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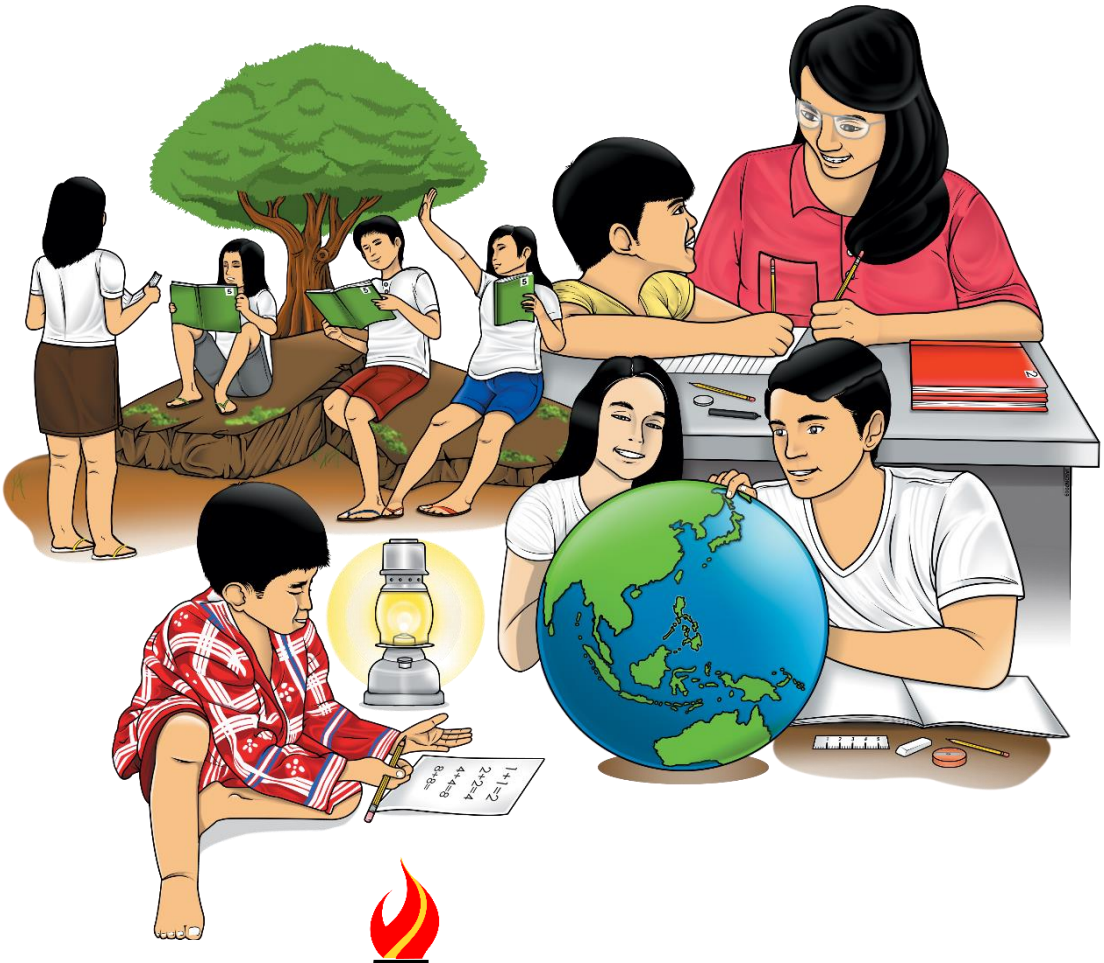
DEPARTMENT OF EDUCATION

Science

Quarter 1 – Module 2
Lesson 3: Separating Mixtures through Decantation



ALTERNATIVE DELIVERY MODE
ADM

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Science – Grade 6
Alternative Delivery Mode
Quarter 1 – Module 2 Lesson 3: Separating Mixtures through Decantation
First Edition, 2020

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Science

Quarter 1 – Module 2
Lesson 3: Separating Mixtures through Decantation

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Introductory Message

For the facilitator:

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

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 Decantation**!

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 decantation.

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

- separate mixtures through decantation.

What I Know

Direction: Write P if the mixture can be separated by picking out, E if by evaporation, F by filtration, D by decantation, and M by magnet. Do it using your Science journal or notebook.

_____ 1. Fruit salad

_____ 2. Mixture of water and salt

_____ 3. Coconut milk

_____ 4. Seawater

_____ 5. Water and sand

_____ 6. Sand and Nail

_____ 7. Rice grain and stone

_____ 8. Water and sugar

_____ 9. Baking powder and water

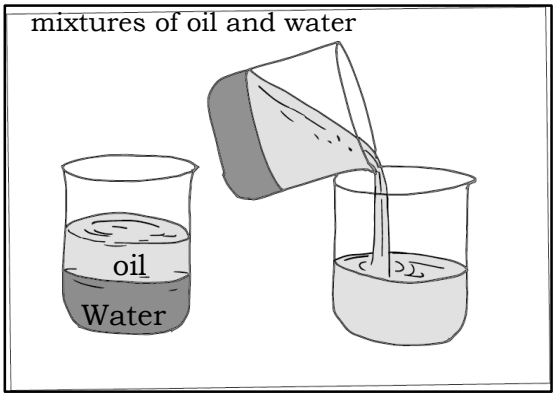
_____ 10. Pebbles, mongo seeds, and rice grain

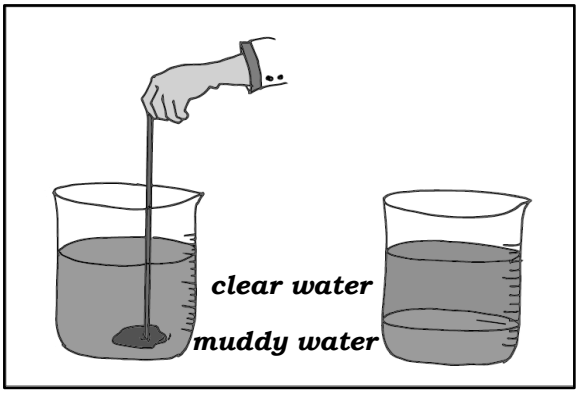
Lesson 3 Separating Mixtures through Decantation

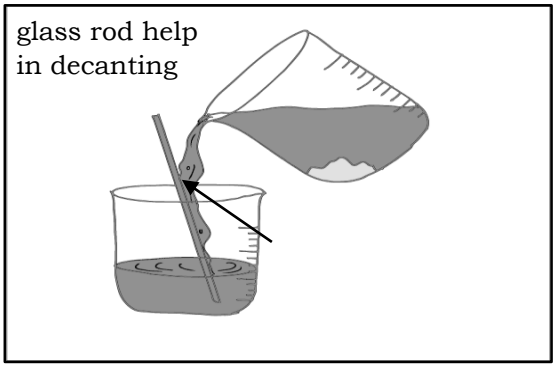
There are many ways of separating components of mixtures. Heterogeneous mixtures can be separated by physical manipulation, undissolved solid in liquid can be separated by filtration, components of suspension can be separated by decantation, elements in solution can be separated by evaporation or distillation, and mixtures of metals and nonmetals can be separated by magnetism. Substances in different mixtures are usually separated from one another using a certain process method. The method used depends on the type of mixtures.

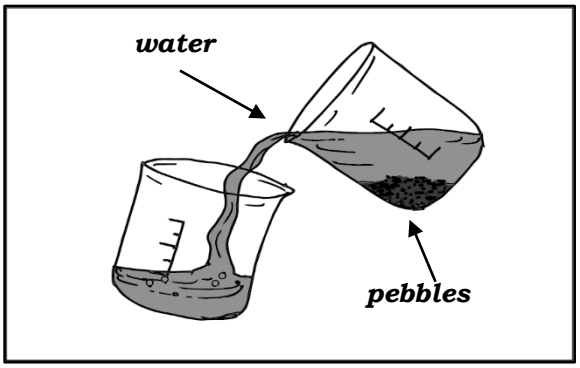
What's In

Observe the following pictures. Find out how mixtures are being separated.

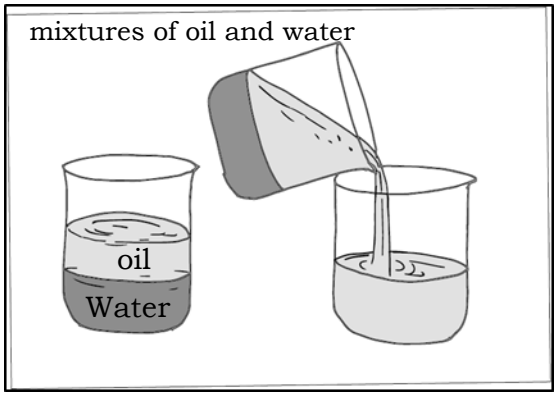


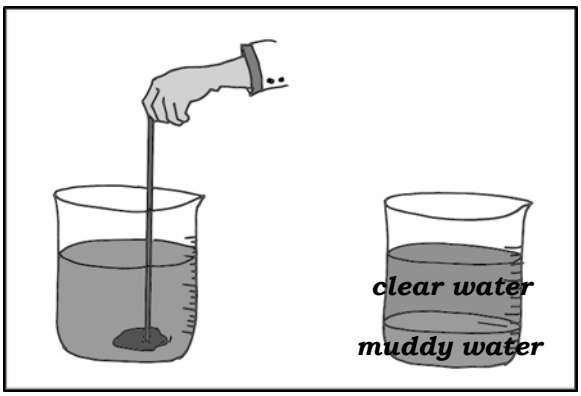


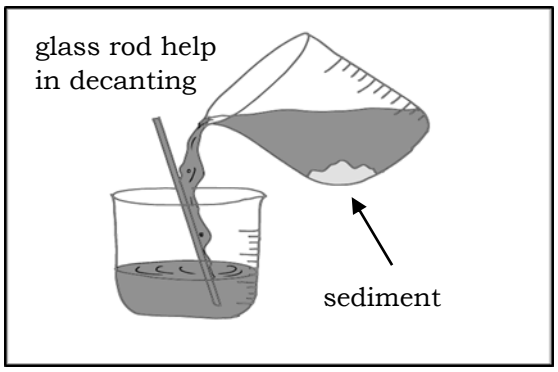


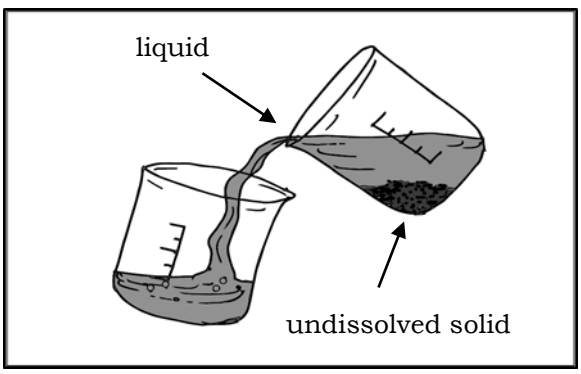


What's New









Decantation is a technique used in separating a less-dense substance from a dense one. In the process of decantation, the mixture is left undisturbed. When the components are separated, the less dense substance could be removed by scooping using a spoon or it can be removed by slowly pouring out the less-dense substance. Oil in water could be removed using the decantation technique. The fats that float in your sinigang could be removed by decantation or scooping.

Some of the mixtures that can be separated by decantation are the following:

A. oil in water

B. Gasoline in water

C. Sinigang with floating fats

D. Mud and water

What is It

Direction: Read the following sentences. Write **TRUE** if the statement is correct and **FALSE** if it is not. Write your answer on a piece of paper.

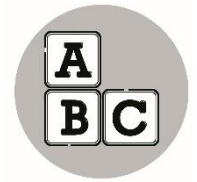
1. Decantation is a technique used in separating a less dense substance from a denser one.

2. In the process of decantation, the mixture is less disturbed.

3. We used decantation method in separating the fruit salad mixtures.

4. Oil in water could be removed using the decantation technique.

5. Decantation is used in removing oil or gasoline from an oil spill.



What's More

Direction: Study the following mixtures. Tell whether they can be separated through decantation methods. Write **YES** or **NO** on the blank provided for. Write your answer on a piece of paper.

1. gasoline in water _____
2. arroz caldo soup _____
3. spaghetti _____
4. sinigang with floating fats _____
5. ice cream _____
6. fruit salad _____
7. oil in water _____
8. lugaw _____
9. batchoy _____
10. tinolang manok _____

What I Have Learned

Direction: Copy and complete the paragraph by supplying the missing word in the blank. Write your answer on a piece of paper.

I learned that ….

Decantation is a technique used in separating (1) _____ from a (2) _____ one. In the process of (3) _____, the mixtures is left undisturbed. When the (4) _____, the less dense substance could be removed by scooping using a spoon or it can be removed by slowly (5) _____.

What I Can Do

Read the following situation below. Write you answer in a piece of paper.

1. An oil spill is one of the environmental problems that occur in the bodies of water. What method of separating mixtures can be used in order to solve this problem?

2. How can you apply the decantation method in your everyday living?

Assessment

Direction: Choose the correct answer in each number. Write your answer using your Science journal or notebook.

1. Which of the following mixtures can be separated using decantation method?
   a. sugar and milk
   b. water in oil
   c. mixed nuts
   d. vegetable salad with dressing

2. Your mother asked you to cook dried fish for lunch and you accidentally mixed the oil with water. What method will you use to separate the mixture?
   a. decantation method
   b. magnetism
   c. evaporation
   d. filtering

3. Which one of the following techniques would best be used to separate soil and water?
   a. filtration
   b. distillation
   c. decanting
   d. chromatography

4. This method is a technique used in separating a less-dense substance from a denser one.
   a. evaporation
   b. decantation
   c. picking
   d. all of the above

5. What will happen to the less-dense substance of mixtures if you separate them using decantation method?
   a. it will evaporate
   b. it will float up
   c. remain the same
   d. it will become solid

6. In the process of decantation, the mixtures is left _____?
   a. behind
   b. undisturbed
   c. removed
   d. none of the above

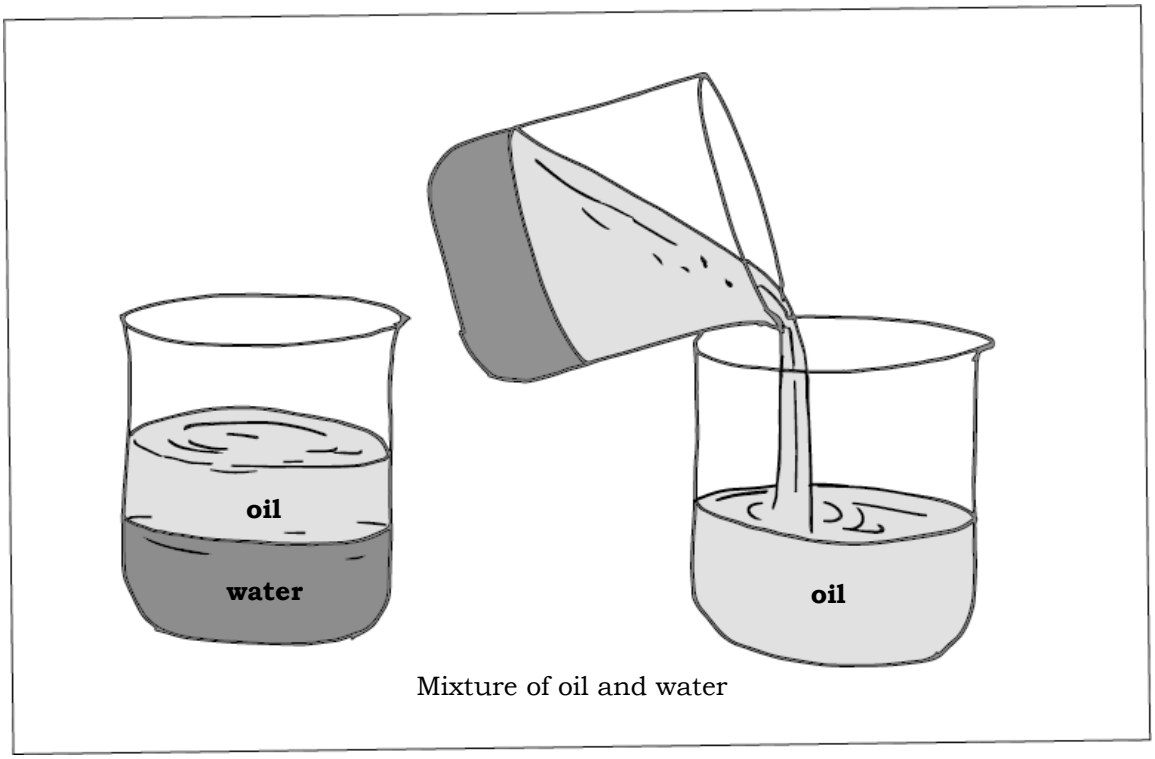
7. How can decantation method be useful to everyday life?
   a. it help us to become more productive
   b. it gives us satisfaction to our everyday living
   c. it just an ordinary technique
   d. it helps us to make our everyday living more efficient and easier

8. Is decantation method applicable to all types of mixtures?
   a. yes
   b. no
   c. maybe
   d. sometimes

9 -10. Give two examples of mixtures that can be separated through decantation method.

Additional Activities

Explain how these mixtures can be separated through decantation method. Write your answer in a piece of paper in a paragraph form.



Mixture of oil and water

What I Know	What's More	What's Is It
1. P 2. E 3. F 4. E 5. D 6. M 7.P 8.F 9.F 10.P	1. YES 2. NO 3.NO 4. YES 5. NO 6.NO 7.YES 8.NO 9.NO 10.NO	1. TRUE 2.FALSE 3.FALSE 4.TRUE 5.TRUE
		Assessment: 1. b 2.a 3. b 4.b 5. b 6.b 7.d 8.b 9-10 Water and oil Gasoline and water Mud and water Sinigang with floating fats Note: Answers may vary

Answer Key

References:

K to 12 Curriculum Guide in Science 6

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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