Next Generation Science Standards

Lesson: Water Quantity
Activity: Measuring Fresh Water/Can you spare a Drop?

Prior Knowledge Should Include:
- Living things need water, air and resources from the land and 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 all over Earth.
- Most of the Earth's water is in the ocean and much of the Earth's fresh water is in glaciers or underground.

Performance Expectations:
- 5-ESS2-2 Earth's Systems. Describe and graph the amounts and percentages of water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.
- 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:
- **ESS2.C The Roles of Water in Earth's Surface Processes:** Nearly all of Earth's accessible water is in the ocean. Most fresh water is in glaciers or underground; only a tiny percentage is in streams, lakes, wetlands and the atmosphere.
- **ESS3.C Human Impacts on Earth Systems:** 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:
- **Using Mathematics and Computational thinking (5) –** Progresses to identifying patterns in large data sets and using mathematical concepts to support explanations and arguments.
- **Engaging in Argument from Evidence (7)** – Progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed worlds.

Crosscutting Concepts:
- **Scale, Proportion and Quantity (3):** In considering phenomena, it is critical to recognize what is relevant at different measures of size, time and energy and to recognize how changes in scale, proportion or quantity affect a system's structure or performance.

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