



Next Generation Science Standards

Lesson: [Oxygen in Water](#)

Activity: [Graphing Temperatures](#) / [Air Supply: Graphing Dissolved Oxygen](#)

Prior Knowledge Should Include:

- Living things can affect the physical characteristics of their environment.
- Societal activities have had major effects on the land, ocean, atmosphere and even outer space. Societal activities can also help protect Earth's resources and environments.
- Populations of organisms live in a variety of habitats. Change in those habitats affects the organisms living there.

Performance Expectations:

- MS-ESS3-4 Earth and Human Activity: Construct an argument supported by evidence for how increases in human population and per-capita consumption of natural resources impact Earth's systems.

Disciplinary Core Ideas:

- **ESS3.C Human Impacts on Earth Systems:** Human activities have significantly altered the biosphere, sometimes damaging or destroying natural habitats and causing the extinction of other species. But changes to Earth's environments can have different impacts (negative and positive) for different living things. Typically as human populations and per-capita consumption of natural resources increase, so do the negative impacts on Earth unless the activities and technologies involved are engineered otherwise.

Practices:

- **Constructing Explanations and Designing Solutions (6)** – Progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles and theories.

Crosscutting Concepts:

- **Cause and Effect** – Events have causes, sometimes simple, sometimes multifaceted. A major activity of science is investigating and explaining causal relationships and the mechanisms by which they are mediated. Such mechanisms can then be tested across given contexts and used to predict and explain events in new contexts.

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