

World of 8 Billion Topic Connections to AP Environmental Science Standards

Jump to APES Connections to:

1. [Child Wellbeing](#)
2. [Rainforest Ecosystems](#)
3. [Sanitation](#)

Child Wellbeing

Unit 3 - Populations

- Topic 3.7 - Total Fertility Rate
 - EIN-1.B Explain factors that affect total fertility rate in human populations.
 - EIN-1.B.3 Factors associated with infant mortality rates include whether mothers have access to good healthcare and nutrition. Changes in these factors can lead to changes in infant mortality rates over time.
- Topic 3.8 - Human Population Dynamics
 - EIN-1.C.1 Explain how human populations experience growth and decline
 - EIN-1.C.1 Birth rates, infant mortality rates, and overall death rates, access to family planning, access to good nutrition, access to education, and postponement of marriage all affect whether a human population is growing or declining.
- Topic 3.9 - Demographic Transition
 - EIN-1.D Define the demographic transition.
 - EIN-1.D.2 Characteristics of developing countries include higher infant mortality rates and more children in the workforce than developed countries.

Unit - 8 - Aquatic & Terrestrial Pollution

- Topic 8.14 - Pollution and Human Health
 - EIN-3.C Identify sources of human health issues that are linked to pollution.
- Topic 8.15 - Pathogens and Infectious Diseases
 - EIN-3.D Explain human pathogens and their cycling through the environment.

Rainforest Ecosystems

Unit 1 - The Living World: Ecosystems

- Topic 1.2 - Terrestrial Biomes
 - ERT-1.B Describe the global distribution and principal environmental aspects of terrestrial biomes.
- Topic 1.4 - The Carbon Cycle
 - ERT-1.D Explain the steps and reservoir interactions in the carbon cycle.

Unit 2 - The Living World: Biodiversity

- Topic 2.1 Introduction to Biodiversity
 - ERT-2.A Explain levels of biodiversity and their importance to ecosystems.
- Topic 2.2 - Ecosystem Services
 - ERT-2.B Describe ecosystem services.
 - ERT-2.C Describe the results of human disruptions to ecosystem services.
- Topic 2.5 - Natural Disruptions to Ecosystems
 - ERT-2.G Explain how natural disruptions, both short and long-term, impact an ecosystem.
 - ERT-2.H Describe how organisms adapt to their environment.
- Topic 2.7 Ecological Succession
 - ERT-2.J Describe the effect of ecological succession on ecosystems.

Unit 3 - Populations

- Topic 3.1 - Generalist and Specialists Species
 - ERT-3.A Identify differences between generalist and specialist species.
- Topic 3.4 - Carrying Capacity
 - ERT-3.E Describe the impact of carrying capacity on ecosystems.
- Topic 3.5 - Population Growth and Resource Availability
 - ERT-3.F Explain how resource availability affects population growth.

Unit 5 - Land & Water Use

- Topic 5.12 - Introduction to Sustainability
 - STB-1.A Explain the concept of sustainability.
- Topic 5.17 - Sustainable Forestry
 - STB-1.G Describe methods for mitigating human impact on forests.

Unit 6 - Energy Resources and Consumption

- Topic 6.7 - Energy from Biomass

- ENG-3.I Describe the effects of the use of biomass in power generation on the environment.
 - ENG-3.I.1 Burning of biomass produces heat for energy at a relatively low cost, but it also produces carbon dioxide, carbon monoxide, nitrogen oxides, particulates, and volatile organic compounds. The overharvesting of trees for fuel also causes deforestation.

Unit 8 - Aquatic and Terrestrial Pollution

- Topic 8.15 - Pathogens and Infectious Disease
 - EIN-3.D Explain human pathogens and their cycling through the environment.

Unit 9 - Global Change

- Topic 9.10 - Human Impacts on Biodiversity
 - EIN-4.C.1 HIPPCO (habitat destruction, invasive species, population growth, pollution, climate change, and over exploitation) describes the main factors leading to a decrease in biodiversity

Sanitation

Unit 1 - The Living World: Ecosystems

- Topic 1.3 - Aquatic Biomes
 - ERT-1.C Describe the global distribution and principal environmental aspects of aquatic biomes.
 - ERT-1.C.1 Freshwater biomes include streams, rivers, ponds, and lakes. These freshwater biomes are a vital resource for drinking water.

Unit 5 - Land and Water Use

- Topic 5.7 - Meat Production Methods
 - EIN-2.I Describe the benefits and drawbacks of different methods of meat production.
 - EIN-2.1.2 Concentrated animal feeding operations (CAFOs) are used as a way to quickly get livestock ready for slaughter. They tend to be crowded, and animals are fed grains or feed that are not as suitable as grass. Additionally, feedlots generate a large amount of organic waste, which can contaminate ground and surface water. The use of feedlots are less expensive than other methods, which can keep costs to consumers down.
- Topic 5.10 - Impacts of Urbanization

- EIN-2.M Describe the effects of urbanization on the environment.
 - EIN-2.M.4 Urban sprawl is the change in population distribution from high population density areas to low density suburbs that spread into rural lands, leading to potential environmental problems.
- Topic 5.13 - Methods to Reduce Urban Runoff
 - STB-1.B Describe methods for mitigating problems related to urban runoff.

Unit 8 - Aquatic and Terrestrial Pollution

- Topic 8.2 - Human Impacts on Ecosystems
 - STB-3.B Describe the impacts of human activities on aquatic ecosystems.
- Topic 8.5 - Eutrophication
 - STB-3.F Explain the environmental effects of excessive use of fertilizers and detergents on aquatic ecosystems.
 - STB-3.F.5 Anthropogenic causes of eutrophication are agricultural runoff and wastewater release.
- Topic 8.11 - Sewage Treatment
 - STB-3.N Describe best practices in sewage treatment
- Topic 8.14 - Pollution and Human Health
 - EIN-3.C Identify sources of human health issues that are linked to pollution.
 - EIN-3.C.2 Dysentery is caused by untreated sewage in streams and rivers.
- Topic 8.15 - Pathogens and Infectious Diseases
 - EIN-3.D Explain human pathogens and their cycling through the environment.
 - EIN-3.D.4 Poverty-stricken, low-income areas often lack sanitary waste disposal and have contaminated drinking water supplies, leading to havens and opportunities for the spread of infectious diseases.
 - EIN-3.D.12 Cholera is a bacterial disease that is contracted from infected water.