
The Great pH Challenge



curriculum links

Grade 5:

- Understanding Matter and Energy:
Properties of and Changes in Matter



overview

In this activity student will learn the importance of pH in the treatment of their drinking water and in the environment. Students will work to predict what they think the pH of basic household items will be, and then measure the pH of each item through use of two different tests.

grade 5 expectations

Science and Technology

Understanding Matter and Energy: Properties of and Changes in Matter

Overall Expectations

- evaluate the social and environmental impacts of processes used to make everyday products;
- conduct investigations that explore the properties of matter and changes in matter;
- demonstrate an understanding of the properties of matter, changes of state, and physical and chemical change.

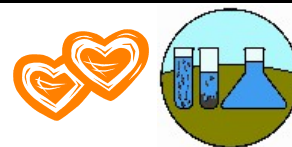
Relating Science and Technology to Society and the Environment

- evaluate the environmental impacts of processes that change one product into another product through physical or chemical changes;

Developing Investigation and Communication Skills



The Great pH Challenge



- follow established safety procedures for working with heating appliances and hot materials;
- use scientific inquiry/experimentation skills to determine how the physical properties of materials make them useful for particular tasks;
- use appropriate science and technology vocabulary, including *mass, volume, properties, matter, physical/reversible changes,* and *chemical/irreversible changes,* in oral and written communication.

Understanding Basic Concepts

- identify properties of solids, liquids and gases, and state examples of each;
- explain changes in matter;
- describe physical changes in matter as changes that are reversible;
- describe chemical changes in matter as changes that are irreversible;
- distinguish between a physical change and a chemical change.

key terms

Acidity - the strength of an acidic substance; measured as pH.

Caustic - a substance that burns or eats away the chemical action.

pH - a measure of the concentration of hydrogen ions in a solutions; the pH scale ranges from 0 to 14, where 7 is neutral and values less than 7 are acidic and values greater than 7 are basic of alkaline.

