

## Architecture

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### Architecture: Grades 9-12

1 time/week 30 min \* □ | GRADE(S): 9-12

The focus of the course in this rotation is on answering the question, "Why do buildings stand up?" The main text of that name offers the history of great monuments and the architectural technology that makes them possible. Famous buildings from 1800-1900 and 100 BC-350 AD are mentioned as well.

☞ Suitable for Grade 8 students with minimal adjustment if combining.

## Art

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### Art: Level 8

2 times/week 45 min \_ □ | GRADE(S): 8-12

Skills Focus: Continue in the new expanded color wheel, as well as learn about contrasting colors, color charting, split complements, and analogous colors. Learn and apply new ways to create texture and value through hatching and stippling. Understand pointillism. Continue working on portraiture. Understand how to paint light in watercolor and continue to strengthen watercolor skills.

☞ If students are in grade 6 or above, they should begin with the fast-track lessons and then move on to Level 4.

Prerequisite: Level 7 or appropriate skill proficiency.

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### Art: High School Fast Track

2 times/week 45 min \_ □ | GRADE(S): 9-12

These High School Fast Track for Art lessons are designed for students with minimal background in Art and/or just beginning Alveary during the high school years. Students will complete all previous eight levels of art lessons in a fast-paced sequence. Students will need a variety of art materials on hand to successfully complete this course.

☞ Students can slow down the pace of lessons to their own pace and spread the course over multiple years if desired. Because of this flexibility, younger students interested in art could also choose to take this course instead of the Fast Track for lower grades.

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## ↔ Picture Study

1 time/week 10 min \* ☐ (Grades 1-3)  
1 time/week 15 min \* ☐ (Grades 4-6)  
1 time/week 20 min \* ☐ (Grades 7-8)  
1 time/week 20 min \*or\_ ☐ (Grades 9-12)

GRADE(S): 1-12

Students study art from 1800-1900 through pieces by Edward Bannister, Vincent van Gogh, and Lilius Trotter. The lesson plans include discussion prompts that tie the artwork to what is being learned in Art Instruction, and other books and resources help students further their relationship with the art studied and consider how art intersects with the large questions of life.

- ☞ There is one set of lesson plans for students in all grades, which makes this an ideal course to study in a multi-age setting. All lessons begin the same, but extensions increase the length and sophistication of the content.

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## Art History

2 times/week 45 min \*      GRADE(S): 9-12

This is a High School elective course. Students study Art History through hands-on projects. Each term will focus on a different breadth of history and the art that was important to that time, bringing together and putting in chronological order many of the art pieces we have studied during Picture Study. Each term, students will be assigned four to six projects based on the history they are surveying. The projects will range from sculpture to fresco to abstract painting. Students will need a variety of art materials on hand to successfully complete this course.

- ☞ Suitable for interested 8th graders, though concepts are better understood with greater age development. No prior Art Instruction or Picture Study experience is required to complete this course.

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## Bible

### Bible: Grades 10-11

GRADE(S): 10-11

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#### ↔ Old Testament: Grades 7-12

2 times/week 30 min \* ☒ (Grades 7-9)  
2 times/week 30 min \* ☐ (Grades 10-12)

GRADE(S): 7-12

From 7th grade through high school, students read through the OT chronologically. With the aid of study Bible notes and selections from study helps such as the Old Testament Today or The Bible Project, this course allows students to meditate on Scripture and engage with the historical and cultural context of the Bible when it was written, as well as the way the OT continues to be relevant as God's word today.

- ☞ Students in Grades 7-12 read the same passages of Scripture, but the lesson plans include a variety of discussion questions and extra study helps differentiated by grade to help students engage at various depths. This makes these lessons flexible for individual students and/or a multi-age context. Younger students in Grades 5-6 can be combined with older students if they have a good general understanding of the narratives and overarching story of the OT.

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## New Testament: Grades 10-11

1 time/week 30 min \* ☐ | GRADE(S): 10-11

Each year in High School, students read one of the gospels along with several other New Testament epistles. Using their study Bibles and other resources, students encounter scripture and seek to understand the cultural, historical, and theological context of their readings in order to more deeply appreciate the richness of the Bible and the humility needed in order to live out God's word today.

- ⌘ Lessons in one of the gospels are shared across HS grades. The epistles scheduled in Grades 10-11 are a little more thematically challenging than those in Grade 9, but lessons may be combined with Grade 9 or Grade 12 if desired. Students new to reading the Bible for themselves or unused to commentaries or study notes may find the lessons in Grades 7-8 a gentler introduction to these study practices.

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## ↔ Church History: Grades 10-12

1 time/week 30 min \* ☐ | GRADE(S): 10-12

Using a survey of key events in the American church, articles, and extra resources on Christianity across the world in the lesson plans, this course gives students a personal and big picture look at church history during the 19th century. A second text is used to bring the people and events of the early church to life.

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## Spiritual Formation: Grades 10-11

1 time/week 30 min \* ☐ | GRADE(S): 10-11

Spiritual formation courses cover particular topics in the Christian life to encourage and deepen students' faith. This course focuses on reading, understanding, and following God's Word along with looking at how the things of this world point us to God.

- ⌘ Can be combined with Grade 12 students. Students new to spiritual formation topics should begin with Spiritual Formation: Grades 7-8 or Bible History in Grade 9.

# Citizenship

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## Citizenship: Grade 11 (U.S.)

GRADE(S): 11

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## Econ/Civics: Grade 11 (U.S.)

1 time/week 40 min \* ☐ | GRADE(S): 11

This course covers a variety of citizenship topics. Students spend the first term learning the art of asking questions as a means of relationship building. The second term focuses on government as students explore the historical documents and decisions from this rotation. The year finishes with a term of economics where students learn a variety of economic theories.

- ⌘ Lessons are occasionally integrated with composition lessons. Government lessons in Term 2 are shared with Grades 9-10, and the economics lessons finish the book begun in Term 3 of Grade 10.

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### ↔ Ethics: Part 5

1 time/week 20 min \* ☐ | GRADE(S): 11+

Students will explore characteristics shared by all Image-Bearers and learn how to guard against good servants becoming bad masters by continuing Charlotte Mason's text written directly to students. Students finish Book II in this course.

☞ Ourselves by Charlotte Mason is scheduled over five years. In a multi-age context, students can jump into the book wherever the class is reading. Otherwise, students should begin the book in Part 1.

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### ↔ Current Events: Grades 9-12

1 time/week 20 min \_ | GRADE(S): 9-11

Students are exposed to current events by reading from a variety of sources and having conversations with teachers. Topics such as scientific discoveries, the arts, and human interest stories are generally suitable.

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### ↔ Community Read Alouds: Grades 1-12

1 time/week 20 min+ \_ ☐ | GRADE(S): +NEW

This is meant to be a read-aloud for all ages to enjoy together in the afternoon at least 1 time a week. We encourage you to choose a book that is specific to your region. However, we will offer some suggestions in the Grades 1-3 Literature lessons and Grades 4+ Citizenship lessons. The suggested book titles will be available June 1st in the lesson plans.

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## Citizenship: Grade 11 (Canada)

GRADE(S): 11

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### Econ/Civics: Grade 11 (Canada)

1 time/week 40 min \* ☐ | GRADE(S): 11

This course covers a variety of citizenship topics. Students spend the first term learning the art of asking questions as a means of relationship building. The second term focuses on government as students explore the historical documents and decisions from this rotation. The year finishes with a term of economics where students learn a variety of economic theories.

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### ↔ Ethics: Part 5

1 time/week 20 min \* ☐ | GRADE(S): 11+

Students will explore characteristics shared by all Image-Bearers and learn how to guard against good servants becoming bad masters by continuing Charlotte Mason's text written directly to students. Students finish Book II in this course.

☞ Ourselves by Charlotte Mason is scheduled over five years. In a multi-age context, students can jump into the book wherever the class is reading. Otherwise, students should begin the book in Part 1.

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### ↔ Current Events: Grades 9-12

1 time/week 20 min \_ | GRADE(S): 9-11

Students are exposed to current events by reading from a variety of sources and having conversations with teachers. Topics such as scientific discoveries, the arts, and human interest stories are generally suitable.

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### ↔ **Community Read Alouds: Grades 1-12**

1 time/week 20 min+ \_ **T** | GRADE(S): +NEW

This is meant to be a read-aloud for all ages to enjoy together in the afternoon at least 1 time a week. We encourage you to choose a book that is specific to your region. However, we will offer some suggestions in the Grades 1-3 Literature lessons and Grades 4+ Citizenship lessons. The suggested book titles will be available June 1st in the lesson plans.

## English

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### **Language Study: Grade 11**

GRADE(S): 11

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#### **Composition: Grade 11**

4 times/week 40 min \* | GRADE(S): 11

Students continue to practice writing poetry and prose of various kinds while working on a few longer projects each term. Lessons topics include: logical fallacies, research and citation habits, narrative techniques, the ethics of communication, and more.

⌘ Prerequisite: Students with little background in the essay form should begin with Essay Voyage from the Grade 9 lessons. And students new to the concept of revision and editing should take the Grade 10 courses.

Composition prompts often reference Alveary lessons in Literature, History, Geography, Bible, etc., so it is ideal if students are using Alveary subjects across the curriculum. However, lessons include the lesson topic and target skill/form, along with ideas for substitution when possible to make the lessons flexible for teachers and students.

### ↔ **Commonplace: Grades 9-12**

1 time/week 10 min \_ | GRADE(S): 9-12

Building on the habit of copywork in younger grades, high school students copy passages of any length that strike them from their readings into their commonplace book. For some students this becomes a lifelong keepsake and continuing habit.

⌘ Students new to copywork or keeping a commonplace book may want to schedule this during morning lessons to build the habit.

### **Recitation: Grade 11**

3 times/week 10 min \*or\_ | GRADE(S): 11

Each term, recite from memory or read beautifully 1 hymn, 1 Old Testament passage, 1 New Testament passage, 1 Psalm, and 1 poem or Shakespeare passage.

# Geography

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## Geography: Grade 10-11

2 times/week 40 min \* | GRADE(S): 10-11

Students learn current and historical aspects of regional and world geography with map work.

∞ Suitable for 12th grade, and several books are shared with both 12th and 9th grade. If combining with 9th grade, it would be best to follow 9th grade lessons and add in other books as desired.

# History

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## History: Grades 10-12 (U.S.)

GRADE(S): 10-12

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### ↔ U.S. History: Grades 9-12

1 time/week 40 min \* | GRADE(S): 9-12  
1 time/week 30 min \*

Read about U.S. history from 1800 to 1900 through primary source documents, creative nonfiction, and history spines. View images and reference atlases and maps to set the people and events in their time and place. Update History Charts and Book of Centuries.

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### ↔ World History: Grades 10-12

1 time/week 30 min \* | GRADE(S): 10-12

Read about world history from 1800-1900. View images and reference atlases and maps to set the people and events in their time and place. Update History Charts and Book of Centuries.

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### ↔ Ancient History: Grades 10-12

1 time/week 30 min \* | GRADE(S): 10-12  
1 time/week 40 min \*

Drawing on material culture, primary sources, and wider overviews, this course delves into the time period from 100 BC to 350 AD.

∞ Inquisitive 9th graders could enjoy this course, but the main texts have an advanced reading level, so students would likely want to move at a slower pace.

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## History: Grades 11-12 (Canada)

GRADE(S): 11-12

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### Canadian History: Grades 11-12

1 time/week 40 min \* | GRADE(S): 11-12  
1 time/week 30 min \*

Read about Canadian history from 1800–1900 through biographies, primary source documents, history spines, and historical fiction. View images and reference atlases and maps to set the people and events in their time and place. Update History Charts and Book of Centuries.

∞ This course is the same for Grade 11 and Grade 12.

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### ↔ **World History: Grades 10-12**

1 time/week 30 min \* | GRADE(S): 10-12

Read about world history from 1800–1900. View images and reference atlases and maps to set the people and events in their time and place. Update History Charts and Book of Centuries.

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### ↔ **Ancient History: Grades 10-12**

1 time/week 30 min \* | GRADE(S): 10-12  
1 time/week 40 min \*

Drawing on material culture, primary sources, and wider overviews, this course delves into the time period from 100 BC to 350 AD.

∞ Inquisitive 9th graders could enjoy this course, but the main texts have an advanced reading level, so students would likely want to move at a slower pace.

## Latin

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### **Latin 4**

2 times/week 30 min+ \* | GRADE(S): 10-12+

Continue to develop Latin reading proficiency through narratives about a Roman family and primary sources in Latin. Study Latin grammar, vocabulary, and culture.

∞ Prerequisite: Level 3. Students just beginning Latin should start at Level 1 and consider the optional online course.

NOTE: for Levels 3–4, students work through materials at their own pace, and lesson plans are not provided. This course may be counted as 1 credit for High School.

## Life Skills

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### **Technology**

2 times/week 30 min \_ | GRADE(S): 9-12

This course will guide students in developing meaningful skills using modern tools. Students will work hands-on with various technologies, from digital media creation to coding. Throughout the course, they will explore foundational principles and use what they have learned to solve problems and create original media while reflecting on the implications of technology and considering questions about privacy, the digital divide, and the role of innovation in society. This course will equip students to think critically about the world of technology and its impact on their lives and future.

NOTE: Students need a Google email account, but no books are required for this course.

∞ May be suitable for Grades 7–8.

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## Health Elective (Beta)

3 times/week 45 min \*or\_ ▢ | GRADE(S): 10–12

This course will provide the ½ credit health requirement for those states that require it or elective credit for any student (two terms of lessons). Approached within a Charlotte Mason framework of focusing on the whole personhood of the student, this course will explore nutrition, mental health, and physical well-being.

∞ May be suitable for Grade 9 students

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## ↔ Handicrafts

1 time/week 20 min \* ▢ (Grades 2–3) | GRADE(S): 2–12

1 time/week 30 min \_ ▢ (Grades 4–12)

We follow Mason's model and do clay modeling every year for one term. We are revamping our clay modeling program with a focus on one hand-building technique per year for younger and inexperienced students and more connections across the curriculum in observation and narration assignments. During the second term, students will learn how to do Sashiko work as they did in Japan, and Redwork, as was done in the United States and Europe. These are hand-stitching techniques that incorporate different stitches to create beautiful patterns. For the 3rd term, students will learn the art of cloisonné, which regained popularity in the West during that time. Cloisonne is an enameling technique that uses metal strips to create delicate designs.

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# Literature

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## Literature: Grade 11

GRADE(S): 11

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### ↔ General Lit.: Grades 11–12

2 times/week 30 min \* | GRADE(S): 11–12

Journey into the 19th century via novels, short stories, personal narratives, fairy tales, and more. Students engage with a variety of authors and texts from and about the time period and reflect on literary techniques and the characteristics of multiple genres along the way.

∞ Some books shared with other High School grades. Literature, history, and geography lessons work in sync in Grades 9–12, so it is best to consider all three together when placing students.

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### ↔ History of Lit: Grades 9–12

1 time/week 30 min \* | GRADE(S): 9–12

Using Marshall's and Long's spines along with a variety of primary sources and additional readings, the History of Literature course introduces students to literary movements and figures in the 19th century. The course prioritizes influential texts in the English-speaking world but also seeks to give students glimpses at literary developments across the globe.



∞ Lessons are shared across HS grades with grade-specific assignments in the lesson plans as appropriate.

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### ↔ Plays: Grades 9-12

1 time/week 30 min \_ | GRADE(S): 9-12

Students read Shakespeare's plays with additional optional readings and extra helpings from the time period.

∞ This year, this course is the same as Shakespeare for Grades 5-8 with the only difference coming in Extra Helpings and additional options for further study.

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### Poetry Study: Grade 11

2 times/week 15 min \*or\_ | GRADE(S): 11

This course helps students explore and enjoy poems on many levels; lessons include practice in both reading and writing about poetry.

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### ↔ Poetry Reading: Grades 9-12

2 times/week 15 min \*or\_ | GRADE(S): 9-12

In addition to reading a variety of poems from 19th century authors, students read biographies of two famous 19th century poets and dive into Virgil's \_Aeneid. \_

∞ Students new or struggling in their relationship with poetry should use Grade 8 lessons.

## Math

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### Mathematics: Grade 11

GRADE(S): 11

∞ Students should have facility with Algebra 1 before beginning Algebra 2/Trig.

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### Algebra 2/Trigonometry: Part 2

5 times/week 40 min \* | GRADE(S): 11

Students continue lessons in Algebra 2/Trig and begin Precalculus if ready.

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### Pre-Calculus: Part 1

5 times/week 40 min \* | GRADE(S): 11

Students continue lessons in Algebra 2/Trig and begin Precalculus if ready.

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## Mathematics: Grade 11 (Denison)

5 times/week 40 min \*

GRADE(S): 11

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## Modern Language

### Upper French: Level 4

5 times/week 30 min \*

GRADE(S): 10–12

Study target language using interactive readings and grammar exercises.

🔗 Prerequisite: French: Level 3

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### Upper Spanish: Level 5

5 times/week 30 min \*

GRADE(S): 11–12

Study target language using interactive readings and grammar exercises.

🔗 Prerequisite: Spanish Level 4

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## Music

### Music: Level 5

GRADE(S): 6–12

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#### ↔ Composer Study

1 time/week 10 min \* ☐ (Grades 2–4)

GRADE(S): 2–12

1 time/week 15 min \* ☐ (Grades 5–12)

Students listen to music from a number of composers from this year's historical period and learn to listen for musical ideas.

🔗 These Composer Study lessons are shared across grades 2–12 with extensions provided for older students. Students in Grades 2–3 with no classical music background may choose to take Intro to Music Appreciation first.

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#### ↔ Hymns & Spirituals

1 time/week 10 min \* ☐

GRADE(S): 1–12

Students sing hymns and spirituals to build their faith and appreciation of God's work across time. Hymns and spirituals are connected to the historical time period as appropriate.

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#### ↔ Folk Songs

1 time/week 10 min \* ☐

GRADE(S): 1–12

Students sing folk songs connected to the time period (1800–1900).


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### Sol-fa: Level 5

1 time/week 15 min \*  | GRADE(S): 6-12

Learn to sight-sing in new keys, time signatures, and rhythms. Continue studying the basics of music theory. Train ears with melodic and rhythmic ear tests, learn how to compose music, and gain further freedom and facility in sight-singing. Audio lessons are included in the lesson plans.

Skills Focus: Time signatures, note values, scales, and dictation.

 Prerequisite: Sight-Singing with Sol-fa Level 4 or appropriate skill proficiency. Students in Grades 4+ with no experience with sol-fa or sight-reading music should start with Level 2.

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### ↔ Afternoon Listening

1 time/week 10 min \_  | GRADE(S): 1-12


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### Sol-fa: Fast Track

1 time/week 15 min \*  | GRADE(S): 5-12

An accelerated course through sol-fa concepts covered in levels 1-3. Through video instruction, students will practice ear-training, Curwen hand-signs, and singing intervals from the solfa ladder. The lessons include exercises in multiple keys, time signatures, and with various rhythms. Students should already be loosely familiar with foundational music concepts such as note duration, time signatures, and how to read music on the staff.

Skills Focus: ear-training, interval recognition, sol-fa syllables, Curwen hand signs, sight-reading.

 May be suitable for a 4th grader who has knowledge of basic music concepts.

## Physical Education


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### PE: Grades 7-12


GRADE(S): 7-12

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#### ↔ Playground Games

1 time/week 20 min \*or\_  | GRADE(S): 4-12

Play group playground games.

 Suitable for interested younger students.

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#### ↔ Sports


1 time/week 20 min \*or\_  | GRADE(S): 4-12

This year, students will learn how to play football, badminton, and softball through participating in a variety of games, skills, and activities. Activities are geared for smaller groups of students, but can be adjusted to any size.


 Minimal supplies are required.

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### ↔ Free Play/ Circuits


2 times/week 20 min \*or\_  | GRADE(S): 4-12

Make fitness-building routines a habit.


 Students may also choose to take a local Pilates or Yoga class.

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### Historic Dancing

1 time/week 20 min \*or\_  | GRADE(S): 7-12

Students will learn dances that were popular in the historical period being studied and perform them to some music of that period.

 This course is suitable for interested students in Grades 5-6 if combining.

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## Science

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### Science: Chemistry


GRADE(S): 9-12+

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#### Chemistry Lessons

5 times/week 45 min \* | GRADE(S): 9-12+

Alveary High School Chemistry provides a natural next step following Physical Science (e.g., Alveary Form 3 Science) and establishes a solid foundation for High School Biology. The course progresses through all expected topics in introductory chemistry and incorporates living engagement and special attention to citizenship, problem-solving, and communication skills for a complete Charlotte Mason science course. This course includes our video companion series, currently at no additional cost.

 Recommended for learners who have completed Physical Science, such as Alveary Grade 7-8 Science, including the laboratory activities. Learners should be taking at least Algebra 1 alongside Chemistry (Algebra 2 if using Denison Success). Teachers wishing to place students in Physical Science instead of Chemistry may choose either to complete Alveary Grade 7-8 Science in a single year (with 5 lessons + 1 lab each week available in the Grade 7-8 Quick Links) or to purchase separately from Classical Academic Press the Novare Introductory Physics Program and Video Course.

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#### Chemistry Labs

1 time/week 60 min \*or\_ | GRADE(S): 9-12+

Labs are an essential part of science in which students engage with the Things they are reading about and practice the scientific method. Labs for this course are integrated into the lessons to facilitate adequate time for more involved activities and to better coordinate with the lessons.

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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

☞ Learners may be combined and follow their own interests.

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### ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

☞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

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## Science: Biology

GRADE(S): 10-12+

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### Biology Lessons

5 times/week 45 min \* | GRADE(S): 10-12+

Alveary High School Biology guides students through all major topics in the discipline. Based on the second edition of Novare General Biology, the Alveary course incorporates living engagement and special attention to citizenship, problem-solving, and communication skills for a complete Charlotte Mason science course. Members that already have the first edition of the text should be sure to keep their lesson plans for future use!

☞ There are no specific prerequisites or concurrents for this course, but there are a number of complex ideas that are difficult without some prior experience. A course with some exposure to basic chemistry is recommended before enrollment in Biology.

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### Biology Labs

1 time/week 60 min \*or\_ | GRADE(S): 10-12+

Labs are an essential part of science in which students engage with the Things they are reading about and practice the scientific method. Labs for this course are integrated into the lessons to facilitate adequate time for more involved activities and to better coordinate with the lessons.

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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

☞ Learners may be combined and follow their own interests.

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### ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

- ☞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

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## Science: Physics

GRADE(S): 11-12

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### Physics Lessons

5 times/week 45 min \* | GRADE(S): 11-12

Physics students gain a solid, hands-on foundation in this living lecture series from Math without Borders. This course guides students through the process of challenging their established perceptions by building up new observations. The course provides extensive experience with technology and mathematical modeling for a stand-alone high school physics course or as a foundation for a future, calculus-based physics course.

- ☞ Recommended for students in 11th or 12th Grade, depending on math placement. Students should have completed Algebra II/Trigonometry and preferably be taking at least Precalculus concurrently with this course.

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### Physics Labs

1 time/week 60 min \*or\_ | GRADE(S): 11-12

Labs are an essential part of science in which students engage with the Things they are reading about and practice the scientific method. Labs for this course are integrated into the lessons to facilitate adequate time for more involved activities and to better coordinate with the lessons.

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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

- ☞ Learners may be combined and follow their own interests.

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### ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

- ☞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

# Alt. Science Options

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## Science: Food Science

GRADE(S): 9-12

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### Food Science Lessons

5 times/week 45 min \* | GRADE(S): 9-12

An elective in Physical Science, Food Science introduces learners to applications in chemistry and physics as they relate to cooking and baking, while incorporating historical context, modern developments, current events, and citizenship. This is a hands-on course that requires independent interest and some flexibility for work time in the kitchen. There is room for teachers and learners to adjust the course for personal needs and preferences.

∞ There are no specific prerequisites or concurrents for this course.

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### Food Science Labs

1 time/week 60 min \*or\_ | GRADE(S): 9-12

Note that labs are an essential part of science in which students engage with the Things they are reading about and practice the scientific method.

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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

∞ Learners may be combined and follow their own interests.

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### ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

∞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

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## Science: Introduction to Engineering

GRADE(S): 9-12

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### Introduction to Engineering Lessons

5 times/week 45 min \* | GRADE(S): 9-12

An elective in Physical Science, Introduction to Engineering develops thinking skills and practical experience that are applicable to any field of design/innovation, while incorporating historical context, modern

developments, current events, and citizenship. This is a VERY hands-on course that requires independent interest in any form of design/innovation, including various fields of engineering and the skilled trades. The course provides guidance and flexibility for teachers and learners to adjust the course for personal needs and preferences.

- ∞ The completion of Algebra 1 and Geometry are recommended for this course, as the experience will contribute to the learner's understanding, but they are not required.

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## Introduction to Engineering Labs

1 time/week 60 min \*or\_ | GRADE(S): 9-12

Note that labs are an essential part of science in which students engage with the Things they are reading about and practice the scientific method.

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## ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

- ∞ Learners may be combined and follow their own interests.

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## ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

- ∞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

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## Science: Botany

GRADE(S): 9-12

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### Botany Lessons

5 times/week 45 min \* | GRADE(S): 9-12

An elective in Life Science, Botany guides learners through the basic foundations of the discipline, while incorporating historical context, modern developments, current events, and citizenship. This course provides guidance and flexibility for teachers and learners to adjust the course for personal needs and preferences.

- ∞ There are no specific prerequisites or concurrents for this course.

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### Botany Labs

1 time/week 60 min \_ | GRADE(S): 9-12

Note that labs are an essential part of science in which students engage with the Things they are reading about and practice the scientific method.



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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

∞ Learners may be combined and follow their own interests.

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### ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

∞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

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## Science: Advanced Nature Study

GRADE(S): 9-12

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### Advanced Nature Study Lessons

5 times/week 45 min \* | GRADE(S): 9-12

An elective in Environmental Science, Advanced Nature Study requires independent interest as it is designed to be personalized by the student and requires some flexibility in scheduling due to the amount of fieldwork required beyond the regular lesson time.

∞ Students should have at least 3 years of nature study experience and be comfortable with their nature journal.

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### Advanced Nature Study Afternoon Work

1 time/week 20 min+ \_ | GRADE(S): 9-12

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## Science: Geology

GRADE(S): 11-12

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### Geology Lessons

5 times/week 45 min \* | GRADE(S): 11-12

An elective in Earth Science, Geology is a wonderful course for Alveary high school students who are interested in the history, theory, and methods of the field.

∞ Due to the complexity of certain topics and the maturity required, this course is recommended for Grades 11-12.

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## Geology Labs

1 time/week 60 min \_ | GRADE(S): 11-12

Labs/fieldwork are an essential part of science in which students engage with the Things they are reading about and practice the scientific method.

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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

∞ Learners may be combined and follow their own interests.

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### ↔ Nature Walks & Scouting: Grades 9-12

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

∞ Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.

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## Science: Astronomy

GRADE(S): 11-12

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### Astronomy Lessons

5 times/week 45 min \* | GRADE(S): 11-12

An elective in Earth Science, Astronomy is a fascinating topic in which learners explore celestial objects, history, and philosophy. Teachers wishing for explicit instruction on topics related to world view, should include the optional Crossroads text.

∞ Recommended for students in Grades 11-12, depending on math placement. Students should have completed Algebra 1 (Algebra 2 if taking Denison Success) and Geometry.

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### Astronomy Labs

1 time/week 60 min \_ | GRADE(S): 11-12

Labs/fieldwork are an essential part of science in which students engage with the Things they are reading about and practice the scientific method.

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### ↔ Nature Notebook: Grades 9-12

1 time/week 20 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

🔗 Learners may be combined and follow their own interests.

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### ↔ **Nature Walks & Scouting: Grades 9-12**

1 time/week 30 min+ \_ | GRADE(S): 9-12

Outdoor work is established or continued as a lifelong habit. Optional resources are provided in science lessons and on the Alveary bookshelf.

🔗 Learners may follow their own interests or follow the plan of their local scouting troop or natural history club.