

2010-2011 WHRO VideoClassroom Preview

Series Title:	Elementary Matter & Chemistry
Curriculum Area:	Science
Grades:	3-5
# of Programs/Length:	7/15:00 minute programs

This engaging 7-part series specifically designed for the elementary science classroom uses animations, live-action footage, and everyday examples to help instructors teach difficult to understand concepts and inspire the minds of students. Correlated to state and National Science Standards and AAAS Benchmarks for Science Literacy. Each program is followed by a 5-question Video Quiz and is accompanied by a downloadable 25-page teacher guide containing numerous student activities and assessment tools.

1.) Investigating Chemical Reactions (Preview Title)

From cooking food to enjoying the warmth of a fire, we use chemical reactions every day. This exciting video highlights the major characteristics and types of chemical reactions. Additional concepts and terminology: reactants, products, physical and chemical changes, chemical equation, reaction rate, and indicators of chemical reactions.

2.) The Changing Phases Of Matter

In this program, students will witness how a substance, such as water, can exist in several dramatically different phases. Easy-to-understand examples illustrate how phase changes occur. Additional concepts and terminology: states of matter, particles, solid, liquid, gas, plasma, melting, freezing, vaporization, boiling, evaporation, condensation, and sublimation.

3.) Investigating Mixtures, Solutions, Elements, & Compounds

Vivid video footage and everyday examples help students understand and differentiate mixtures, solutions, elements, and compounds. Additional concepts and terminology: element, pure substance, properties, atoms, molecule, compounds, types of mixtures, suspension, colloid, and alloy.

4.) Exploring The Building Blocks Of Matter

Colorful animations highlight the major features of atoms, often referred to as the building blocks of matter. Special attention is given to the arrangement and models of atoms. Additional concepts and terminology: atomic theory, model of atom, element, nucleus, protons, neutrons, electrons, atomic number, atomic mass, electron cloud, isotope, and modern periodic table.

5.) Forming Bonds

From the water we drink to the salt we put on food, we benefit from atomic bonds every day. Colorful, easy-to-understand animations and video footage illustrate the process of chemical bonding and various types of bonds. Additional concepts and terminology: molecule, electron arrangement, valence electrons, compounds, ion, ionic bond, covalent bond, crystal, metallic bond, and organic compound.

6.) Solutions At Work

Engaging footage illustrates the types, characteristics, and uses of solutions, paying special attention to solutions we use every day. Additional concepts and terminology: solution, suspension, solute, solvent, water, concentration, solubility, saturated and unsaturated solutions, pH, acids, and bases.

7.) Describing Matter And Its Properties

Matter is everywhere around us. This colorful video uses everyday examples to illustrate how matter is described, observed, and measured. Additional concepts and terminology: mass, weight, volume, density, hardness, texture, shape, flammability, size, and physical and chemical properties of matter.