OVERVIEW

BIG IDEA
Our interactions with the environment are complex and are not always healthy.

OBJECTIVE
10.1: Identify various non-infectious environmental factors that may be a danger to our health.

AGENDA
1. Brainstorm
2. Discussion
3. Enviro Health & The NCEH
4. Work at the NCEH & Focus Area Icons

HOMEWORK
The purpose of this homework is to get students engaged in how this health issue is portrayed by Hollywood. Ask students to briefly share at the start of the next class. Ask if they think the environmental health issues are misrepresented, or whether certain issues are "hot" while others are ignored.

LESSON 10.1

Intro to Environmental Health

SUMMARY:

This lesson will launch students into the realm of environmental health issues. Students will begin with a brainstorming exercise to tap into their own knowledge base and background. Then they will compare with other students and think critically about the role of humans in the environmental factors that affect our health. Next students will read an excerpt from the NCEH website describing the scale of environmental health and the role their organization plays. Finally, as a way to internalize the many facets of environmental health, students will come up with icons for each program within the NCEH as they read an overview of that aspect of the NCEH's work.

STANDARDS:

NHES 1.12.3: Explain how environment & personal health are related.

IL Learning Standard 22.C: Explain how the environment can affect health.

MODULE 10: ENVIRONMENTAL HEALTH LESSON 10.1

Intro to Environmental Health

Obj. 10.1: Identify various non-infectious environmental factors that may be a danger to our health.

DO NOW

Environmental Health Brainstorm

How does the environment around you (both natural and man-made) influence your health? List all the ways you can think of in the tree below.



DISCUSS

Environmental Health Issues

1. Compare your list with a small group. Circle any issues on your list that at least one other person in the group also came up with.

2. Which type of environmental factors came up more commonly on your lists--natural ones or man-made ones?

3. What role do you think humans have in the state of our environmental health?

DO NOW: Example answers: food availability, pesticides on food, pesticides in homes/ buildings/outdoors, jobs available, condition of homes, schools, & workplaces (mold, asbestos, lead paint, etc.), hazards (chemicals, fire, biological, etc.), natural disasters & weather conditions, air quality & pollution, water quality, etc.

READ

What is Environmental Health & Who is the NCEH?

The environment is everything around us - the air we breathe, the water we drink and use, and the food we consume. It's also the chemicals, radiation, microbes, and physical forces with which we come into contact. Our interactions with the environment are complex and are not always healthy. We at the National Center for Environmental Health, also known as NCEH, are working to prevent illness, disability, and death from interactions between people and the environment. We are especially committed to safeguarding the health of populations that are particularly vulnerable to certain environmental hazards - children, the elderly, and people with disabilities.

We conduct research in the laboratory and in the field to investigate the effects of the environment on health. We track and evaluate environment-related health problems through surveillance systems. We also help domestic and international agencies and organizations prepare for and respond to natural, technologic, humanitarian, and terrorism-related environmental emergencies.

On the basis of research and surveillance results, we work with partners to protect human health. Our interventions range from responding to emergencies, educating and training various audiences, and developing new standards and guidelines, to helping formulate public policy. We strive to protect health over the entire life-span. We work to promote optimal fetal, infant, and child development, including preventing birth defects and developmental disabilities, and enhance health and quality of life and prevent secondary conditions among children, adolescents, and adults with disabilities.

The scope of our work is worldwide, from protecting health during emergencies both in the United States and abroad to protecting the health of the public visiting U.S. national parks and taking cruises on ships that dock in U.S. ports. Since environmental problems cross geographic boundaries, and since lessons learned in helping other countries can be used to understand and address U.S. public health problems, we have established a global health office to coordinate and expand our global activities.

The nature of our work is also expanding. Because genetic knowledge, tests, and services will play an increasingly larger role in public health practice, we are working to make sure that knowledge of human genetics is translated into effective and ethical public health actions.

No matter where and how we work, we are committed to safeguarding the health of the U.S. public, both in the United States and abroad.

Source: NCEH Website <http://www.cdc.gov/nceh/information/about.htm>

THINK

Work at the NCEH

Based on the reading above, come up with three different job titles that might represent work done at the NCEH.

1)

2)

3)

READ: Ask students if they know what the EPA is. Go to the EPA's website to give students a quick overview. Ask students how the NCEH and EPA have different roles. Ask students if the roles are complementary.

THINK: Examples: 1) Air quality engineer (tests air quality and provides recommendations for businesses and development); 2) Researcher focusing on the epidemiology of exposure to lead among children in low-income areas; 3) Data analyst compiling and reporting on aggregate data from all state and local health departments

NEW INFO

Environmental Health Focus Areas

Read through the main program areas at the NCEH. For each one, draw a simple picture that can serve as an icon representing it.

	National Asthma Control Program: The National Asthma Control Program works with state health departments and NGOs to help people with asthma control their disease and live healthier, more productive lives.
	Built Environment & Health Initiative: The Built Environment & Health Initiative (also known as the Healthy Community Design Initiative) helps states and communities integrate health considerations into transportation and community planning decisions in order to improve public health.
	Climate and Health Program: The Climate and Health program works to prevent and adapt to the health impacts of extreme weather and other climate related issues.
	Environmental Health Laboratory: The Environmental Health Laboratory provides unique laboratory science that improves the detection, diagnosis, treatment and prevention of diseases resulting from exposure to environmental chemicals and selected other diseases that require advanced laboratory measurement for accurate diagnosis.
	Core Environmental Health Services: The Core Environmental Health Services program works with state, local, tribal, and territorial environmental health practitioners to ensure that our food, drinking water, and wastewater systems are safe.
	Environmental Public Health Tracking Network: The Environmental Public Health Tracking Program is a dynamic Web-based tool that tracks and reports environmental hazards and the health problems that may be related to them.
	Healthy Homes/Lead Poisoning Prevention Program: The Healthy Homes and Lead Poisoning Prevention program protects children from lead exposure.
	Radiation: CDC's Radiation Studies Program and Environmental Health Laboratory protect the public's health from exposures to radiation by identifying and studying harmful exposures, using unique laboratory science to measure exposures, and providing important health communication and education.
	Safe Water Programs: CDC's Safe Water Programs reduce waterborne exposures and diseases, with an emphasis on noninfectious contaminants.
	Agency for Toxic Substances and Disease Registry: The Agency for Toxic Substances and Disease Registry is a federal agency that engages at the community level to prevent and respond to environmental hazards. Its research scientists guide and advise government, industry, and community partners on saving lives and protecting the public's health.

NEW INFO: As students come up with icons for each program within the NCEH (as they read an overview of that aspect of the NCEH's work), they should be internalizing the many facets of environmental health.

Environmental Health Factors

List 5 environmental factors (natural or man-made) that may impact our health.

Environmental factors that can impact health
1
2
3
4
5

Environmental Health in Hollywood

Search for a movie or documentary that features an environmental health issue. If possible, watch it. If unable to watch it, read a description online or watch a clip or trailer on youtube. Then answer the questions in the table below.

Title & Year of Film	
Environmental Health Issue Portrayed	
How was the environmental health issue portrayed? Was it factual and realistic or dramatized?	
What message do you think the audience is left with after watching the film? Why?	

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