



Science Benchmark Achievements

Elementary Science

The Second Day: Water and Chemistry
(Ages 8-12)

Objectives at this age:

- Begin student-created science textbooks for water and chemistry
- Discover the why and how behind God's creations
- Introduction to basic science concepts and vocabulary
- Introduction to famous scientists: Antoine Lavoisier, Robert Boyle, Dmitri Mendeleev

Beginning at age 8, children will begin creating a science textbook for each of the scientific disciplines. Even though the textbooks will not be completed until their senior years, students are encouraged to prepare a chemistry journal at this age to begin recording and illustrating their discoveries.

- Water and the Expanse: Making a cloud
- Water: Solids and Liquids
- Water: Floating and sinking
- Water: Water in the gas phase
- Water: Water is cohesive and adhesive
- Water: What is water? Chemical molecule
- Water: What is solution?
- Air: Air takes up space
- Air: Air has weight
- Chemistry: Simple model of an atom
- Chemistry: Electrical charges in the atom
- Chemistry: Introduction to the periodic table
- Chemistry: Elements and Molecules
- Properties of Matter: Mass, odor, and color
- Classes of matter: Solid, liquid and gas
- Classes of matter: Solid
- State of solids: Organic or metallic
- Classes of matter: Liquid
- State of liquids: Temperature, volume and evaporation
- Classes of matter: Gas
- State of gases: Density, pressure, distillation, condensation
- Combinations of matter: Solvent and solutions
- Polar bonds
- Diluted versus concentrated

- Combinations of matter: Compounds
- Crystallized creations
- Putty and plastics
- Combinations of matter: Mixtures
- Homogeneous and heterogeneous
- Matter and change: Physical and chemical change
- Transfer of energy in physical change