

An illustration depicting various educational activities. In the upper left, a group of students are gathered under a large green tree; one student stands while others sit on a log, all holding green books. To the right, a female teacher with long black hair and glasses, wearing a red shirt, sits at a desk with a male student, both writing. In the lower right, a male student in a white shirt sits at a desk, holding a large globe of the Earth, with a female student looking on. In the lower left, a male student in a red and white patterned shirt sits on the ground, writing on a piece of paper next to a glowing lantern. A small flame icon is at the bottom center.



Science – Grade 6
Alternative Delivery Mode
Quarter 2 – Module 7: Protection and Conservation of Ecosystem
First Edition, 2020

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Science

Quarter 2 – Module 7

Protection and Conservation of Ecosystem

Introductory Message

This Self- Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises and discussion are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide your step by step as you discover and understand the lesson prepared for you.

Pre- test are are provided to measure your prior knowledge on lesson on each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator on your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self –check your learning. Answer key are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Note to the teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home- based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module do not hesitate to consult your facilitator.

Thank you.

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

- Identifying ways to protect and conserve the tropical rainforest, coral reefs and mangrove swamps
- Explaining the need to protect and conserve tropical rainforests, coral reefs and mangrove swamps.

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

- identify ways to protect and conserve the tropical rainforest, coral reefs and mangrove swamps
- explain the need to protect and conserve tropical rainforests, coral reefs and mangrove swamps



What I Know

Directions: Choose the letter of the best answer. Write your answer in your answer sheet.

1. Which statement best describe conservation?
 - a. use of natural resources
 - b. maintaining the life of ecosystem
 - c. wise use and preservation of resources
 - d. utilizing of earth's resources
2. Which human activity contributes to the destruction of forest?
 - a. reforestation
 - b. deforestation
 - c. protecting the forest against harmful activities
 - d. all of the above
3. The following are ways to conserve Earth's resources, which one is **NOT**?
 - a. proper waste disposal
 - b. reduce air and water pollution
 - c. buy products made from animals
 - d. help raise funds for environmental conservation
4. Which of the following destroys coral reefs?
 - a. building man-made fish sanctuaries
 - b. dynamite fishing
 - c. waste dumping
 - d. both b and c
5. It is an environment where both living and non-living things exist and interact with one another.
 - a. ecology
 - b. ecosystem
 - c. community
 - d. population
6. Which is a cause of habitat destruction?
 - a. too many plants
 - b. thriving animals
 - c. great weather
 - d. pollution

7. Species that are in danger of going extinct are called?
 - a. endangered
 - b. threatened
 - c. fossilized
 - d. adapted
8. Which situation does not maintain biodiversity?
 - a. Growing plants on a farm
 - b. Protecting all the species in an ecosystem
 - c. Protecting the habitats in an ecosystem
 - d. Removing an important predator from the ecosystem
9. When we cut down trees, what do we do to the habitats of many living things?
 - a. help
 - b. destroy
 - c. build
 - d. plant
10. What is/are the way/ways to restore denuded forest?
 - a. reforestation
 - b. deforestation
 - c. *kaingin* system
 - d. dynamite fishing

Lesson

1

Protection and Conservation of Ecosystems

Forest, coral reefs, and mangrove swamp ecosystems need to be protected and conserved. We need to give importance to these ecosystems because they provide us our needs.



What's In

Write PC if the following statement shows protecting and conserving tropical rainforest, coral reefs and mangrove swamps and write N if not.

- _____ 1. Replanting trees in the forest.
- _____ 2. Striking or touching a coral reef.
- _____ 3. Helping organizations dedicated in protecting and conserving natural resources.
- _____ 4. Saying no to deforestation.
- _____ 5. Establishing park for recreation.
- _____ 6. Maintaining sustainable limits in logging.
- _____ 7. Participating in local coastal cleanups.
- _____ 8. Recycling and disposing trash properly.
- _____ 9. Clearing mangroves for property development.
- _____ 10. Restoring mangrove forest.



What's New

The Ecosystem is an environment where both living and non-living things exist and interact with one another. Identify what type of ecosystem is in the pictures.

1.



2.



3.





What is It

The Ecosystem is an environment where both living and non-living things exist and interact with one another. Example of ecosystem is the tropical rainforests, coral reefs, and mangrove swamps.

A tropical rainforest is simply an area where tall, mostly evergreen trees grow and with high amount of rainfall.

Coral reefs serve as habitat for many animals. They are a breeding ground of marine life. It is composed of non-living components such as water and sand and living components such as fish, crustaceans, mollusks, cnidarians, sponges and echinoderms.

Mangrove swamp ecosystem is composed mostly of mangrove plants and animals like crustaceans and migratory birds. It is an important system that allows for the breeding of fishes and survival of other marine animals. It is also a part of the coastal and marine ecosystems.

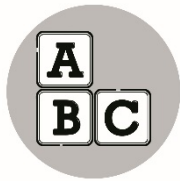
Today, tropical rain forests, coral reefs and mangrove swamps are disappearing from the face of the globe. Despite growing international concern, these are continuing to be destroyed. These destructions have a global impact through species extinction, the loss of important ecosystem services and resources. However, these destructions can be slowed, stopped and in some cases even reversed.

We need to protect and conserve the Earth's resources. We need to give high value to our tropical rain forests, coral reefs and mangrove swamps. Here are some ways to protect and conserve it.

1. Habitat restoration
2. Reforestation or replanting a forest
3. Mangrove rehabilitation.
4. Wildlife conservation which include protecting a sanctuary where animals live.
5. Supporting projects of the government and non-government organization that protect tropical rainforest, coral reefs and mangrove swamps.

6. Joining organizations that conduct educational campaigns and give information on how to protect and conserve it.

Being responsible to the development and restoration of Earth's resources like the tropical rain forests, mangrove swamps and coral reefs are key for the long-term benefits to mankind.



What's More

Direction: Read and understand the following statements. Write your answer in your science journal.

1. Give at least 2 ways on how to protect and conserve living organisms found in the tropical rainforest, coral reefs and mangrove swamps.

2. Explain why we need to protect and conserve the following: tropical rainforest, coral reefs and mangrove swamps of the Philippines.

tropical rainforest:

coral reefs:

mangrove swamps:



What I Have Learned

Directions: Complete the statement below. Write your answer in your science journal.

I have learned that...

Tropical rainforests, coral reefs and mangrove swamps are some examples of _____. Hence, they should be protected and conserved. There are some ways to protect and conserve our ecosystem like habitat restoration , _____, _____, _____ and wildlife conservation.



What I Can Do

Directions: Read and write your ideas on the following. Write your answer in your Science Journal.

1. Provide at least 3 major threats to tropical forest?

2. Mangrove forest had been classified by many governments and industries alike as wastelands, or useless swamps. Do you agree with that? Why?

3. The coral reefs around the world face threats from climate change, overfishing and pollution. As a grade VI pupil, how can you help protect or lessen the threats for the coral reefs?



Assessment

Direction: Choose the letter of the best answer. Use a separate sheet for your answer.

1. Which of the following destroys coral reefs?
 - a. mangrove planting
 - b. building man-made fish sanctuaries
 - c. waste dumping
 - d. coastal clean up

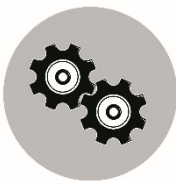
2. Which of the following strategies show how to conserve the balance of life in the ecosystem?
 - a. Massive cutting of trees
 - b. conserving the needs of living things
 - c. destroying wildlife ecosystem
 - d. Dumping garbage anywhere

3. Which of the following shows wildlife conservation?
 - a. excessive hunting of wild animals
 - b. protecting the forests against harmful activities
 - c. practicing *kaingin* system in the forest
 - d. muro-ami fishing

4. The following shows mangrove rehabilitation, EXCEPT:
 - a. Planting mangrove seedlings in the mangrove swamps.
 - b. Supporting projects for mangrove rehabilitation.
 - c. Making the mangrove swamps as dumping site.
 - d. Joining the campaign against mangrove destruction.

5. The _____ is one of the ways to restore denuded forest.
 - a. reforestation
 - b. deforestation
 - c. *kaingin* system
 - d. dynamite fishing

6. Why does dynamite fishing is being prohibited?
- The use of explosives destroys marine animals.
 - The use of explosives benefits plants and animals.
 - The use of explosives improves marine sanctuary.
 - It makes the coastal area erosion worse.
7. Massive _____ will destruct natural habitats of wildlife.
- reforestation
 - reclamation
 - deforestation
 - conservation
8. Why should mangroves be conserved and protected?
- The mangrove area makes coastal erosion worse.
 - The mangroves provide shelter for fishes and crustaceans.
 - The mangroves serve as dumping site.
 - The mangroves serve as area for fishing.
9. Here are some ways of protecting and conserving wild life, which one is not?
- Buy products made from animal parts.
 - Protect a fish sanctuary .
 - Support programs for wildlife conservation.
 - Help raise funds for environment conservation.
10. What areas or places where fishing and hunting are prohibited?
- rivers
 - swamps
 - coastal
 - sanctuaries
 - e.



Additional Activities

Make a poster showing how to protect and conserve the tropical rainforests, coral reefs and mangrove swamps.

RUBRICS FOR POSTER MAKING

Category	10 pts.	8 pts.	6 pts.	4 pts.
Coverage of the topic	The poster captures the important information about the topic	The poster captures the important information about the topic but need more information to fully understand it.	The poster need more information to further understand it.	The poster has nothing to do with the topic
Use of Graphics	All graphics are related to the topic	All graphics are related to the topic, but some are vague	1 graphics is not related to the topic	2 or more graphics are nor related to the topic
Organization	All information are organized well	1 information is not organized well	2 information are not organized well	3 or more information are not organized well
Layout & Design	All information on the poster can be clearly identified	Most of the information on the poster can be clearly identified	Some of the information on the poster can be clearly identified	Most of the information on the poster are not easy to understand
Mechanics	No spelling or punctuation error	Almost no spelling or punctuation error	A few spelling and punctuation error	Many spelling and punctuation error



Answer Key

<p>Assessment</p> <p>1. c 2. b 3. b 4. c 5. a 6. d 7. c 8. b 9. a 10. d.</p> <p>Additional Activities <i>Posters may vary</i></p> <p>What I Know 1. c 2. b 3. c 4. d 5. b 6. d 7. a 8. d 9. b 10. a</p>	<p>What I have Learned</p> <p>ecosystem</p> <p>reforestation, mangrove rehabilitation, supporting projects of the government and non-government organization, joining organization that conduct educational campaign on how to protect and conserve tropical rainforest, mangrove swamp and coral reefs</p> <p>What can I do</p> <p>1. Human threats are the major threats in tropical rainforest. 2. No. Mangrove swamps are important because they protect the shorelines from damaging storms, waves and floods. 3. By not throwing garbage that can pollute the water and can harm the reef. (Answers may vary)</p>	<p>What's In</p> <p>1. PC 2. N 3. PC 4. PC 5. N 6. PC 7. PC 8. PC 9. N 10. PC</p> <p>What's New</p> <p>1. CORAL REEF 2. TROPICAL RAINFOREST 3. MANGROVE SWAMP</p> <p>What's More <i>Answers may vary</i></p>
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