Ocean Ecosystems

Intertidal Zones

- This region is constantly uncovered or covered by water as waves come in and recede.
- Organisms living in this zone have shells or closing mechanisms to protect them from water loss and force of crashing waves. They also have strong attachments so that they won't be swept away.

Study Tip

Knowing the environmental conditions of each oceanic zone can help you remember what type of organisms live and adapt there.

The intertidal zone consists of many tidal pools such as this one. Many different kinds of organisms live in these pools.

Reefs

- Considered the "rainforests" of the ocean, reefs are one of the most populous and diverse ecosystems in the world.
- Coral reefs also form around surfaced volcanoes to create interesting shapes. The reef island left behind when the volcano erodes away is called an **atoll** and the empty space within is called a **lagoon**.

Oceanic Zones

- Predation occurs in this zone: smaller animals eat plankton and larger animals prey on smaller animals.
- Because meals are scarce, fish have specializations such slow breathing, smaller bone structure/size, and having large jaws; this way they can conserve energy and prevent prey from escaping.

Maupati Island is a reef island. Notice the eroding volcano in the center.

Hydrothermal Vents

- Hydrothermal vents are located within mid-ocean ridges where there is no sunlight.
- Therefore, organisms living in these ecosystems aren't able to use photosynthesis to make food. Instead, they use chemosynthesis and depend on various chemicals for their energy sources.
- When these vents reach the Earth's surface, they can form geysers and hot springs.

Concept Check

- Describe the intertidal zone, reefs, oceanic zone, and hydrothermal vents.
- What is the environment like in each of these ecosystems?
- What kinds of organisms live in each of them?