

Mi Isla: HOPE

Subject/Grade Level: *Grade 6/Integrated Science*

Title: *Mi Isla: HOPE*

Competency: *Functions of the Ecosystem*

KCh Learner Values: **Community – Oriented** (*I belong to a Community*)

Appreciation: Benefits of Mangroves

I appreciate that we are in a tropical country where trees and wildlife are abundant and diverse.

Critical Issue: *Caring for the Ecosystems*

I. Objectives

At the end of the lesson, students will be able to:

- understand each of the functions of the ecosystem;
- appreciate the nature and uses of mangroves;
- advocate and actually do activities on how to help restore mangroves.

II. Essential Understanding

- All organisms cause change/s in the ecosystem in which they live. If this/ these change/s reduce another organism's access to resources, that organism may either move to another location or die.
- Mangrove trees provide unique and important habitats for birds, mammals, crabs, and fish populations through the complex marine food chain, habitats available for breeding, and areas that offer protection for young animals. On the other hand, animals

III. Essential Questions

- How do the plants and animals benefit from mangroves?

IV. Summary of the Episode

The community devised ways to help preserve and conserve Isla Verde and its ecosystem.

Functions of the Ecosystem:

- a. self-regulating: carrying capacity – This is the maximum population of any species that can survive in a particular area before the ecosystem becomes too degraded.
- b. maximum sustainable yield – Maximum sustainable yield has been especially influential in the management of renewable biological resources such as commercially important fish, forests and wildlife.
- c. waste assimilative capacity – This is to communicate how pollution occurs when waste production goes beyond the recycling capacity of the ecosystem.
- d. natural enemies - This involves maintaining the balance in the population when natural enemies or predators are absent.
- e. self- perpetuating - This is the connection or connections between extinction and reproductive capabilities of organisms

V. Pre-Viewing (Motivation)

As part of the motivational activity, ask the students to group themselves into 3 or 4.

Give the students different scenarios to choose from.

- a. Deforestation (soil erosion, flooding and mudslides, desertification, loss of biodiversity and wildlife extinction)
- b. Pollution (sewage wastes, industrial wastes, pesticides)
- c. Coral Reef Destruction (dynamite fishing, human sewage, dive tourism, muroami)

Ask the students to define/describe the assigned phenomena including its causes and effects on the different habitats or ecosystems, one of which are the mangrove forests.

This activity will help the students better understand the causes of a particular phenomenon and its effects on the ecosystems. The episode will help the students realize the importance of taking care of the environment particularly our mangrove forests.

VI. Viewing Proper

Mi Isla (Grade 6 / HS Year1 - Integrated Science)

“**Mi Isla: HOPE**”

VII. Post Viewing

1. Questions (re the episode)

- a. What was the program about?

2. Review Questions (re content)

- a. Why are there so many organisms (plants/animals) in the mangrove forest?
- b. How important are mangrove trees in the forest (ecosystem)? Discuss and elaborate what we get from mangroves.
 - **Fisheries:** Fishery products include fish, prawns, shrimps, crabs, shells and clams (Mollusks), shipworms (Tamiluk).
 - **Forestry:** Forestry resources include firewood, tanbark, and timber for construction, fences, and furniture, boats and fishing poles.
 - Minor products can be taken from these forest resources. These are fibers, ropes, corks, floats, mats and honey.
 - **Other Livelihood Resources:**
 - Nypafruticans (used for making fans, thatch or shingles for roofing and walls for rural houses)
 - Dyes or tannins, mangrove extracts are good sources of seasoning, glues and medicines.
- c. How do the problems or issues mentioned earlier affect the processes/activities in a mangrove forest?

3. Group Work/Activity

Description of Situation	Decision: Healthy or Not Healthy	Reason (Why or Why Not)
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The marine area is declared a fish sanctuary. Divers are not allowed in the area. Coral reefs start to grow and fish begin to increase in numbers.		
More algae are growing. The nutrients have increased due to sewage and wastes. Sunlight cannot penetrate down to the coral reef.		
Blasting of fish is practiced. More fish are caught but dynamite blasts will destroy coral reefs.		
Divers and cleaners gather cans, plastics, bottles and other solid wastes from the sea floor and the beach. This is done regularly.		
The sewage system of the factory goes to the waterways and rivers. Nutrients and chemicals are added to the water. Fish take the chemicals and, in turn, are eaten by man.		

VIII. Synthesis and Valuing

To end the session, ask the following:

1. How did the given chart help you understand the meaning of a healthy environment?
2. What can you do or contribute to create a healthy environment?
3. Despite the many good things mangroves forests can offer, they are not free from abuse and various human stresses. Mangrove loss is mainly due to inappropriate human interventions such as conversion to aquaculture, commercial, residential and other uses. How can you contribute in saving our dying mangrove forests?

This episode can also be used in:

- Biology

- Social Studies (Civics and History)
- Values Education
- Other subjects discussing conservation of forests and the environment

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Appreciation: Benefits of Mangroves

I appreciate that we are in a tropical country where trees and wildlife are abundant and diverse.

Critical Issue: *Caring for the Ecosystems*

IX. Objectives

At the end of the lesson, students will be able to:

- understand each of the functions of the ecosystem;
- appreciate the nature and uses of mangroves;
- advocate ways on how to help restore mangroves.

X. Essential Understanding

- All organisms cause changes in the ecosystem in which they live. If this change reduces another organism's access to resources, that organism may move to another location or die.

- Mangrove trees provide unique and important habitats for birds, mammals, crabs, and fish populations through the complex marine food chain, habitats available for breeding, and areas that offer protection for young animals.

XI. Essential Questions

- How do the plants and animals in a mangrove forest benefit from each other?

XII. Summary of the Episode

This episode features how the community can help in the advocacy to conserve Isla Verde and some ways by which one can contribute to the preservation of marine life.

Functions of the Ecosystem:

- self-regulating: carrying capacity – This is the maximum population of any species that can survive in a particular area before the ecosystem becomes too degraded.
- maximum sustainable yield – Maximum sustainable yield has been especially influential in the management of renewable biological resources such as commercially important fish, forests and wildlife.
- waste assimilative capacity – This is to communicate how pollution occurs when waste production goes beyond the recycling capacity of the ecosystem.
- natural enemies - This involves maintaining the balance in the population when natural enemies or predators are absent.
- self- perpetuating - This is the connection or connections between extinction and reproductive capabilities of organisms

XIII. Pre-Viewing (Motivation)

As part of the motivational activity, ask the students to group themselves into 3 or 4.

Give the students different scenarios to choose from.

- Deforestation (soil erosion, flooding and mudslides, desertification, loss of biodiversity and wildlife extinction)
- Pollution (sewage wastes, industrial wastes, pesticides)

- f. Coral Reef Destruction (dynamite fishing, human sewage, dive tourism, muroami)

Ask the students to define/describe the assigned phenomena including its causes and effects on the different habitats or ecosystems, one of which is the mangrove forest.

This activity will help the students better understand the causes of a particular phenomenon and its effects on the ecosystems. The episode will help the students realize the importance of taking care of the environment particularly our mangrove forests.

XIV. Viewing Proper

Mi Isla (Grade 6 / HS Year1 - Integrated Science)

“Mi Isla: HOPE ”

XV. Post Viewing

4. Questions (re the episode)

- a. What was the program about?

5. Review Questions (re content)

- d. Why are there so many organisms (plants/animals) in the mangrove forest?
- e. How important are mangrove trees in the forest (ecosystem)? Discuss and elaborate to students the value we get from mangroves.
 - **Fisheries:** Fishery products include fish, prawns, shrimps, crabs, shells and clams (Mollusks), shipworms (Tamiluk).
 - **Forestry:** Forestry resources include firewood, tanbark, and timber for construction, fences, and furniture, boats and fishing poles.
 - Minor products can be taken from these forest resources. These are fibers, ropes, corks, floats, mats and honey.
 - **Other Livelihood Resources:**
 - Nypafruticans (used for making fans, thatch or shingles for roofing and walls for rural houses)
 - Dyes or tannins, mangrove extracts are good sources of seasoning, glues and medicines.
- f. How do the problems or issues mentioned earlier affect the processes/activities in a mangrove forest?

6. Group Work/Activity

Description of Situation	Decision: Healthy or Not Healthy	Reason (Why or Why Not)
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More algae are growing. The nutrients have increased due to sewage and wastes. Sunlight cannot penetrate down to the coral reef.		
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XVI. Synthesis and Valuing

To end the session, ask the following:

1. How did the given chart help you understand the meaning of a healthy environment?
2. What can you do or contribute to create a healthy environment?
3. Despite the many good things mangroves forests can offer, they are not free from abuse and various human stresses. Mangrove loss is mainly due to inappropriate human interventions such as conversion to aquaculture, commercial, residential and other uses. How can you contribute in saving our dying mangrove forests?

It can also be used in:

- Biology
- Social Studies (Civics and History)
- Values Education
- Other subjects discussing conservation of forests and the environment

Mi Isla: Good in Diversity (Marine)

Subject/Grade Level: *Grade 6/Integrated Science*

Title: *Mi Isla: Good in Diversity (Marine)*

Competency: *Human Impact on Ecosystem*

KCh Learner Values: ***I Empathize***

I am sensitive to others and appreciate personal differences.

I accept mutual accountability with other individuals for the fate of the planet.

Critical Issue: *Human responsibility in taking care of the environment*

XVII. Objectives

At the end of the lesson, students will be able to:

1. identify the manifestations, causes and effects of climate change;
2. devise and work for ways that will help restore balance in nature.

XVIII. Essential Understanding

- Humans can change natural habitats in ways that can be helpful or harmful for the plants and animals that live there.

XIX. Essential Questions

- How can human beings affect the ecosystems?

XX. Summary of the Episode

This episode presents some benefits of marine biodiversity to the community and how some human activities lead to its destruction.

XXI. Pre-Viewing (Motivation)

1. Before watching the episode, ask the students to get a partner and fill-out a chart.
2. Based on what they see on TV and newspapers or even personal experiences, let them write “what they know” (please refer to the table below) about human impact on the ecosystem.
3. Then on the other column, ask them to write the things that “they want to learn” about human impact on ecosystem.

What do I Know?	What do I want to Learn?
1.	1.
2.	2.
3.	3.

4. This activity will help the students better understand the impact of human activities on our ecosystem. The episode will make them realize that the concepts given are relevant to

Their day-to-day activities.

XXII. Viewing Proper

Mi Isla (Grade 6 / Grade 7 Science)

“Mi Isla: Good in Diversity”

XXIII. Post Viewing

7. Questions (re the episode)

- a. What was the program about?

8. Review Questions (re content)

- a. Cite some causes and effects of the Human Effects of Ecosystem were mentioned in the video.
- b. Enumerate ways on how we can prevent these Human Effects in the Ecosystem as mentioned in the episode.

XXIV. Synthesis and Valuing

To end the session, ask the following:

1. As students, how can you help save our environment? What activities have you personally embarked on?
2. What environmental projects can you suggest that will create an impact in our society? How will you influence your neighbors and barangay/government officials to support these projects?
 - Our environment is fast deteriorating. If we do not take care of the earth, we will destroy the only planet we have. Human activities slowly destroy the natural environment. But one great thing we can do is to follow the laws that the government enacted and is implementing to help save Mother Earth.

It can also be used in:

- Biology
- Social Studies (Civics and History)
- Values Education
- Other subjects discussing conservation of forests and the environment

Mi Isla: Good in Diversity (Marine)

Subject/Grade Level: *Grade 6/Integrated Science*

Title: *Mi Isla: Good in Diversity (Marine)*

Competency: *Human Impact on Ecosystem*

KCh Learner Values: ***Empathize***

I am sensitive to others and appreciate personal differences.

I accept mutual accountability with other individuals for the fate of the planet.

Critical Issue: *Human responsibility in taking care of the environment*

XXV. Objectives

At the end of the lesson, students will be able to:

3. identify the manifestations, causes and effects of climate change;
4. devise ways that will help restore balance in nature.

XXVI. Essential Understanding

- The earth has finite resources and humans deplete some resources faster than they can be renewed.
- Humans can change natural habitats in ways that can be helpful or harmful for the plants and animals that live there.

XXVII. Essential Questions

- How can we detect some issues or causes that pose dangers to the environment?
- What role does private individuals and organizations play in the management and conservation of our natural resources to prevent global warming and climate change?

XXVIII. Summary of the Episode

This episode presents some benefits of marine biodiversity to the community and how some human activities lead to its destruction.

XXIX. Pre-Viewing (Motivation)

4. Before watching the episode, ask the students to get a partner and fill-out the chart.
5. Based on what they see on TV and newspapers or even personal experiences, let them write “what they know” about human impact on ecosystem.
6. Then on the other column, tell them to write the things that “they want to learn” about human impact on ecosystem.
7. Write at least 5 in each column.

What do I Know?	What do I want to Learn?
1.	1.
2.	2.
3.	3.

4.	4.
5.	5.

5. This activity will help the students better understand the impact of human activities on our ecosystem. The episode will make them realize that the concepts given are relevant to our day-to-day activities.

XXX. Viewing Proper

Mi Isla (Grade 6 / HS Year1 - Integrated Science)

“Mi Isla: Good in Diversity”

XXXI. Post Viewing

9. Questions (re the episode)

- a. What was the program about?

10. Review Questions (re content)

- a. Cite some causes and effects of the Human Effects of Ecosystem were mentioned in the video.
- b. Enumerate ways on how we can prevent these Human Effects in the Ecosystem as mentioned in the episode.

XXXII. Synthesis and Valuing

To end the session, ask the following:

3. As students, how can you help save our environment? What activities have you personally embarked on?
 4. What projects can you suggest that will create an impact in our society? How will you motivate your neighbors and barangay/government officials to support these projects?
- Our environment is fast deteriorating. If we do not take care of the earth, we will destroy the only planet that we have. Human activities slowly destroy the natural environment. But one great thing we can do is to follow the laws that the government enacted and is implementing to help save Mother Earth.
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It can also be used in:

- Biology
- Social Studies (Civics and History)
- Values Education
- Other subjects discussing conservation of forests and the environment