's New

Mixtures can be classified as solution, suspension, and colloids that differ in their solubility. Mixtures of tea leaves in hot water is an example of suspension. Tea leaves settle down at the bottom where you can see the two mixtures combined. Suspension is a kind of mixture where visible particles can be seen to the naked eyes as it settles down at the bottom when left undisturbed. Cloudy appearance appears when two materials were mixed. It can be used in processing food, beverages, and medicine.

What is It

From the short information that you have read about suspension, answer the following questions using your Science journal or notebook.

1. What is a suspension?

2. Give two examples of suspension?

3. Give three uses of suspension.

4. What is the appearance of suspension when two materials were mixed?

5. Where can particles usually be seen when two materials were combined in a suspension?

What's More

Activity 1. Pick out the examples of suspensions inside the box. Do it in your Science journal or notebook.

gravel and water	soil and water	oil and water
salt and water	tea leaves and hot water	rice grain and water
	vinegar and soy sauce	

1.
2.
3.
4.
5.

Activity 2. List down the uses of suspensions. Give sample for each use.

1.
2.
3.

4.

What I Have Learned

Complete the paragraph below. Do it using your Science journal or notebook.

Suspension is a kind of mixture _____ _____ as it _____ at the bottom when left undisturbed.

What I Can Do

Answer the following questions. Write your answers using your Science journal or notebook.

- Based from the given illustration, describe what a suspension is about. _____.
- How does suspension appear? _____.

Assessment

Choose the letter of the best answer. Write the chosen letter on your Science journal or notebook.

1. What kind of mixture is formed when larger particles settle out when left undisturbed?
   a. colloid
   b. suspension
   c. solution
   d. solvent

2. What kind of mixture is formed when oil is mixed with water?
   a. solution
   b. water
   c. colloids
   d. suspension

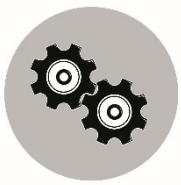
3. Which of the following mixtures is not an example of a suspension?
   a. salt and water
   b. oil and water
   c. sand and water
   d. chalk and water

4. How does suspension appear?
   a. It appears clear.
   b. It appears cloudy.
   c. It appears messy.
   d. none of the above

5. Which of the following statements do not describe a suspension?
   a. Suspensions are larger particles is visible to the naked eyes.
   b. Suspensions are particles that settle out when left undisturbed.
   c. Mixture of soil and water is an example of suspension.
   d. Suspensions are homogeneous mixture and invisible to the naked eye.

Identify whether the answer is Yes or No. Write your answer on a separate sheet.

_____6. Suspensions can be used in processing medicine, beverage and food.
_____7. The appearance of suspension is clear and uniform in color.
_____8. Mixture of tea leaves in hot water is an example of suspension.
_____9. Suspension appears cloudy.
_____10. Suspension is a kind of mixture where particles are evenly distributed and invisible.



Additional Activities

Are you familiar in making a blog? Create a simple blog by following the instructions below. Pass it to your teacher using your smart phone.

1. Prepare a beverage using tea leaves and observe its appearance.

2. Discuss the beneficial effects of drinking hot tea leaves.

Answer Key

What I Know	What's In	What's Is It
A. 1.S 2. S 3. S 4. N 5. N B. 1. True 2. True 3. False 4. True 5. True	1. Insoluble 2. Soluble 3. Soluble 4. Insoluble 5. Soluble	1. Suspension is a kind of mixture where particles are visible to the naked eyes as it settled at the bottom when left undisturbed. 2. Answers may vary. Oil and water Flour and water 3. Suspensions are used in food, medicine and beverages. 4. Cloudy 5. bottom
What's More Activity 1 1. Gravel and water 2. Soil and water 3. Oil and water 4. Tea leaves and water 5. Rice grain and water Activity 2 1. Use in making food. 2. Use in making medicine. 3. Use in making beverages.	**What I can do** 1. Suspension is a kind of mixture where particles are visible to the naked eyes as it settled at the bottom when left undisturbed.	**Assessment** 1. b 2. d 3. a 4. b 5. d 6. Yes 7. No 8. Yes 9. Yes 10. No

References

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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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