Scope and Sequence for *Science in the Industrial Age*

This hands-on science course introduces a wide variety of scientific topics to elementary students of all ages. Because each lesson is built around an activity or experiment, it is engaging for all K-6 students. In addition, there are three levels of review for each lesson, so that the parent/teacher can choose the depth at which each student is expected to grasp the material. The course contains roughly 90 hours of instruction, 35 of which are composed of hands-on activities.

The course covers scientific topics in the context of 19th-century history, discussing science as it was discovered. The first 15 lessons cover the work of Georges Cuvier to part of Michael Faraday's work. The students learn about how paleontologists identify fossils, active ingredients in medicine, the earth's magnetic field, chemical formulas, catalysts, early ideas about evolution, Avogadro's Law, dew and frost, atomic masses, the macronutrients, electromagnetism, and alloys.

The next 15 lessons cover the rest of Michael Faraday's work through the work of Thomas Graham. They teach students about magnetic fields, the cause of magnetism, electrical power plants, Faraday cages, the molecular basis of temperature, the structure of the human brain, heat engines, electrical circuits, sound waves, how electricity flows, depth perception, the telegraph, uniformitarianism, catastrophism, diffusion and colloids.

The next 15 lessons cover the work of Mary Somerville to part of Louis Pasteur's work. They discuss the origin of the word "scientist," digestive enzymes, cell structure, the function of blood, early photographic methods, the First Law of Thermodynamics, the Doppler effect, the mechanical equivalence of heat, the discovery of Neptune, the structure of the human retina, absolute temperature, chirality, and fermentation.

The next 15 lessons cover the rest of Louis Pasteur's work through the work of Gregor Mendel. Students learn about spontaneous generation, vaccines, the Second Law of Thermodynamics, fluorescence, color, the nature of light, Saturn's rings, natural selection, evolution, biological mimicry, antiseptics, and dominant/recessive genes.

The next 15 lessons cover Alfred Nobel through Albert Michelson. They teach students about the Nobel Prize, capillary action, the Periodic Table of the Elements, meteor showers, the surface of Mars, index of refraction, neurons, DNA, Maxwell-Boltzmann distributions, the inner ear, supersonic speed, the telephone, germ theory, mitosis, and the Michelson-Morley experiment.

The final 15 lessons cover Thomas Edison through Marie Curie. They discuss the light bulb, fluids in the body, Venn diagrams, metabolic rate, diamagnetism and paramagnetism, equilibrium, osmotic pressure, electrolytes, activation energy, alternating current and direct current, radio waves, X-rays, radioactivity, and ionizing radiation.

Note that this course covers old-earth concepts and evolutionary concepts, because they were important in science during this time period. However, the author does provide young-earth creationist responses to those ideas.