

COURSE SYLLABUS

6th Grade Life Science

Principles and Patterns of Living Things

2026-2027 • Mondays • Two-hour tutorial

Scale How School • Arete Honors Science Tutorial

“We understand that these wondrous accomplishments will not come without work. We know we must learn all we can of the truth of things in this life, and that we shall have to conquer eternal physics, eternal chemistry, eternal biology, and all eternal arts to give eternal science beauty. But our Lord and Master will guide the teaching, and the truth will be the text.”

—Elder S. Dilworth Young

And God saw every thing that he had made, and, behold, it was very good.

—Genesis 1:31

Course Description

Arete Honors Life Science introduces the structures, processes, relationships, and diversity of living things using Novare Science’s Life Science and The Apprentice’s Companion for Life Science. The course combines a weekly two-hour tutorial with structured home study and approaches the natural world from a Latter-day Saint worldview while teaching students to recognize both the power and limits of scientific inquiry.

The course is intentionally demanding. Students learn difficult ideas through concrete models, retrieval practice, hands-on investigation, complete-sentence explanation, cumulative review, and careful exposure to scientific habits that will later reappear in high-school biology, chemistry, environmental science, and AP courses.

Course promise

Complex does not mean impossible. Every major concept is taught with a visual model, an analogy or memory tool, guided practice, and repeated opportunities to explain the idea in the student’s own words.

Calendar and Course Information

Item	Details
Instructor	_____
Tutorial meeting	Mondays, _____
Location	_____
Course text	Life Science by Tracy Creek (Novare Science)
First tutorial	Monday, August 24, 2026
Fall semester final	Monday, December 14, 2026
Spring semester final	Monday, May 10, 2027

Calendar alignment: Davis School District 2026–2027 school-year calendar; the detailed pacing guide controls tutorial dates.

Primary Course Objectives

- Recognize the characteristics shared by living things and explain how science uses evidence, models, controlled investigations, and revision.
- Describe the chemistry of life, organic molecules, cell structures, and differences between prokaryotic and eukaryotic cells.
- Explain levels of biological organization and the major functions of human tissues and organ systems.

Course Color

Forest green - used for the 6th Grade Life Science Anki deck and coordinated course materials.

- Compare mitosis and meiosis; explain reproduction, inheritance, Punnett squares, mutation, and environmental influences on traits.
- Connect photosynthesis, cellular respiration, metabolism, homeostasis, energy flow, and nutrient cycles.
- Explain nervous and sensory systems in animals and response systems in plants.
- Analyze populations, limiting factors, competition, predation, symbiosis, food webs, ecological pyramids, and biogeochemical cycles.
- Compare climates and biomes; evaluate succession, biodiversity, ecosystem services, and human pressures.
- Describe evidence and mechanisms relevant to evolutionary change while engaging worldview questions carefully and respectfully.
- Collect observations, interpret evidence, construct models, and record scientific thinking clearly in the commonplace journal or on teacher-provided pages.

Weekly Learning Rhythm

When	Student responsibility	Why it works
Before tutorial	RRC every assigned section; mark difficult ideas and questions.	Retrieval before rereading exposes what still needs attention.
In tutorial	Opening; QR-card review; cumulative quiz; model-rich instruction; investigation or application; synthesis.	Ideas are retrieved, tested, handled, explained, and connected.
After tutorial	Daily Anki; QR cards; Chapter Exercises; Moodle; investigation or project work.	Short, spaced practice builds durable memory.
End of chapter	Review Guide, Chapter Exercises, mixed Anki, and explanation from memory.	Students practice both recall and transfer before assessment.

Plan for approximately 30–60 minutes on most weekdays—about 3–5 hours per week in a typical week—with additional time near project and semester-final deadlines.

Mastery and Study Systems

RRC Study Cycle: Inspect–Question–Read–Recall–Check

1. Inspect. Survey the assigned section before close reading: notice the title, headings, subheadings, diagrams, captions, bold terms, summaries, and overall structure.
2. Question. Turn the section heading into a question that the reading should answer.
3. Read. Read the section attentively with that question in mind.
4. Recall. Close the book. Answer the question from memory and reconstruct the main idea, process, diagram, and key words in the student’s own words.
5. Check. Reopen the text. Correct errors or omissions in a different color. If the idea remains unclear, write a specific question to bring to the tutorial.

Anki and Handwritten Quiz-Review Cards

Students complete daily Anki review, normally 15–30 minutes. The course deck uses chapter subdecks and guided release so future chapters do not appear early. After each returned quiz, the student handwrites one QR card for each missed or incomplete idea. Anki contains original vocabulary and concept prompts—not direct quiz or Chapter Exercise questions.

Five-Step Study Rescue

Use this rescue only when the RRC Check step reveals that the student cannot yet explain an important idea, rebuild a diagram or process, distinguish two similar ideas, or repeatedly misses the same concept. Rescue one small idea, then return to normal RRC study.

Step	Action
1. Shrink it	Choose one process, diagram, relationship, or paragraph—not the whole chapter.
2. Sketch it	Draw the parts and arrows before trying to memorize precise wording.
3. Say it	Explain the idea aloud as if teaching a younger student.
4. Compare it	State what the idea is and what a nearby, easily confused idea is not.
5. Retrieve it	Close every source and rebuild the explanation or diagram from memory; then check once more in a different color.

Future AP Bridges—Exposure, Not Acceleration

Selected lessons include a small Future AP bridge. Students are not expected to master high-school detail; they are expected to recognize the shape of the idea.

- Claim–Evidence–Reasoning (CER) and identifying independent, dependent, and controlled variables.
- Structure–function reasoning at the molecule, cell, organ, organism, and ecosystem levels.
- Energy and matter accounting through photosynthesis, respiration, food webs, and cycles.
- Data displays, proportional reasoning, exponential growth, and sources of variation.
- Natural selection as a population-level change in inherited traits over generations.

Required Materials

- Life Science by Tracy Creek (Novare Science).
- A three-ring binder with five dividers: Syllabus, Reference, Quizzes, Class Notes, and Activities.
- A durable commonplace journal for RRC notes and assigned activity work, preferably with page numbers and a table of contents.
- Lined index cards with a ring for handwritten quiz-review cards; bring every week.
- Pencils; pens in at least two different colors for visible corrections; scissors; a three-hole ruler; and a binder pouch.

- Independent project supplies selected by the student and parent.
- A device that can access Anki and Moodle at home; electronics remain put away during tutorial unless authorized.

Teacher-Provided Companion Activities

The Apprentice's Companion for Life Science is a teacher resource. Families do not need to purchase it. The instructor will direct or provide the selected activities, and students will record appropriate work in the commonplace journal or on teacher-provided pages.

Activities and Investigation Program

All hands-on activity and data collection occur in the tutorial. Follow-up may take the form of a labeled model, data table, graph, brief written explanation, or commonplace-journal entry. Sixth-grade students do not write formal lab reports and do not need a separate lab journal.

Nos.	Companion activities	Primary emphasis
1–3	Experiments and the Scientific Method; Classifying Statements; Collecting, Preserving, and Mounting Specimens	Scientific observation, method, evidence, and specimen practice
4–5	Elements and Compounds; Organic Molecules	Chemistry of life, organic molecules, and cells
6–9	Cell Organization and Function; Muscles and Bones; The Digestive System; Diffusion	Cell organization and human body systems
10–12	Modeling Mitosis; Vegetative Propagation; Inheritance	Mitosis, reproduction, and inheritance
13–16	Enzymes; Fermentation; Experimental Design; Gravitropism	Enzymes, fermentation, experimental design, and response
17–20	Exponential Growth; Symbiosis; Energy Transfer; Ecosystems	Population growth, symbiosis, energy transfer, and ecosystems
21–23	Local Climate and Weather; Aquatic Biomes; Design a Self-Sustaining Ecosystem	Climate, biomes, and self-sustaining ecosystems
24–26	Modeling Earth Processes; Modeling Cellular Processes; Investigating a Genetic Bottleneck	Earth processes, cellular processes, and genetic bottlenecks

Grading Plan

Component	Contribution
Weekly cumulative quizzes	70%
Homework assignments	5%
Investigation work, models, and commonplace journal	15%
Special projects or presentations	10%
Total	100%

How the Final Course Grade Is Calculated

Component	Contribution
Fall term average	40%
Fall semester exam	10%
Spring term average	40%
Spring semester exam	10%
Total	100%

Semester exams are completed during the tutorial on Monday, December 14, 2026 and Monday, May 10, 2027.

Course Structure and Expectations

In the Tutorial

- Open with gratitude, prayer, hymn, and catechism.
- Review the previous quiz and handwrite a QR card for each missed or incomplete idea.
- Complete a timed, cumulative written quiz in complete sentences; show quantitative work when appropriate.
- Discuss assigned reading, difficult concepts, worldview questions, exercises, and student questions.
- Participate in demonstrations, interpretation practice, hands-on investigations, models, and presentations.
- Complete all quizzes, chapter assessments, hands-on data collection, and semester finals in person.

At Home

- Use the complete RRC study cycle for every assigned text section and record organized notes in the commonplace journal.
- Complete daily Anki, rehearse QR cards, and continue cumulative review.
- Complete assigned Chapter Exercises, Review Guides, study questions, or problem sets.
- Complete the weekly Moodle check-in and any assigned discussion or submission.
- Complete assigned corrections or brief activity follow-up in the commonplace journal and complete one independent project or presentation per semester.

Enrollment and Code of Conduct

Enrollment is not complete until a parent or guardian submits the required Scale How School Student Code of Conduct and Host-Home Agreement. The digital agreement addresses respect for the host residence and property, authorized areas, class etiquette, electronic devices, academic integrity, activity safety, and consequences for misconduct.

Serious misconduct—or repeated failure to follow the agreement—may result in dismissal or expulsion from the tutorial.

Course Policies

Attendance: Because the tutorial meets only once each week, regular attendance is essential. Quizzes, investigations, and finals may not be completed at home; any permitted make-up must be supervised by the instructor.

Preparedness: Arrive with assigned RRC work complete, materials in hand, QR cards reviewed, and questions marked.

Late work: Late work follows the instructor's stated policy. Activity follow-up and project work are due by the announced deadlines.

Activity safety: Follow all oral and written directions. Unsafe conduct may result in immediate removal from an activity, an alternate assignment, dismissal, or expulsion under the behavior policy.

Academic integrity: Work must represent the student's own thinking. Data, sources, quotations, digital assistance, and collaboration must be acknowledged. Students may discuss an investigation but may not share or copy written responses, calculations, graphs, or files.

Schedule changes: Weather, materials, class progress, and student needs may require adjustments. Changes will be communicated through Moodle or the usual family channel.

Encouraged Family Outside Reading

Each Arete family is encouraged to keep one shared family copy of *The God Proofs: How Science Points to YOUR Creator* by Douglas Ell. This is optional family outside reading, not a class-specific text, and it may or may not be referred to during tutorials.

Optional Science and Nature-Lore Reading

These optional selections are adapted from AmblesideOnline's current science and natural-history recommendations for AO Year 6. They are not required, graded, or a substitute for assigned course reading. Families may choose according to interest and reading level; parent read-alouds and audiobooks are welcome.

- *Science Couldn't Just Happen* — Lawrence O. Richards (AO Year 6)
- *The Mystery of the Periodic Table* — Benjamin Wiker (AO Year 6)
- *The Elements* — Theodore Gray (AO Year 6)
- an AmblesideOnline-listed biography of Albert Einstein — family choice (AO Year 6)

Current source schedules: [AmblesideOnline Year 6 schedule](#)

Core Source and Supplemental Resource Note

The textbook and teacher-directed companion activities remain the instructional spine. Supplemental links are selected to make difficult concepts more visible and memorable; they do not replace assigned reading, discussion, or written practice.

Official Davis School District school-year calendars • Amoeba Sisters biology playlist • Learn.Genetics • HHMI BioInteractive