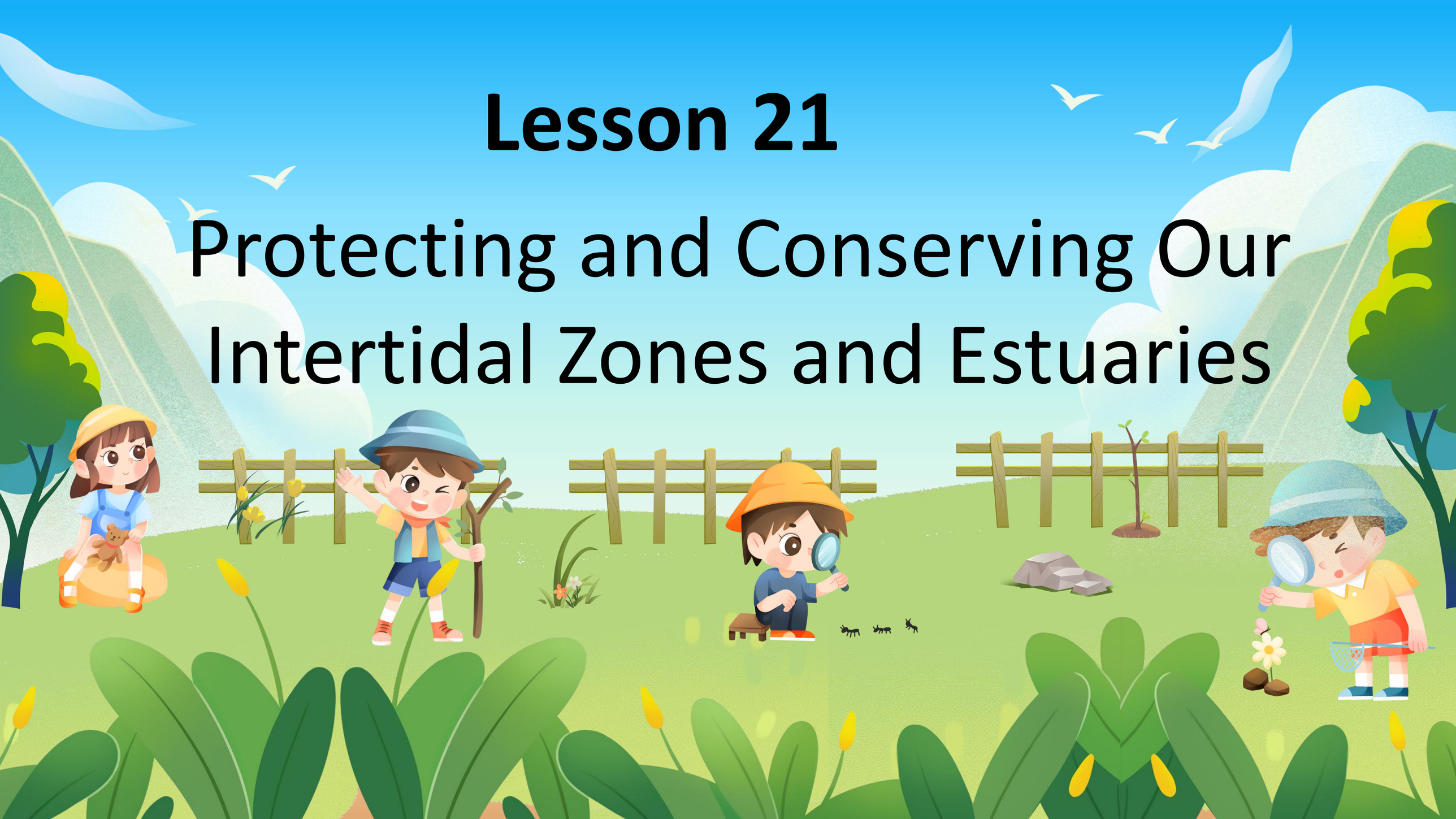
Lesson 21

Protecting and Conserving Our Intertidal Zones and Estuaries



The Protection and conservation of the environment, not just the estuaries, lies the hands of the people

You learned in the previous lessons that intertidal zone and estuaries are homes to different kinds of living things. These make them vital place of the earth. These places are meant to be protected by us human beings.

However, most of our intertidal zones and estuaries are already under threat. Some of them are being converted to buildings, malls, etc. while others are now extensively polluted by man’s industrial activities. Thus, we should protect and conserve our environment now before its too late.

At Home

- As much as possible avoid using synthetic fertilizers. Plants do not absorb them completely and it can wash off into our streams and waterways.
- Use natural fertilizer instead. Trimmed grass clippings from your lawn can be used a natural fertilizer.
- Cut grass moderately. A little height can make the roots move deeper and may lessen erosion.
- Grow plants in your garden, choose plants that are native to your area, so that it would need less water and fertilizer.
- Dispose toxic products properly. Improper disposal may pollute coastal rivers and estuaries.
- Remind your parent to pump your septic pump at least every three years
- Use nontoxic pesticides. Example of which is a mixture of soap water and chili pepper. Excessive use of toxic pesticides can pollute nearby waterways.
- Look for natural alternative to chemical-based household products. Example of which are table salt and baking soda.
- Always clean up after your pets' waste. Never let their waste be washed up to waterways and end up polluting our estuaries.

At the Beach

- Leave your beaches clean. Always pick up your trash and dispose it properly.
- Do not disturb or keep animals that you found along the shoreline.
- Avoid using motorized boats or sensitive habitats. Use canoe or kayak if you want to snorkel near the coral reefs.
- When on a boat, avoid throwing your trash out to the sea.

Estuaries are important because it filters dirt before the fresh water enters the seas or oceans. It also filter the salt from the seas and ocean before it enters to the mouth of the river. It also plays vital role during storms since it serves as an exit point for floods. Can you imagine life without estuaries and intertidal zones?

Let's Summarize

- Estuaries are bodies of water that formed when fresh water from rivers flows and mixes with saltwater from the sea or oceans.
- The non living abiotic factors in estuaries are water in waves, salinity, temperature , amount of sunlight, and type of soil.
- The living or biotic factors consist of all the plants, animals, microorganism that are found in it.
- Some habitats found in intertidal zone and estuaries are salt marshes, mangrove forest, mud flats, rocky shores, and coral reefs.
- The living organism in any ecosystem consist of producer, consumer, and decomposers.
- Producers or autotrophs are mainly green plants, algae, or microorganism that undergo photosynthesis and can make their own food.
- Decomposers get energy by breaking down dead organism and their wastes
- A food chain is a series of organism that transfer energy in the form of food.
- A food web consist of two or more food chain.

UNIT III
Energy, Force, and Motion

Motion and energy are important parts of our daily life. For example, watching movie theater allows you to witness how motion and energy work together. Movies or motion pictures captures actual scenes using a video camera. It is shown on the big screen using the light that comes from the movie projector . The video camera and the movie projector are both powered by electricity. The art of film making exhibits the concept of energy and motion.

In this unit, you will learn more about energy and motion. Particularly, we will learn to measure the movement of an object using the right tools. In addition, we will also explore how different objects interact with light, heat, sound and electricity. Specifically, you will try to identify good conductors of electricity using a simple circuit.

CHAPTER 7

How do we Measure Motion in Terms of Distance and Time?

Objectives of this Chapter

- Determine if an object moved
- Explain the importance of having a reference point when understanding motion
- Define distance

It is fun playing with our friends especially with traditional Filipino games like patintero, piko, luksong tinik, sipa, and kadang-kadang. We run. We climb. We kick. We exert force. Forces help us in daily activities. Without them, no motion can be achieved. Without motion, we cannot do work and enjoy life.

In this chapter, you will accurately measure the change in the movement of an object in terms of its distance travelled and time of travel using appropriate tools and correct standards units. We will use different examples to help us easily determine if an object moved or not.