



Earth Science Yearlong 2019/20



ELIGIBLE STUDENTS:

Grades 7th-9th graders, 10th graders welcome: *who are able to type and have writing skills that will allow them to respond to questions regarding both class discussions and independent reading assignments. Students will be required to create flashcards for aiding in the memorization of vocabulary as well as other homework assignments that will help increase their fluency in science and especially Earth Science. Students should also be prepared to participate in lab experiments, which will be conducted both during class time and independently.*

Please note: This course will include independent reading, which will provide a basis for in-class discussion. Students will be required to be prepared with lab materials in order to work through lab experiments, questions about labs, and discussion of results during scheduled dates for labs.

Class Dates: Begin Wednesday, September 4, 2019; running through Friday, May 22, 2020.

Class Times: Mondays, Wednesdays, & Fridays: 11:00 am – 12:15 pm (EST)

Instructor: Sarabeth Borowiec

E-mail: sborowiec@scholeacademy.com

SCHEDULE FOR EARTH SCIENCE:

CLASS SESSIONS DATES:

Classes will take place on Mondays, Wednesdays, & Fridays: 11:00 am – 12:15 pm (EST) for 32 weeks and 95 classes on the following dates*

September (12): 4, 6, 9, 11, 13, 16, 18, 20, 23, 25, 27, 30

October (13): 2, 4, 7, 9, 11, 14, 16, 18, 21, 23, 25, 28, 30

November (10): 1, 4, 6, 8, 11, 13, 15, 18, 20, 22 [**Thanksgiving Break**]

December (6): 2, 4, 6, 9, 11, 13 [**Christmas Break**]

January (12): [**Christmas Break**] 6, 8, 10, 13, 15, 17, [**End 1st Semester**] 20, 22, 24, 27, 29, 31

February (9): 3, 5, 7, 10, 12, 14 [**Winter Break**] 24, 26, 28

March (13): 2, 4, 6, 9, 11, 13, 16, 18, 20, 23, 25, 27, 30

April (10): 1, 3 [**Holy Week**] 13, 15, 17, 20, 22, 24, 27, 29

May (10): 1, 4, 6, 8, 11, 13, 15, 18, 20, 22 [**End 2nd Semester**]

**Please note the above dates and times are the anticipated class sessions for this course. However, all dates are subject to change as the instructor's circumstances might dictate (e.g. illness, family emergency). Any classes canceled by the instructor will be made up at an alternate time designated by the instructor.*

EARTH SCIENCE COURSE MAP:

QUARTER 1

1. Earth in Space (Ch. 1)
2. Visualizing Earth (Ch. 2)
3. Thinking about Earth (Ch. 3)

QUARTER 2

1. Matter and Minerals (Ch. 4)
2. Rocks and the Rock Cycle (Ch. 5)
3. Rock and Mineral Labs

QUARTER 3

1. Plate Tectonics and Mountain Building (Ch. 6)
2. Volcanoes and Earthquakes (Ch. 7)
3. Weathering, Erosion, and Soils (Ch. 8)

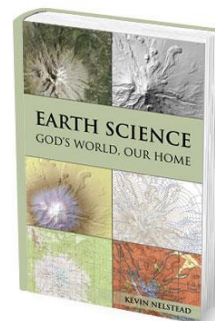
QUARTER 4

1. Surface Water and Groundwater (Ch. 9)
2. The Atmosphere (Ch. 13)
3. Weather (Ch. 14)

OFFICE HOURS: Office hours will be held on Mondays and Wednesdays from 10:30 – 11:00 am by appointment. Other times will be offered throughout the year for students to ask questions and have an opportunity to study together outside of regular class sessions.

REQUIRED COURSE TEXTS:

[Earth Science: God's World, Our Home](#), by Kevin Nelstead, Novare Science and Math, 2016 edition



REQUIRED COURSE MATERIALS:

[Lab Kit for use with Novare Earth Science](#) (find at www.homescience-tools.com)

[Graph Paper Composition Notebook](#)

Index Cards or Cardstock for creating flashcards

Three Ring Binder

Notebook Paper

Ruler

EARTH SCIENCE COURSE DESCRIPTION:

“It is important for us to act as good stewards of the gifts God has given to us. The Earth is certainly a great gift and in our time the Earth is in need of our care and attention. *But we humans generally do not properly care for things unless we love them, and we generally don’t love things unless we spend time with them.* We encourage you to find ways to spend time with the Earth – not just riding in cars around town, but exploring streams, walking in the woods, playing in the ocean, and hiking in the mountains. If you are going on vacation with your family, we encourage you to suggest to your parents to include stops at National Parks, National Forests, or other natural spots during the trip so that you can experience the glories of this beautiful planet for yourself.” This quote comes from the preface for students found in the main text that will guide our study of the science of the Earth for our class. Our aim throughout the year is to spend time learning about the Earth so that we might love it and become good stewards of it.

During class sessions, students will learn to take notes using the Cornell Note taking system during brief lectures that will be used to clarify those points that lend themselves well to further explanation. Students will participate in both class discussions and enrichment activities, as well as labs (studying topography and rocks and minerals) for a significant portion of our class time together. During these discussions students will learn to speak clearly about what they are learning and grow in charity towards one another.

Outside of class, students will responsibly dedicate time to their preparation for class discussion and assessments. Throughout the year, students will complete required reading, write flashcards, and complete study exercises that will allow them to not only contribute well to class discussions, but also take their learning with them after they have taken a quiz and finished the last class of the year.

During the year, we will address the controversial topic of the age of the Earth. We will look at the scientific processes and claims that are made through the interpretation of data in order to begin to understand more about the age of the Earth. Students are welcome to respectfully disagree about the age of the Earth and the data that is presented in our text and in this course. Students will **not** be assessed about either their view or the text’s view about the age of the Earth.

At Scholé Academy, we have carefully considered how we should engage our contemporary culture as those who believe that Christ is the Truth (John 14:6), and that all truth has its source in him. We think it is important to provide our upper school students (in grades 7-12) with tools and opportunities for critically examining various cultural trends, issues and more through the lens of orthodox, Christian beliefs. Being confident in the truth revealed to us in creation, the Scriptures, and the tradition of the church, we are not afraid to follow the truth and its implications nor to address error and falsehood. [Read more about our Faith & Culture here.](#)

STUDENT EXPECTATIONS: EXECUTIVE FUNCTION SKILLS

Students enrolling in Scholé Academy's Earth Science will be expected to show development of Executive Function Skills throughout the year. Executive Function Skills speak to a set of qualities and skill sets students can develop and hone to better approach the courses, lectures, readings, and teachers they will face in their future academic coursework.

Each teacher will invariably have his own set of requirements and skills he requires students to bring to their studies. *Generally* speaking, I believe there are five such qualities that are necessary for my students in various subjects; and I believe they would be accepted as "good" by many other teachers as well.

1. An Engaged Student: One who is willing to step into the arena of class discussion, ask questions, supply answers, generate the internal dialogue necessary to determine if what's being discussed is important and necessary to himself.

2. Note Taking: A student who during and after being engaged with the class has been trained to note important and relevant content in an organized fashion (Cornell Notes would be a great option). His notes would then be consulted, independently, for application in assignments and assessments.

3. Attention to Detail & Preparedness: These students are ones who consistently adhere to deadlines, submission requirements, adhering to style guides and codes, confirm technology is working prior to the start of class, be responsible to determine how to proceed after an absence, be responsible for consulting his course syllabus and adjusting as the class proceeds, etc.

4. Employ Critiques: These students are ones who receive feedback to one of their submissions, and then are sure to apply that feedback to future assignments rather than repeating mistakes. These students also glean information from the live class critiques of fellow students and note mistakes to avoid by learning from others.

5. Initiative/Maturity: This student would hear the teacher comments and be able to assess whether or not the teacher was describing his work, and then take the initiative to schedule office hours with his teacher if necessary.

STUDENT EXPECTATIONS IN ACTION

Students will be studying Earth Science topics and concepts found in Earth Science: God's World, Our Home. The ultimate goal for the student will be to understand the scope and nature of the field of Earth Science. Students will be assigned reading assignments, writing assignments, and assignments that cause them to review content studied previously. Students will participate in labs during class time as well as independently.

In this class, students will be expected to listen attentively, and participate actively in class discussions. Students are expected to arrive to class on time and with all assigned material completed. The instructor will facilitate learning for the student, but the responsibility for staying up-to-date with classwork and assignments ultimately falls to the student.

Students who have not submitted their homework to the appropriate Schoology assignment folder prior to the start of class will not be permitted to join the live class session. Those students will be invited into a separate Zoom breakout room to work privately until they have completed the day's assignment. After they have completed their homework submission, they will be permitted to rejoin the class in session. A day spent in a breakout room will constitute an absence from class.

All assignments will be due into the appropriate Schoology Assignment folder prior to the start of class each day. Students turning in late work will earn a 10% penalty for each day the assignment is late. Students will submit their work by scanning their homework pages and uploading it into the Schoology assignment window. Photographs of completed assignments will not be accepted as they are incredibly difficult to read.

STUDENT EVALUATION: GRADING

While pursuing Earth Science through Scholé Academy will be “restful”, we also recognize the need to provide grades for students who will be using this course as part of their prepared college transcript. It’s a delicate balance to achieve both restful learning and excellent academic performance. Earning a specific grade should not overshadow achievement goals for mastery of this discipline.

I can assign the following grades to your student’s level of achievement: *magna cum laude* (with great praise); *cum laude* (with praise); *satis* (sufficient, satisfactory) and *non satis* (not sufficient).

Ideally, every average student working diligently should do praiseworthy work (*cum laude*). Those who excel beyond this expectation will be the *magna cum laude* students. Students who do adequate but not praiseworthy work be designated *satis*. *Non satis* means lacking sufficiency or adequacy.

Inasmuch as you might be fully on board with this grading method in theory, there will undoubtedly be the need to complete a college transcript with either a numeric or traditional letter grade. Traditional percentage grades will be provided and will be readily accessed on the *Earth Science* Schoology page. Additionally, Mrs. Borowiec will provide a transcript of that grade to the requesting parent at the end of the year.

STUDENT EVALUATION: MASTERY PORTRAIT

Mastery portrait: Students in the Earth Science class should master the following skills, ideas, and knowledge taught:

- Through deep engagement both inside and outside of class, students who master Earth Science should grow in their love for the given world, God’s creation.
- Master skills for acquiring vocabulary and central concepts in Earth Science.
- Practice proper and safe laboratory technique and procedures.
- Interpret results from laboratory experiments.
- Learn to make connections from what is known to what is being learned in order to speak clearly about Earth Science.
- A student who masters Earth Science will memorize the names of a variety of rocks and minerals.
- Will begin to understand main points about how scientists make claims about the age of the earth.
- Students should grow in the student virtue of humility as they consider the task set before them to know about Earth in order that they may steward it well. Growth in perseverance, constancy, and patience should also occur organically as students to steadily attend to and complete the work that is before them.

STUDENT EVALUATION: ASSIGNMENTS, TYPES & WEIGHTS

Mrs. Borowiec will communicate with students regarding assignment feedback and grading through the free online grading system, Schoology. The teacher will provide students with more detailed information and access to the Earth Science course page.

Student's grades will be comprised of:

1. Attendance: 10% of the grade
2. Class Participation (Discussion & Notes): 25% of the grade
3. Homework Assignments: 30% of the grade
4. In class participation in labs: 10% of the grade
5. Quizzes and Assessments: 25% of the grade

STUDENT EVALUATION: ACADEMIC DISHONESTY

Students will often take assessment tests and/or quizzes privately at home. Students are on their honor to abide by [Scholé Academy's Learning Philosophy](#) which assumes the personal cultivation of Student-Virtues described in the Student-Parent Handbook.

Additionally, plagiarism is a serious and punishable offense. Proper citation of all sources is essential to the academic endeavor. Remember to cite any source if the information is not common knowledge or is an opinion obtained through any source. A plagiarized assignment will result in a failing grade. Students should consult their chosen style manual for specific direction on obtaining, quoting and paraphrasing sources.

THE VIRTUAL CLASSROOM:

We will be using the free online "virtual classroom" software provided by Zoom, one of the leading companies that provides such software. The virtual classroom will provide students with interactive audio, text chat and an interactive whiteboard in which texts, diagrams, video and other media can be displayed and analyzed. We will provide students with a link (via email) that will enable students to join the virtual classroom.

Specific information regarding the technology used by Scholé Academy (including required technology) can be found by visiting the [Technology in the Classroom](#) section of the Student Parent Handbook.

Students will submit documents by scanning and uploading them to their personal computer. They will submit their work to the *Earth Science* Schoology assignment page (access granted after enrollment is secured).

ABOUT THE INSTRUCTOR:

Sarabeth Borowiec graduated from Grove City College with a B.S. in Molecular Biology. At Grove City College, she participated in research involving sequencing mitochondrial DNA. During an internship at the University of Pittsburgh, she studied the impact of select heavy metals on cellular and molecular mechanisms of cells in the respiratory system. She has classically educated her daughters at home for the past five years, and has taught a variety of classes for homeschooled students including writing, knitting, and Latin. She is excited to share her love of the intricacies found in the natural world with the students of Scholé Academy. Her desire is that her students will not only deepen their knowledge and understanding of the world around them, but also that they will integrate that learning throughout their lives that they might act justly, love mercy, and walk humbly with God.