

Chapter 4 Ecosystems and Communities

What Is Climate?

How is weather different from climate?

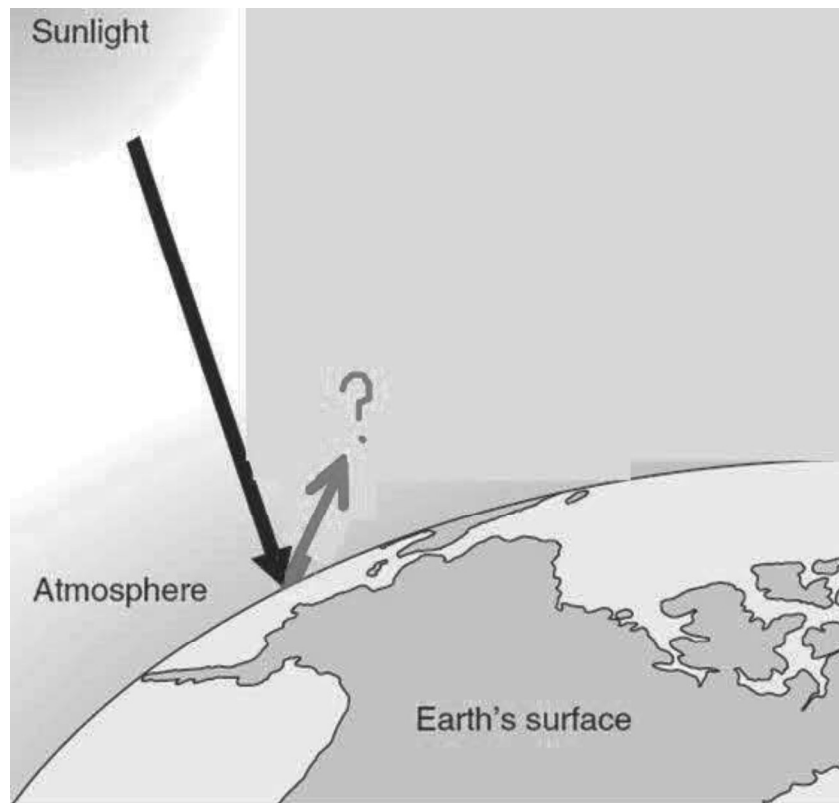
What factors cause climate?

The Greenhouse Effect

3. Circle the letter of the world's insulating blanket.

- a. oxygen
- b. the atmosphere
- c. the oceans
- d. solar energy

Complete the illustration of the greenhouse effect by showing in arrows and words what happens to the sunlight that hits Earth's surface.



What effect do carbon dioxide, methane, and a few other atmospheric gases have on Earth's temperature?

What is the greenhouse effect?

The Effect of Latitude on Climate

Why does solar radiation strike different parts of Earth's surface at an angle that varies throughout the year?

Circle the letter of where the sun is almost directly overhead at noon all year.

- a.** the North Pole **b.** China **c.** the equator **d.** the South Pole

Why does Earth have different climate zones?

Complete the table about Earth's three main climate zones.

MAIN CLIMATE ZONES

Climate Zone	Location	Climate Characteristics
	Areas around North and South poles	
	Between the polar zones and the tropics	
	Near the equator	

Heat Transport in the Biosphere

What force drives winds and ocean currents?

The process in which water rises toward the surface in warmer regions is called: _____

Circle the letter of each sentence that is true about ocean currents.

- a. Patterns of heating and cooling results in ocean currents.
- b. Ocean currents transport heat within the biosphere.
- c. Surface water moved by winds results in ocean currents.
- d. Ocean currents have no effect on the climate of landmasses.

Niches and Community Interactions

Biotic and Abiotic Factors

Complete the table about factors that influence ecosystems.

FACTORS THAT INFLUENCE ECOSYSTEMS

Type of Factor	Definition	Examples
Biotic factors		
Abiotic factors		

What do the biotic and abiotic factors together determine?

The Niche

What is a niche?

In what ways is food part of an organism's niche?

Explain the difference between a nice and a habitat?

Circle the letter of each sentence that is true about niches.

- a. Different species can share the same niche in the same habitat.
- b. No two species can share the same niche in the same habitat.
- c. Two species in the same habitat have to share a niche to survive.
- d. Different species can occupy niches that are very similar.

Community Interactions

When does competition occur?

What is a resource?

What is often the result of direct competition in nature?

What is the competitive exclusion principle?

What is predation?

When predation occurs, what is the organism called that does the killing and eating, and what is the food organism called?

What is symbiosis?

Complete the table about main classes of symbiotic relationships

MAIN CLASSES OF SYMBIOTIC RELATIONSHIPS

Class	Description of Relationship
Mutualism	
Commensalism	
Parasitism	