



Next Generation Science Standards:

Lesson: [Water Quality](#)

Activity: [Examining Lake Effect](#)

Prior Knowledge Should Include:

- Living things need water, air and resources from the land and they live in places that have the things they need. Humans use natural resources for everything they do.
- Water is found in many places and in different forms on Earth.
- Matter exists as different substances with different observable properties.

Performance Expectations:

- 2-PS1-1 Matter and its Interactions: Plan and conduct an investigation to describe and classify different samples of water based on their chemical and observable properties including temperature, pH and turbidity.
- 2-PS1-2 Matter and its Interactions: Analyze data from the testing of the water samples to determine which materials have the properties that are suited for certain purposes such as drinking, swimming or cooking.

Disciplinary Core Ideas:

- **PS1.A Structure and Properties of Matter:** Different properties are suited to different purposes. A great variety of objects can be built up from a small set of pieces.

Practices:

- **Planning and Carrying Out Investigations (3)** – Progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.
- **Analyzing and Interpreting Data (4)** – Progresses to collecting, recording and sharing observations.

Crosscutting Concepts:

- **Patterns:** Observed patterns of forms and events guide organization and classification, and they prompt questions about relationships and the factors that influence them.
- **Cause and Effect:** Mechanisms and explanation. 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 context and used to predict and explain events in new contexts.

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