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Week 8: Public Environment & Health

Module 3: Climate and Health

Lesson: Why Does the Environment Affect Your Health?

Lesson Overview

Students investigate how climate conditions affect human health through direct and indirect pathways. They gather evidence from the module, use it to explain health outcomes, and apply their understanding to a realistic community health scenario. By the end of the lesson, students recognize how public health professionals use evidence to protect communities.

Learning Targets

Explain how climate factors affect human health.

Distinguish between direct and indirect health impacts.

Build and revise a cause-and-effect model showing how climate affects the body.

Vocabulary

Climate Change
 long-term changes in temperature and weather patterns

Direct Impact
 immediate effect on the body

Indirect Impact
 effect that happens through multiple steps

Health Outcome
 how the body is affected

Materials

Module
 Student response sheets
 Whiteboard or chart paper

Instructional Notes

This lesson connects students' understanding of climate systems to human health. Students move from seeing climate change as an environmental issue to recognizing that it can affect people's daily lives, bodies, and communities. Students often think climate impacts only involve weather or environmental changes. This lesson helps them discover that climate conditions can lead to health outcomes both directly, such as heat-related illness, and indirectly, such as increased disease exposure, allergies, or respiratory illness. This lesson prepares students for future learning about public health, epidemiology, prevention, and community decision-making. Students begin to understand how evidence is used to identify risks and protect people.



Learning Experience

8 min	Opening	The teacher displays the question, “Which environmental condition would most likely affect your health during a normal week?” and displays the choices: Extreme heat, Flooding, Wildfire smoke, and Large amounts of pollen. Students move to a corner, side of the room, or otherwise indicate their choice. The teacher asks students to discuss, “What health problems could this cause?” and “What evidence or experiences make you think that?” Groups are then invited to share their thinking, and the teacher records student ideas without confirming or correcting them. The teacher tells students, “Today, you will investigate which ideas are supported by evidence and discover how climate conditions can affect human health.” Students select the condition they believe would have the greatest impact on health, discuss their reasoning with peers, share ideas and examples, and listen to other perspectives.
15 min	Module	Focus: How climate affects human health through direct and indirect impacts. Guiding Questions: • How can climate affect human health? • What makes an impact direct or indirect? • What evidence connects environmental conditions to health outcomes?
15 min	Application	The teacher tells students, “You are part of a public health team preparing for the Nebraska Community Health Fair. Your job is to create a health alert that helps community members stay safe.” The teacher displays four possible community health alerts: Extreme Heat Alert, Flood Recovery Alert, Air Quality Alert, and Mosquito Season Alert. One alert is assigned to each group, or groups are allowed to choose. Students may only use evidence learned from the module. In Step 1: Gather Evidence, students review notes from the module and identify evidence related to their assigned health alert. Examples students may use include: Heat can cause dehydration, heat-related illness, heat stroke, and increased cardiovascular impacts; Flooding can lead to mold growth, damage infrastructure, and affect access to care; Poor air quality can worsen respiratory conditions such as asthma; and Warmer temperatures can increase mosquito activity and disease exposure. In Step 2: Explain the Health Risk, students create a simple cause-and-effect explanation and show how the environmental condition affects people. Students write, “_____ leads to _____, which can affect health by _____.” In Step 3: Create the Community Health Alert, students develop a short public health message. The message includes the health concern, evidence from the module, and one action community members could take. Students write, “Be aware of _____ because _____.”



		In Step 4: Share and Defend, students present the alert to another group, explain why the alert is important, and use module evidence to support the recommendation. Sentence Frames: "Our health alert focuses on ____." "Evidence from the module shows that ____." "This condition can affect health because ____." "We recommend ____ because ____."
2 min	Reflection	How can understanding climate and health connections help communities make better decisions?
2 min	Career Connections	Epidemiologists and public health professionals study evidence to identify health risks in communities. They investigate patterns, determine how environmental conditions affect people, and help communities prepare for health challenges. Their work supports decisions that can prevent illness, reduce harm, and protect public health.