

MACH High School Class Descriptions and Book Lists 2020-2021

9th Grade Physical Science (also open to 10th graders who did not have this class in 9th grade)

Teacher: Leslie Smith

Physical science is the systematic study of God's creation and how it works. This course will be broken down into two components: we will study basic chemistry in the fall, including an introduction to matter, the periodic table, atoms, chemical reactions, acids, and bases, etc.; in the spring, our studies will include an introduction to physics in which we'll explore motion and force, waves (sound, light, electromagnetic), electricity, magnetism, among other topics. There will be weekly homework assignments (approximately 30-45 minutes per weekday) with some periodic projects. We will have classroom and at-home labs as well. There will be an additional fee for copies and lab materials, which should not exceed \$15.

Required Textbook:

- *Prentice Hall Physical Science* book, copyright 2009, published by Pearson Education, Inc. ISBN #6860601336 or 9780133668605.

9th Grade Writing & Literature **CANCELLED**

Teacher: Emily Bucher. *Note: this is a paid class for members. Cost: \$180.

This course teaches reading comprehension, composition, research, vocabulary development, applied grammar, and oral communication. Both fiction and non-fiction works are used with attention to understanding main ideas, supporting details, author's purpose, and literary techniques. Students will be challenged to think critically about their reading and to express their thoughts in composition. They will utilize different styles of writing, including narrative and persuasive, as well as literary analysis. Composition assignments will facilitate the development of mature sentences, the organization of effective paragraphs, and basic resource/research skills necessary for future academic courses. Assessments will include reading comprehension quizzes, grammar quizzes, graded writing assignments, Writer's Notebook participation, and a 6+ page research paper.

Required Book List:

- *Write Source* 9th grade, 2007 edition, published by Great Source Hardcover ISBN: 978-0-669-53134-3 Softcover ISBN: 978-0-669-53138-1
- *Carry On, Mr. Bowditch* ISBN: 978-0-618-25074-5
- *The Merchant of Venice* ISBN: 0-553-21299-0
- *The Bronze Bow* ISBN: 978-0-395-13719-2
- *The Hiding Place* ISBN 978-0-8007-9405-7

7th-9th Grade American History

Teacher: Kim Groff

This class will begin with the exploration and founding of America and trace the path of America's history until the end of the Civil War. *The American Republic* text demonstrates our unique American values and government and reinforces the importance of understanding our history. Weekly assignments will include reading and interpreting the text, researching related topics, understanding maps, and engaging in class participation. Students will be responsible for reading books and presenting book reviews, as well as completing other writing assignments to reinforce what they are learning. Unit tests will summarize the students understanding of their studies. A trip to Massachusetts may be taken at the end of the year to give students the opportunity to experience, in person, some of the historic places they learned about throughout the year.

Required Book:

- *The American Republic*, Author - BJU Press, Copyright Year – 2009, 3rd ed. ISBN - 978-1-59166-706-3 (*Note a 4th edition is also available but is not the correct text.)

Algebra 2 (Grades 8-12)

Teacher: Sue Snavelly

Parents will be expected to correct their students work prior to class so the teacher can review the students' work. There will be four lessons assigned to be completed during the week, and study for quizzes and tests throughout the course. This course will cover traditional second-year algebra topics and prepare students for Precalculus. This course will also provide some SAT Prep for the math sections and utilize some SAT Prep materials. Students should already have completed Algebra 1 and possibly Geometry prior to taking Algebra 2. There will be a copy fee for the weekly study guides that are handed out in class.

Textbooks:

- *Algebra 2: An Incremental Development*, 3rd ed., by Saxon Publishers ISBN: 1-56577-140-0
*Note: The 2nd edition textbook may be used but be aware this edition does not include the lesson reference next to each homework problem. ISBN: 978-0-939798-62-9
- *Solutions Manual*, ISBN: 1-56577-143-5

Geometry (Grades 9-12)

Teacher: Jessica Hoeltzle

Using a traditional approach to math, standard geometry topics will be covered. Geometric proofs are introduced early in the course and used through to the end. Algebra is frequently reviewed throughout the lessons. Trigonometry and transformations are introduced in the last lessons. This course should be manageable for average to slow learners. Advanced students can be challenged by completing the honors exercises. Class time will be used to review homework difficulties and to introduce new concepts. Homework will be self-graded at home either by the student or parent. The number of worksheets per week will depend on the mastery of concepts per student. Honor worksheets will be assigned to aggressive learners. Tests will be completed at home each week.

A review of the Math-U-See curriculum can be found here: <https://cathyduffyreviews.com/homeschool-reviews-core-curricula/math/math-grades-k-6/math-u-see>

A Description of the geometry books can be found here: <https://store.demmelearning.com/math-u-see/secondary-math/geometry>

Required Books/Materials:

- *Math U see Geometry Teacher's Manual* (instructions and answer key) and DVD (optional) 2005 or 2009 edition
- *Math U See Geometry Student Text and Test booklet* – new
- *Painless Geometry - second edition* by Lynette Long (can buy used for less than \$5 at <https://www.abebooks.com/9780764142307/Painless-Geometry-Series-Long-Lynette-0764142305/plp>)
- A copy of the Print Correction Sheet for 2005 edition, found at <https://www.mathusee.com/web-pdfs/corrections/GCorr.pdf>
- Protractor, a good compass, and a straight edge to draw constructions.

10th - 12th Grade Modern World History and World Religions

Teacher: Amy Brengle *Note: this is a paid class for members (\$180)

This course is designed to examine world history starting after the Renaissance and Reformation and continuing to present day. Study will center on analyzing major people, events, religions, and movements throughout this portion of history. Special focus will be placed on reading historical primary sources and discussing global issues.

Required Books:

- *Modern World History, Patterns of Interaction*, 2005 edition (ISBN 0-618-37711-5)
- *The Compact Guide to World Religions* (ISBN 1-55661-704-6).

10th -12th Grade English with British World Emphasis

Teacher: Emily Bucher *Note: this is a paid class for members (\$180)

This course explores the exciting world of British Literature. In this class, we will familiarize ourselves with British authors and the fascinating history and culture that helped shape their writings. We will also discuss major themes addressed in the pieces we read filtered through a Biblical worldview, equipping the students with the tool of godly discernment. The students will have opportunities to sharpen their writing and creative skills through the preparation of several essays and projects. The students will also broaden their vocabulary and poetic pallets through the preparation and presentation of several speeches and poetry recitations.

Course Requirements:

- Students will complete weekly reading assignments including comprehension questions, which will be turned in at the beginning of the following class period typed or handwritten (neatly, please) in blue or black ink.
- Throughout the course of the semester, students will write the following essays:
 - Biblical Response essay (2-4 pages)
 - Character Analysis: Compare and Contrast (2-4 pages)
 - Literary analysis (2-4 pages)
- Students will memorize and perform a poem from Shakespeare's *Macbeth*.
- Students will create and present a poem written about a character of choice from a piece of teacher's choice.
- Students will create a picture illustrating a favorite scene from a piece of their choice.
- Students will take 3 tests per semester over lecture notes.

Required Books:

- Textbook: *British Literature, 2nd edition* (2011) Publisher: BJU Press, ISBN: 978-1-60682-181-7
- *Write Source 2007* book
 - Hard cover ISBN: 978-0-669-53135-0
 - Soft cover ISBN: 978-0-669-53139-8

Chemistry 10th-12th Grades

Teacher: Galen Hershey *Note: This is a paid class for members (\$225)

A 28-week, 1 ½ hour class with a lecture and a lab. All aspects of high school chemistry are covered including: atomic structure, nomenclature, reactions, aqueous solutions, chemical composition, atomic theory, stoichiometry, chemical bonding, mass calculations, gases, solutions, orbitals, polar and ionic bonding, Lewis structure, acids and bases, equilibrium, electrochemistry, oxidation and reduction reactions, radioactivity, and intro to organic and biochemistry. All materials and supplies for labs will be included. Prerequisite - Algebra 1.

Class Requirements:

- Scientific calculator capable of doing logarithms
- Notebook for taking notes

Required Textbook:

- *Introductory Chemistry a Foundation*, 4th edition, by Zumdahl, Published by Houghton Mifflin Company (ISBN 0-395-95536-X)

If there is a picture on the site, the book is blue and white.

*Note: It is important that you get the fourth edition. There is also a fifth and sixth edition. The text is almost identical for all the editions, but the problems are different, and it is important that all the students will be doing the same problems.

Anatomy and Physiology Class

Teacher: Kelly Rittenhouse

This 1-credit course will cover the anatomy and physiology of the human body. We will begin with cellular metabolism and physiology. We will then cover in detail the anatomy and physiology of each of the following body systems: integumentary, skeletal, muscular, nervous, endocrine, blood, cardiovascular, lymphatic, respiratory, digestive, urinary, and reproductive. Course will include class presentations. There will be a class fee for copies and supplies needed to teach the class, which should not exceed \$20.

Required Books:

- To be announced

Algebra 1 (Grades 7-12) CANCELLED

Still undetermined whether this class will be offered. Please note on your class sign-up form, if the class is desired. You will be notified by July 1, whether this class is being offered or not.

Volleyball (7-12th grades)

Skills and Drills will be practiced during the first half of the class, followed by play of the game. High school students, taking the Chemistry course, may join in for the volleyball games at 2:00. Volleyball will not be held on the last day of the Spring semester, and for any other circumstances beyond our control (e.g. times the church may not allow us to use the gym, because of other church functions).

Woodworking/Cooking Class (2nd-9th grade) (Fall semester only)

This class will cover general woodworking skills such as sanding, supervised cutting, drilling, hammering, nailing, and/or painting and staining. The final decision for the woodworking project has not yet been determined. Simpler woodworking options will be provided for the younger ages, and more advanced options will be available for the older students. Options discussed are a bookshelf or clock. During the cooking portion of this class, students will learn skills such as chopping, dicing, frying, and browning. Each student will prep and assemble their own 9x13 dish. Final cooking or baking will be finished at home. Possible meal choices include a casserole/layered dish, a salad meal, Stromboli, spaghetti and meatballs, and a crockpot meal. A list of supplies for this class will be provided closer to the time. There will be an approximate supply fee of about \$30.

Choir/Musical (2nd-9th grade) (Spring only)

Teacher: Melody Stahl *Note: this is a paid class for members.

This class will provide instructions of musical elements including rhythm, singing with healthy technique, reading music, and performing. A drama component may also possibly be added. Minimum of 12 students is needed. Approximate cost: \$50/student but is dependent upon the number of participants.

Music Ensemble (2nd-9th grade) (Spring Only)

Teacher: Melody Stahl *Note: this is a paid class for members. Approximate cost: \$50.

Several options are listed as possibilities. Final choice will be decided based on that with the most interest.

- **Option #1: Group Guitar (Grades 5-9)**
Students would learn basic chord progressions and beginning picking skills. Students need to provide the guitar and buy the resources (or this would somehow be included in the price of the class) some resources cost more than others.
- **Option #2: Band (Grades 5-9)**
Students who play brass, woodwind, or percussion instruments would combine to perform ensemble music together. The group would focus on how to tune, developing tone, how to listen and blend with each other, and expanding technical skills. Students who are interest must include what instrument they play, how many years they've played, if they've taken private lessons and if so, for how long, and what level they are at, and if they've ever played in a band.
- **Option #3: Private Lessons (Grades 3-9)**
Piano lessons offered beginning-advanced.
Instrumental lessons offered beginning only. Books need to be purchased by the family. They should be aware that this is only for a couple months and it is best to have a teacher for several years. :) and I will encourage them/get them in touch with someone they can contact for further lessons afterwards.