

Physical Science Syllabus 2010-2011

Course Title -Physical Science

Textbook- Science of the Physical Creation (A Beka – 2nd edition)
Authors – DeWitt Steele and Gregory Parker

Meetings – Mondays 1:30 – 3:00 PM, Room 3 Severna Park EP Church

Tutor - Don Luce. E-Mail - dluce@cornerstonetutorial.org
Home: 410-647-8195 (no calls after 9 PM or before 9 AM, please).

Materials – Textbook, loose leaf notebook, weekly assignments from tutor by e-mail.

Course Objective – To understand the physical (non-living) creation from a Christian perspective.

Evaluations – Quizzes and tests will be given periodically. Homework and other assignments will be checked and returned weekly. A progress report will be mailed to parents after each major test. **Parents should keep a record of grades and assign a final grade.**

Be Aware – The class will move quickly through the year covering many complex topics. Therefore, it is of great importance for students to carefully complete weekly assignments on time. Extra help can be given when needed after basic assignments are completed. Talk to the tutor.

Tentative Course Schedule – (subject to change):

Week	Text pages
1.	3-17 Mathematics and Science; metric system; scientific method.
2.	Metric measurements- linear, weight, and liquid volume.
3	112-125, 379-386 Matter, elements, compounds, diffusion, atom models.
4	126-135 Radiation, fission, periodic table of elements.
5	137-145 Molecules, chemical bonds, ions.
6	145-156 Molecular forces, vapor pressure, solubility, chemical equations.
7	157-171 Thermodynamics, types of chemical reactions, pH scale.
8	172-184 Introduction to organic chemistry, the chemistry of living things.
9	185-191 Test; proteins, enzymes, nucleic acids.
10	305-318 What is physics? Laws of motion, vectors.
11	319-333 Momentum, gravity, forces of nature, waves and their behavior.
12	334-349 Sound.
13	350-361 Light and color, photons, the dual nature of light.
14	362-373 Polarization, electromagnetic spectrum, lasers.
15	374-377, 388-391 Speed of light, relativity, lightning, capacitors.
16	392-401 Earth's magnetism, compasses, law of magnetic poles, law of magnetic force.
17	399-409 What causes magnetism, electromagnets.
18	410-423 Electricity, electric circuits, Ohm's law, series and parallel circuits.
19	425-437 Using electricity, producing electricity.
20	438-447 Transformers, electronics, CRTs, triodes.
21	448-460 Semiconductors, LEDs, ICs, early computers.
22	461-469 Computers, binary numbers, hardware, software.
23	23-38 Atmosphere, UV, ozone layer, greenhouse effect, global warming.
24	195-202; 267-272 Earth's interior, plate tectonics, introduction to Darwin.
25	273-275, 288-294, 297-301 Geologic eras, transitional forms, mutations, human classification.
26	189, 193, 243, 275-279, 303 Evolution
27	Genesis 1:1-31, Genesis 2:1-24. The case for creation.
28	225-251 Minerals, three categories of rocks, metamorphosis, weathering.
29	247-265 Glaciers, ice and wind erosion, wasting.
30.	Review and final exam.