Science Benchmarks Achievements

Senior Science

The Second Day: Water and Chemistry

Ages 12+

Objectives at this age:

- Students will complete their water and chemistry science textbook.
- Upon completion of the textbook, they will be prepared to enroll in a college level chemistry course.
- Student-created textbooks should demonstrate a basic understanding of chemistry.
- However, students are encouraged to explore subjects in greater depth according to their interests and desires.

Student-created textbooks should include:

- A cover designed and created by the student
- An introduction to chemistry written by the student that includes the question and discussion of why and how God organized and created things using water and chemistry
- Definitions, illustrations, and descriptions of chemistry terms and concepts listed in the Elementary Science achievement skills
- A combination of reports, essays, illustrations, and research papers to demonstrate student's knowledge of the following nine divisions of chemistry. (At least 3 projects for each division)
    - Water (molecule, polarity, solutions)
    - Air (chemistry in the atmosphere)
    - Periodic Table (atoms, elements, molecules)
    - Properties of Matter (mass, odor, color)
    - Classes of matter (solid, liquid, gas)
    - Combinations of matter (solvents, solutions, compounds, mixtures)
    - Changes in matter (physical and chemical changes)
    - pH scale (acids and bases)
    - Famous chemists (Antoine Lavoisier, Robert Boyle, Dmitri Mendeleev, etc.)
- Conclusion written by the student that answers the question of why and how God created things using chemistry. Students may consider searching the scriptures for the following terms to assist them in their study:
    - Rock, Rust, Creation, Earth, World, Water, Air, Fire, Heat, Intelligence
- Include a bibliography in the back of the book to reference the materials used in the creation of the textbook
- Optional: Table of contents and page numbers