HEALTHY MANGROVES

Mangroves | Cause & Effect in Habitats

Approximate Length of Lesson

Two 45-minute class sessions

Approximate Number of Minutes Weekly

90 minutes

Materials

- Pictures of mangrove forests
- Cause/effect flow chart
- Paper for drawing
- Pencil and markers for drawing
- Scenarios
- Song about mangroves
- K-W-L chart - lessons 2 & 3

Teaching Notes

Which content standards from your entity address the essential questions?

Essential Question:

Why are mangroves important?

- What does a healthy mangrove habitat look like?
- What can harm a healthy mangrove habitat?

Learning Goals

Students will be able to:

- Name characteristics and components of healthy mangrove habitats.
- Describe examples of actions that can harm mangrove habitats.
- Give examples of effects of harmful actions on mangrove habitats.

Content Standards

(Record corresponding standards in space below. E.g., Grade 3: FSM Sci.1.3.5 Identify cause and effect relationships. FSM Sci.5.3.1 Name and describe living things that are found in the ocean, reefs, and swamps.)

Teaching Notes

FA: Observe and provide feedback during vocabulary review, when students are responding to discussions and while they draw healthy and harmed mangrove habitats.

SA: Levels for each criteria: emerging (1), satisfactory (2), effective (3).

Benefits: Coastal protection, nursery, building materials, food.

Ask students to think about the roots, leaves of healthy mangroves.

Make copies of the scenarios handout. In addition to the scenarios provided, you can create your own, especially scenarios for the local community.

Have students work in pairs or groups of 3 to identify actions from scenarios.

Formative Assessment (FA)

Teacher observes students participation, process and progress as they develop and apply specific skills and knowledge. Teacher asks specific questions to confirm learning and assigns writing and initiates conversations to support learning process (e.g., reflection, knowledge).

Summative Assessment (SA)

Students perform songs about mangrove habitats. Teachers assess the accuracy of the information communicated through the song.

Learning Sequence

Activate Prior Knowledge

- Read aloud the essential questions for this lesson.
- Give students some time to think about the questions. Ask for volunteers to share their thoughts.
- Show pictures of mangrove forests and remind them of their visit to the mangroves. Ask students to identify benefits and services that the mangrove forest provides from the pictures.

Introduce Vocabulary

- Define the term healthy (physically strong, not likely to become ill or weak). Have students suggest characteristics of a healthy person, healthy animal, healthy ocean
- Review vocabulary from Lesson 1 (benefit, change, harm).

Healthy Mangrove

- If a mangrove habitat is healthy, what will the mangroves look like? What kinds of living things will we find in the mangrove habitat?
- In small groups, draw and label a healthy mangrove habitat, using word wall as reference.

What Can Harm a Healthy Mangrove?

- Refer to the interview from lesson 1. Ask students to recall benefits from mangroves, and harms caused by people to mangroves.
- Listen to/read different scenarios and identify actions done towards a mangrove swamp as a result of benefits. Ask students to focus on scenarios 1 to 3 (general actions done towards a mangrove swamp).

Teaching Notes

Review various ways to graphically organize cause and effect ideas using the cause/effect flow chart handout.

Teacher can provide students with sentence frames to contrast healthy and unhealthy mangrove habitats. E.g., in English:

- *A healthy mangrove is/has _____, but an unhealthy mangrove is/has _____.*
- *A healthy mangrove is/has _____. On the other hand, an unhealthy mangrove is/has _____.*

Prior to lesson, identify a local song that describes healthy mangroves, use an existing song and insert new lyrics about healthy mangroves and things that can harm them, or write a new song about healthy mangroves and things that can harm them.

• Based on information from the scenarios, create own a cause/ effect flow charts to show how certain human actions can harm mangrove swamps.
• Teach and practice using the cause/effect signal words to communicate the cause/effect of harms to mangrove swamps. Have students orally practice making cause/effect statements using the signal words, and write those statements under the flow charts.
• If those things and actions take place, what will happen to the mangrove habitat? In small groups, drawn and label an unhealthy mangrove habitat, using word wall as reference.

Compare student drawings of healthy and unhealthy mangrove habitats and contrast the two. Record the contrast statements on drawing.

Song: Healthy Mangroves

• Teach students a song that describes a healthy mangrove and things that can harm healthy mangroves.
• Have students work together to create dance movements to represent key concepts.
• Have students perform song and dance for school community.

Revisit K-W-L chart from lesson 2, answer questions, record new learning, and brainstorm additional questions to extend learning.

Lesson Closure

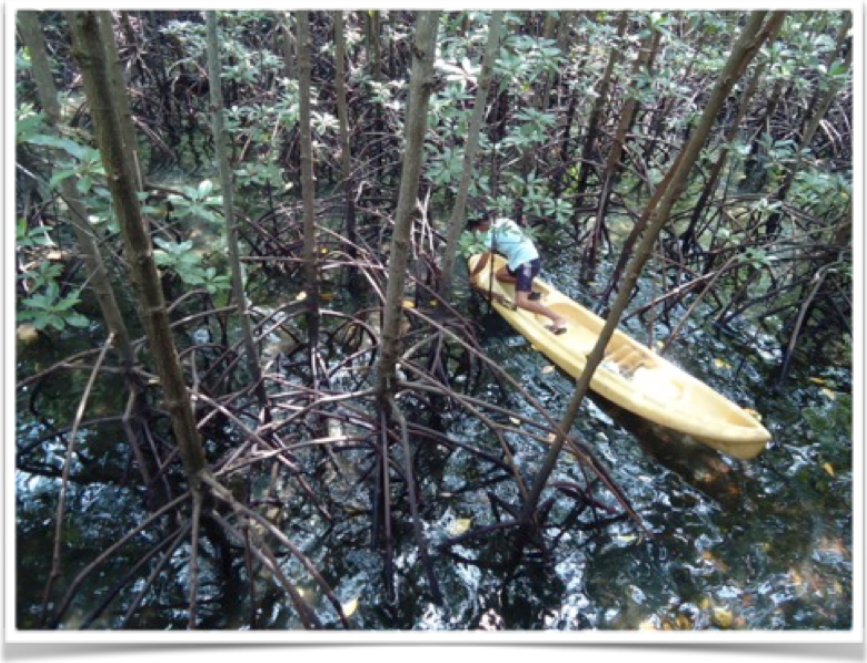
Review the essential questions for this lesson. *Why are mangroves important? What does a healthy mangrove habitat look like? What can harm a healthy mangrove habitat?*
Ask for responses based on what was learned.

Constructing Idea

Language Functions	Related Sentence Structures in the Local Language (to be completed by teacher)	Related Sentence Structures in English
State cause and effect		If cause , then effect . Effect because cause . Cause so effect .
Contrast healthy and unhealthy mangroves		A healthy mangrove is/has _____, but an unhealthy mangrove is/has _____. A healthy mangrove is/has _____. On the other hand, an unhealthy mangrove is/has _____.

Key Vocabulary in Local Language:

Key Vocabulary in English: healthy, benefit, change, harm



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