

Brunswick School Department
Science
Grade 6: Ecology and Human Impact

Unit Overview

This unit allows students to explore evidence for how human populations impact food production and natural resources. Examples of evidence include grade-appropriate databases on human populations and the rates of consumption of food and natural resources (such as freshwater, mineral, and energy). Examples of impacts can include changes to the appearance, composition, and structure of Earth's systems as well as the rates at which they change. The consequences of increases in human populations and consumption of natural resources are described by science, but science does not make the decisions for the actions society takes.

Essential Understandings

- Human populations impact the rate at which food is consumed.
- Human populations impact the rate at which natural resources, such as fresh water, minerals, and energy-producing materials, are consumed.
- Population impacts to the environment include changes to the earth's systems.
- Scientists can describe and study the consequences of human impacts on the environment.
- Scientists can describe and predict what can happen to natural resources, such as fresh water, minerals, and energy-producing materials.

Priority Standards and Performance Indicators

(as based on Next Generation Science Standards)

P.S. S-4 Understand cause and effect.

e. Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

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Next Generation Science Standards Addressed in this Unit

MS-ESS3-3. Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

MS-PS1-3. Gather and make sense of information to describe that synthetic materials come from natural resources and impact society.

Examples of Formative / Summative Assessments

- “Global Warming” Assessment Probe,
- Examine and note down changes to the appearance, composition, and structure of Earth’s systems as well as the rates at which they change using databases, graphs, and images.
- Make predictions of future changes for these earth systems.
- “Where Does Oil Come From?” Assessment Probe
- Explanation (visual or written) explaining the climate crisis (using evidence)

Sample Texts and Materials/Resources

- [ScienceSaurus](#) or other print resources similar to it
- Internet articles
- [Kids Discover: Ecology](#)
- Interactive web sites for human interactions with habitats