

Science Curriculum

Scope & Sequence Overview

The following Scope and Sequence outlines the science curriculum offered by Sabbath Mood Homeschool, organized by grade level and topic. This document is designed to help parents and school administrators understand the progression of scientific study across elementary, middle, and high school years.

Sabbath Mood Homeschool follows the educational philosophy of Charlotte Mason, emphasizing a living books approach, regular time in nature, and the development of habits such as attention and wonder. Each course is built around rich, narrative science texts and paired with experiments, notebooking, and observation. This method fosters not only comprehension of scientific content but a lifelong love of learning.

Courses are listed by Form (Charlotte Mason's developmental stages, roughly corresponding to grade bands), with one row per course. Each row includes the grade level, course title, key objectives, major topics covered, and the primary book(s) used. Formal science instruction begins in Form II; for Form I, please refer to the note below.

Note on Grades 1–3 (Form I):

Formal science instruction begins in Form II (Grades 4–6). In Form I (Grades 1–3), students develop foundational skills for scientific thinking through nature study. This includes time spent outdoors in observation, nature notebooking, and reading narrative-style "nature lore" books such as *Plant Life in Field and Garden* by Arabella Buckley. These early years foster habits of attention, wonder, and curiosity that prepare students for the more abstract scientific study introduced later.

How Many Courses Are Completed Each Year?

Sabbath Mood Homeschool follows the Charlotte Mason practice of rotating through multiple science topics each year rather than focusing on a single subject for the full year.

- In Form II (Grades 4–6), students complete three science courses per year, typically one per term equalling 36 weeks total.
- In Forms III–VI (Grades 7–12), students complete four science courses per year, allowing them to study biology, chemistry, physics, and earth science each year. Again, completing 36 weeks of work each year.

Lab Science & Hands-On Work

Each course includes hands-on components such as experiments, demonstrations, nature walks, or other observational work. These meet or exceed expectations for lab-based science instruction and are clearly described in each guide.

High School Credit

At the high school level, completing three full terms of coursework, 36 weeks of study, in a subject area equals one high school lab science credit.

Approval & Flexibility

Sabbath Mood Homeschool courses are widely used by independent homeschool families and co-ops throughout the U.S., and have been approved by various private schools and charter programs. If your administrator requires additional documentation—such as sample lesson plans, a weekly schedule, or lab activity details—we're happy to provide that upon request.

	Grade Level / Form	Course Title	Course Objectives	Topics Covered	Main Book(s) Used
1	Grades 4-6 / Form 2	Astronomy	Develop wonder at the heavens; observe and name celestial bodies; understand Earth's place in the solar system	Stars, constellations, moon phases, Earth's rotation, seasonal patterns	Find the Constellations by H.A. Rey
2	Grades 4-6 / Form 2	Weather	Introduce meteorological concepts; foster observation of weather patterns and atmospheric changes	Clouds, precipitation, temperature, forecasting, seasonal weather	Rain, Hail, Sleet and Snow by Nancy Larrick
3	Grades 4-6 / Form 2	Geology	Develop awareness of Earth's features and natural processes; recognize their impact	Rocks, soil, landforms, erosion, fossils	The First Book of the Earth by O. Irene Sevrey
4	Grades 4-6 / Form 2	Botany	Explore the diversity and structure of plant life; observe plants in daily life	Roots, stems, leaves, flowers, seeds, plant processes	The First Book of Plants by Alice Dickinson
5	Grades 4-6 / Form 2	Chemistry	Foster curiosity about matter and molecules; begin to grasp basic chemical principles	States of matter, atoms, molecules, simple experiments	Matter, Molecules, and Atoms by Bertha Morris Parker
6	Grades 4-6 / Form 2	Technology &	Introduce foundational	Simple machines,	The First Book of

		Engineering	machines and human innovation through observation and function	mechanical systems, real-world applications	<i>Machine</i> s by Walter Buehr
7	Grades 4-6 / Form 2	Physics – Magnets	Observe magnetic properties and forces; understand real-world uses of magnetism	Magnetic attraction, polarity, fields, Earth's magnetism	<i>Magnets</i> by Rocco V. Feravolo
8	Grades 4-6 / Form 2	Physics – Waves	Introduce the principles of sound and wave behavior in a concrete and understandable way	Vibrations, pitch, volume, sound transmission	The First Book of Sound by David Knight
9	Grades 4-6 / Form 2	Physics – Energy	Understand the forms and uses of energy in daily life	Electricity, energy transfer, circuits, power sources	The First Book of Electricity by Sam and Beryl Epstein
10	Grades 7-8 / Form 3	Biology	Explore the development of biological thought; gain a foundational understanding of life science from cell to system	History of biology, early scientists, cell structure, classification, microscope use	Men, Microscopes, and Living Things by Katherine Shippen
11	Grades 7-8 / Form 3	Botany	Study plant structure and function through hands-on exploration and classification	Photosynthesis, reproduction, classification, seed and leaf structures	First Studies of Plant Life by George F. Atkinson
12	Grades 7-8 / Form 3	Chemistry	Explore the development of chemical understanding through a historical lens	Early chemists, elements, reactions, the periodic table	The Mystery of the Periodic Table by Benjamin Wiker
13	Grades 7-8 / Form 3	Astronomy	Develop a deeper understanding of planetary science and the solar system	Planets, moons, orbits, the sun, space exploration	The Planets by Dava Sobel
14	Grades 7-8 / Form 3	Geology	Learn how Earth changes over time through natural forces and features	Erosion, rock cycle, rivers, tectonics	Rocks, Rivers, and the Changing Earth by Herman and Nina Schneider
15	Grades 7-8 / Form 3	Weather	Deepen meteorological understanding; connect observation with prediction	Cloud types, atmospheric pressure, forecasting tools, weather phenomena	Look at the Sky and Tell the Weather by Eric Sloane
16	Grades 7-8 / Form 3	Physics	Explore fundamental	Motion, gravity,	Secrets of the

			physical laws through accessible explanations	energy, magnetism, light	<i>Universe</i> by Paul Fleisher
17	Grades 7-8 / Form 3	Electronics	Build practical understanding of circuits and modern electronics	Voltage, current, resistors, real-world electronic projects	Electronics for Kids by Øyvind Nydal Dahl
18	Grades 9-12 / Forms 4-6	Biology: Anatomy Part 1 (⅓ credit)	Explore the structure and function of the human body; connect biology to daily life and well-being	Cells, tissues, organs, digestive, circulatory, and respiratory systems	The Body by Bill Bryson (chs. 1–8)
19	Grades 9-12 / Forms 4-6	Biology: Anatomy Part 2 (1⁄3 credit)	Continue in-depth study of the human body; analyze interdependence of bodily systems	Nervous, endocrine, immune, and reproductive systems	<i>The Body</i> by Bill Bryson (chs. 9–20)
20	Grades 9-12 / Forms 4-6	Biology: Ecology (⅓ credit)	Study environmental science and stewardship; explore ecosystems and conservation	Biomes, ecological relationships, environmental care, human impact	Let Creation Rejoice by Jonathan Moo
21	Grades 9-12 / Forms 4-6	Biology: Origins (⅓ credit)	Examine differing perspectives on origins and the intersection of science and faith	Worldview, intelligent design, evolution, creation	Seven Days that Divide the World by John Lennox
22	Grades 9-12 / Forms 4-6	Chemistry: Part 1 (⅓ credit)	Discover the building blocks of matter and the history of chemistry; emphasize conceptual understanding	Elements, atoms, reactions, early discoveries	Wonders of Chemistry by A. Frederick Collins (chs. 1-6); The Elements by Theodore Gray
23	Grades 9-12 / Forms 4-6	Chemistry: Part 2 (⅓ credit)	Continue chemistry study with greater complexity and lab connections	Molecular structure, bonding, acids and bases	Wonders of Chemistry by A. Frederick Collins (chs. 7-12); The Elements by Theodore Gray
24	Grades 9-12 / Forms 4-6	Chemistry: Part 3 (⅓ credit)	Deepen understanding of applied chemistry and real-world uses	Combustion, chemistry in the home, everyday applications	Wonders of Chemistry by A. Frederick Collins (chs. 13-20); The Elements by Theodore Gray
25	Grades 9-12 / Forms 4-6	Physics: Part 1 (⅓ credit)	View physics through the lens of wonder; observe	Motion, energy, gravity, light	For the Love of Physics by Walter

			natural laws at work in daily life		Lewin
26	Grades 9-12 / Forms 4-6	Physics: Part 2 (⅓ credit)	Deepen understanding of physics by exploring the forces and principles that shape the physical world	Newton's laws, acceleration, force, friction, energy transfer, real-life physics applications	For the Love of Physics by Walter Lewin
27	Grades 9-12 / Forms 4-6	Physics: Part 3 (⅓ credit physics or earth science)	Connect physics to astronomy through study of space, light, and time	Stars, galaxies, the cosmos, astrophysics concepts	For the Love of Physics by Walter Lewin
28	Grades 9-12 / Forms 4-6	Physics: Theoretical (⅓ credit)	Explore foundational modern physics ideas in an approachable way	Relativity, quantum mechanics, theoretical models	Seven Brief Lessons by Carlo Rovelli; Relativity and Quantum Mechanics by Paul Fleisher
29	Grades 9-12 / Forms 4-6	Earth Science: Weather (1⁄3 credit)	Study the atmosphere and weather systems from a scientific and observational perspective	Climate, meteorology, forecasting, seasonal weather	The Secret World of Weather by Tristan Gooley
30	Grades 9-12 / Forms 4-6	Earth Science: Geology (⅓ credit)	Understand Earth's structure and surface processes through observational science	Rocks, tectonics, plate movement, landforms	Aerial Geology by Mary Caperton Morton