

Course Description

Grade 9 Physical Science

Philosophy Statement: Science instruction equips students to know and experience God's basic eternal truths revealed through His creation. Science deepens the students' faith, understanding, and awareness of the eternal power and divine nature of God. (Romans 1:20)

Course Objective: Physical Science is the study of matter and energy and includes chemistry and physics. It is a basis for the further study of chemistry and physics. Labs or investigations are used to give students hands on learning and practical applications as well as to teach the material. Math is also very important to science students and calculators should be brought and used in class. Topics that will be studied include: matter, the periodic table, elements, mixtures, compounds, chemical reactions, light and electromagnetic spectrum, energy, heat, motion, Newton's laws and momentum.

Textbooks: The Physical World
Bob Jones University Press
Copyright 2000

Physical Science
Prentice Hall
Copyright 2004

Materials:

- Chemicals & lab equipment
- Calculator (optional)

Time Allotment: 44 minutes per day, 5 days per week

Course Content:

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|---------------------------------|------------------------------|
| • Scientific Skills and Inquiry | • Forces |
| • Matter | • Work, Power, and Machines |
| • Atomic Structure | • Thermal and Heat Energy |
| • Periodic Table | • Mechanical Waves and Sound |
| • Bonds and Reactions | • Electromagnetic Spectrum |
| • Solutions, Acids, and Bases | • Optics |
| • Carbon Chemistry | • Electricity |
| • Nuclear Chemistry | • Magnetism |
| • Motion | • Laboratory Skills |

Areas to be evaluated:

- Tests
- Quizzes
- Homework assignments
- Labs
- Article summaries on science specifically on chemistry and physics
- Class participation

Additional activities:

- Guest Speakers (hot air balloon pilot)
- DVD on Einstein and the splitting of the atom