

LTT CLASS DESCRIPTIONS 2022-2023

ABOUT LTT'S MATH PROGRAM - What makes us unique?

- The upper-level math classes will consist of a 1.5-hour in-person primary session on Wednesday and a 1-hour online session on Monday. This format will serve our families well by ensuring adequate instruction time, opportunity for a “mid-week” check-in, and convenient access for students on Mondays. (Students must have a camera and the ability to write on Zoom whiteboard. They need to log in through a computer, not a phone or Chromebook.)
- LTT math classes are modeled on current best practice teaching methodologies and all math classes supplement our textbook-based curriculum by incorporating various online tools that are becoming more and more prevalent in math education in high schools and universities. We use IXL.com for standards based spiral review.
- Because we recognize that students work at different levels, we offer many of our math classes at both standard college prep and honors level. Students are offered the opportunity to earn honors points throughout the year on tests and homework assignments. If they complete the honors assignments and tests with acceptable grades (average on honors work > 75), they receive a special Honors designation on their final grade report.
- To keep skills current, summer review assignments will be assigned by mid-June. These assignments will be in IXL.com. The assignments, which will review the prerequisites, will be due the first day of class and counted as homework grades. If you have significant trouble with these assignments, you should consider taking a review class over the summer.

FUNDAMENTALS OF MATHEMATICS (1.5-hour tutorial) This is a middle school math course designed to bridge students between their elementary math studies and Pre-Algebra. This course will focus on fractions, decimals and percents. Fractions, in particular, are often something that students struggle with, and this struggle multiplies as they move further into higher math. The goal of this course is to help students understand and conceptualize these topics so that can move forward with greater confidence. We will approach the material through a variety of learning approaches which makes the material accessible to all learning styles. This course requires about 30 – 45 minutes of DAILY work outside of class.

Required Materials: 1/2 to 1 inch 3-ring binder for organizing handouts.

Materials fee: \$85 includes the worktexts, copy costs and other miscellaneous materials.

Tutor: Dana Cloutier, clouts4@yahoo.com

PRE-ALGEBRA (2-hour tutorial) This class will meet twice a week. We will meet for 1 hour on-line on Monday and for 1 hour in person on Wednesday. This format will allow for more in-depth interaction with the concepts. The course requires about 45 minutes to an hour of DAILY work outside of class. There will be required summer assignments to get students warmed up for the beginning of the school year.

Prerequisites: Admission into this course requires passing a readiness test administered by the instructor. If a student is not ready for this class, Fundamental of Mathematics would be an excellent starting course.

Topics covered in this class include: Variables, Expressions, Integers, Order of operation, Simplifying variable expressions, Solving equations, Multi-step equations, Inequalities, Factors, Greatest common factor, Rules of exponents, Scientific notation, equations and inequalities with rational numbers, ratios and proportions, the percent equation, percent applications, simple interest, relations and function, graphing, linear equations in two variable, slope, graphing a line in the slope-intercept form, the Pythagorean Theorem, distance and mid-point, Circumference and area of circles, basic statistics. Students often learn math as a lot of different, separate things they need to memorize and approach in separate ways. As a result, they quickly reach a point where they can't keep it all straight, feel overwhelmed, and conclude that they are no good at math. The goal of this course is to help students understand the concepts and the connections between the different concepts. This enables them to broaden their math knowledge and see how they can make connections between what they already know and the new things they are learning. This course is designed for middle school students who have completed their basic elementary math work (7th and 8th graders, although some 6th graders may be ready for this course). We will work through the basic math concepts that will lay a strong foundation for Algebra and high school level science. We will approach the material through a variety of learning approaches which makes the material accessible to all learning styles.

Required Materials: Pre-Algebra, by Larson, Boswell, Kanold and Stiff, published by McDougall Littell, Copyright 2005, ISBN 0618250034. (Can be purchased used through Amazon, Abe Books and other used book sources.) A 3-ring binder with 5 dividers, lined and graph paper. You will also need a calculator that can handle trig. Functions and logarithms (I would highly recommend the Texas Instruments TI-30xs MultiView). Do not purchase a graphing calculator.

Material fee: \$45 - includes one year subscription to IXL, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

ALGEBRA 1/HONORS ALGEBRA 1 (2.5 hour tutorial) This class will meet twice a week. We will meet for 1 hour on-line on Monday and for 1.5 hours in person on Wednesday. This format will allow for more in-depth interaction with the concepts. The course requires about 45 minutes to an hour of DAILY work outside of class.

Topics covered in this class include: We will start with Chapter 3 of the textbook because Chapter 1 and 2 are Pre-Algebra topics. Required summer assignments will review these earlier topics. Topics covered in this class include polynomial arithmetic, factoring polynomials, transforming formulas, algebraic fractions, negative exponents and scientific notation, functions and lines, equations and graphing, systems of linear equations, inequalities, rational and irrational numbers, and quadratic function.

Prerequisites: Admission into this class requires either successful completion of Pre-Algebra or passing an Algebra readiness test administered by the instructor. Students should have a good command of order of operations, evaluation of simple and complex expressions, solving linear equations, problem solving process, signed number arithmetic, positive exponents, and the distributive property.

Required Materials: Algebra 1, by Larson, Boswell, Kanold and Stiff, published by McDougall Littell, Copyright 2007, ISBN 0618594027. (Can be purchased used through Amazon, Abe Books and other used book sources.) A 3-ring binder with 5 dividers, lined and graph paper. You will also need a calculator that can handle trig. functions and logarithms (I highly recommend the Texas Instruments TI-30XS MultiView). Do not purchase a graphing calculator. The use of a phone is not allowed.

Material fee: \$45 – includes one year subscription to IXL.com, summer review assignments, and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

ALGEBRA 2/HONORS ALGEBRA 2 (2.5 hour tutorial) **This class will be offered in the 2023-2024 school year.**

Topics covered in this class include: We will start with Chapter 2 of the textbook because Chapter 1 reviews Algebra 1 topics. Required summer assignments will review these earlier topics. Topics covered in this class include systems of inequalities, factoring quadratics, quadratic equations and functions, rational expressions, complex fractions, irrational and complex numbers, direct and indirect variation, polynomial equations, systems of equations in 2 or more variables, exponential and logarithmic functions, triangle trigonometry, and trigonometric applications.

Prerequisites: Admission into this class requires either successful completion of Algebra 1 taught by this instructor or passing an Algebra readiness test administered by the instructor.

Required Materials: Algebra 2, by Larson, Boswell, Kanold and Stiff, published by McDougall Littell, Copyright 2007, ISBN 0618595414. (Can be purchased used through Amazon, Abe Books and other used book sources.) A 3-ring binder with 5 dividers, lined and graph paper. You will also need a scientific calculator (I highly recommend the Texas Instruments TI-30XS MultiView). Do not purchase a graphing calculator. The use of a phone is not allowed.

Material fee: \$45 - includes one year subscription to IXL.com, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

GEOMETRY/HONORS GEOMETRY (2.5 hour tutorial) This is a high school level math course will meet twice a week. We will meet for 1 hour on-line on Monday and for 1.5 hours in person on Wednesday. This format will allow for more in-depth interaction with the concepts. The course requires about 45 minutes to an hour of DAILY work outside of class. This course can be taken at either an Honors level or a standard level.

A goal of this course is to help students understand why the concepts work, not just how to find the answer. This helps promote mathematical reasoning and conceptual growth which allows students to analyze new situation and deduce answers.

Some of the topics covered include: parallel and perpendicular lines, triangle relationships, similarity, polygons and area, surface area and volume, right triangles and basic trigonometry, circles, transformations, and proofs.

Prerequisites: Admission into this class requires either successful completion of Algebra 1 taught by this instructor or passing an Algebra readiness test administered by the instructor. (If a student is not ready for Geometry, the Algebra 1 course is a great place to begin.)

Required Materials: McDougal Littell Geometry (2007 edition ISBN:978-0-618-59540-2). You will also need a calculator that can handle trig. Functions and logarithms (I highly recommend the Texas Instruments TI-30XS MultiView which can be purchased for under \$20). Do not purchase a graphing calculator. The use of phones is not allowed.

Material fee: \$45 - includes one year subscription to IXL.com, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

ABOUT LTT's LANGUAGE ARTS PROGRAM:

All of LTT's language arts courses are taught from a distinctly Christian and classical worldview. The compositions in the LTT writing classes are generally synthetical, while the writing in the LTT literature classes is more analytical. High school students absolutely need to learn both analytical and synthetical writing to be well prepared for higher education.

The Introductory Writing class for middle school students uses writing level B from Institute for Excellence in Writing (www.iew.com) which teaches writing through the classical method of imitation. The Foundational Writing class (formerly Writing B) and the Advanced Writing class (formerly Writing C) both use some stylistic techniques and structural concepts from IEW but go much further in developing composition skills in high school students, placing more emphasis on the content and clarity of a student's papers. Many students will remain in the Introductory and Foundational writing classes for two consecutive years to master the concepts presented, giving them the confidence to move to a higher level of writing. The writing and grammar concepts in the Introductory and Foundational classes do not change from year to year, but the content of the writing assignments rotates every other year within the level, creating little repetition for second year students. Although the Introductory and Foundational writing classes are offered every year, the Advanced writing class is only offered every other year.

The literature classes focus on textual engagement and close reading, along with honoring authorial intent and historical context. Although the classes are taught from a Christian perspective, students are not taught to judge a text through a critical lens, but instead are encouraged to appreciate the text as the author intended while considering what the book might have to say about biblical and universal truths, no matter what the author's beliefs were. Stories written by non-Christians include the truths of the scriptures because they are representations of spiritual realities written on every human's heart by our creator. Since reading and writing are closely related, most of the literature classes are writing intensive. Each year there is a literature option for 9th/10th and 11th/12th although the literature options rotate. Balancing instructor guided reading with class discussion, the 9th/10th grade literature options teach students to read metaphorically, make connections, and give students the background knowledge they need so that they are well prepared when they encounter the great books from Ancient and British literature in the 11th/12th grade. There are no separate literature classes currently offered for middle school students at LTT; however, the Introduction to Writing class is highly recommended as it exposes students to a wide variety of traditional stories such as fables, fairy tales, and legends. These are the stories that the novels studied in high school have grown out of, so elementary and middle school students should be reading these classic tales.

INTRODUCTION TO WRITING (1.5-hour tutorial): In this 32-week course, students in grades 6-8 will be introduced to the foundations of writing using Excellence in Writing's Level B Intensive curriculum. Covering all nine of IEW's structural models, this class will alternate all year between the inventive/imitation writing units and the report writing units. There are two main components to this class. One of these is the structural part of the class where students learn the concrete organizational skills necessary to structure a basic paper including: outlining sources, staying on topic in their body paragraphs, writing introductory and concluding paragraphs, and revising and polishing compositions. In addition to the organizational and structural component, a second major focus of this class is improving the syntax and mechanics of student's sentences using the IEW Stylistic techniques. Along with the structure and style that they learn, students will learn some basic grammar rules. One note about the inventive/imitation writing units: these are not open-ended creative writing but instead are structured and classical in nature. Students will build a binder throughout the year that includes the IEW Student Resource Notebook materials as well as supplemental resources created by the instructor. Students should plan on about 2-3 hours of homework per week. All paragraphs/papers (rough drafts and final drafts) must be typed before submission (parents can help with this if needed) and must be handed in during class, not by e-mail.

NOTE: Source materials are rotated every other year so that students can take this class for two years in a row without much repetition, but the same grammar is repeated each year so that students can fully master the concepts.

In order to sign your child up for this introductory writing class: You, the parent, must be willing to help your child organize and manage this class on a weekly basis at **home or your child will not be able to continue in the class**. Because this class only meets for 1½ hours per week and students at this level often need more help, students rarely succeed when parents leave them on their own so parental involvement is essential. Also, because this is a writing class, your child must be able to hold a pencil properly and be able to write in complete sentences. If your child does have a learning or developmental disability and you want to sign them up for this class, you must first e-mail the tutor PRIOR to registering them for the class to make sure that the class will be a good fit for your student. Students with disabilities have taken this class and been very successful, but please be aware that you the parent will need to provide adequate support at home.

Remote Option: There is NO remote option for this class.

Required Materials: a blue or black pen (NO PENCILS ALLOWED IN THIS CLASS), a colored pen or pencil (any color except red, black, or blue), and a highlighter. At this level students do not need to purchase a grammar book as the instructor will provide any necessary handouts.

Materials provided by teacher: IEW binder, magnum opus binder, 3-ring pencil case to be kept in IEW binder, weekly handouts

Materials Fee: \$55 per student

Tutor: Carol de Vries, csdevries4305@gmail.com

FOUNDATIONAL WRITING (Formerly Writing B) (1.5-hour tutorial): This 32-week high school writing course is a foundational composition class that is a prerequisite for all of LTT's high school writing and literature classes. Although this class continues from the introductory course utilizing *Excellence in Writing's* stylistic techniques and structural models, it goes much further than the scope of the IEW curriculum and places more emphasis on the clarity and content of the student's compositions. During the first semester, students are taught how to move beyond report writing (which they learned in the introductory class) and write a basic expository essay which includes choosing reliable sources, writing a thesis statement, using specific evidence, and integrating quotations. For the narrative unit of the class, students read several short traditional stories while learning to succinctly summarize a story. The culmination of the narrative unit is writing a literary paper that both summarizes and analyzes a narrative poem. Then in the second semester, students learn how to research and write an academic argument essay with MLA citations. Along with learning grammatical conventions and mastering syntactical techniques, students will spend time reading and imitating famous authors' styles. Sprinkled throughout the year, the forms and conventions of poetry are studied, and students write some of their own original poetry. Because of the foundational nature of this class, it is not uncommon for students to remain in this class for two years between 8th-10th grade. Each year reviews the same concepts, but the source texts and assignments are rotated every other year so that students do not repeat much from the previous year and can take the class for two consecutive years in order to fully master the material. Instead of a textbook, students will build a comprehensive binder throughout the year. Students should plan on about 4 hours of homework per week. All paragraphs/papers (rough drafts and final drafts) must be typed before submission and must be handed in during class, NOT by e-mail.

Prerequisites and Important Notes: This class is appropriate for those students in 8th grade and up who have successfully completed LTT's introductory writing course, or it can also be used as a starting point for any high school student (9th grade and up) who has not taken LTT's introductory writing class. It is always to a weaker writer's advantage to have first taken the Introductory Writing course in middle school as the Foundational class does start off with some review, but the pace picks up quickly after the first few weeks of class. Foundational Writing is also the prerequisite for many of LTT's high school literature classes and the advanced writing class. How to know if your student is ready for this class? If your student successfully completed the introductory class without much help from their parent, the introductory writing tutor recommended that they were ready, and they are in 8th grade or above, then they should be able to handle this class. If your high school student has any learning or neurological disabilities, it is best that you NOT put them in this class without their first taking the introductory class.

Credits: This class is equal to one full credit of high school grammar and composition.

Required materials you should purchase: 2-inch, three-ring binder with 8-tab dividers (marked: models, style, grammar, poetry, thesaurus, documentation, compositions, and quizzes), a blue or black pen, a colored pen or pencil (except red), a highlighter, a three-ring binder pencil case, and some (not a whole ream) of three-ring binder paper. Because this class is taught so that students can take it for two consecutive years, a different grammar book is used each year and each grammar book has a different focus. Last year the grammar book focused on grammar and usage, while this year the grammar book focuses on grammar and syntax. This year students should purchase the book *Grammar for Middle School: A Sentence-Composing Approach* student worktext by Don and Jenny Killgallon. ISBN 978-0-325-00956-8.

Materials Fee: \$55 per student.

Tutor: Allison Desautell, allisondesautell@gmail.com

ADVANCED WRITING (Formerly Writing C) (1.5-hour tutorial): This course will be offered in the 2023-2024 school year.

FUNDAMENTALS OF LITERARY ANALYSIS (1.5-hour tutorial): This 32-week high school literary analysis class is ideal for 9th and 10th graders but is open to any high school student who has never taken a formal high school discussion-based literature class. The intent of the class is to give students a solid foundation in literary analysis which includes helping them learn to read closely and metaphorically, appreciate authorial intent while discerning secular ideologies, and view each text Biblically by considering what the book might have to say about absolute truth, no matter what the author's beliefs or worldviews were. As an example of this, for each novel read, students will discuss what does this particular story have to say about man's inherent need for a savior. Throughout the year to prepare for class discussions, students will use a mix of study guides, annotation and close reading exercises, and written responses in dialectical journals, but no matter what they are using, students will be expected to provide textual evidence for their responses. Because students need to be able to both establish meaning and analyze meaning, class conversations will toggle back and forth between broad discussions of the text's big ideas along with deep dives into excerpts to notice text structure and author's word choice. Texts are intentionally chosen to expose students to a wide variety of genres from both American and British literature and for their text complexities: multiple narrators or plots, non-linear time sequence, symbolic elements, parallel characters or stories, or archaic language. Students are taught incrementally to write a variety of paragraphs and literary analysis essays.

Prerequisites and Notes: Although it is not a prerequisite, it is recommended that students have successfully passed one year of Foundational Writing (Formerly LTT's Writing B) or an equivalent before taking this class.

Credits: This class is equal to 1 full high school literature credit.

Required Books to Purchase: Students will start the year with an 8-week short story unit and then read several novels: *A Christmas Carol* by Charles Dickens, *The Strange Case of Dr. Jekyll and Mr. Hyde* by Robert Louis Stevenson, *The Giver* by Lois Lowry, *Animal Farm* by George Orwell, *The Old Man and the Sea* by Ernest Hemingway, and *Much Ado about Nothing* by William Shakespeare. The short stories used for the first 8 weeks will be emailed to the student each week and they will be required to print them out. For the novels, it is recommended that you purchase a used copy of each of the books so that your student has the book when needed and can feel free to write in their book. You may purchase any UNABRIDGED edition for the required books except for *Much Ado about Nothing* which must be the *No Fear Shakespeare* version ISBN 9781411401013.

Required materials you should purchase: 1 ½ inch, three-ring binder with 5-tab dividers (marked: handouts, current book, past books, tests/quizzes, compositions), a blue or black pen, and some three-ring binder paper (not a whole ream of paper!). In the second semester students will need a composition notebook.

Materials Fee: \$55 per student

Tutor: Allison Desautell, allisondesautell@gmail.com

CLASSICAL LITERATURE I: (1.5 hours) Offered in the fall semester. Although this one semester interactive reading class is geared for 11th-12th graders, it is open to any high school student who is a mature reader and writer and has met all of the prerequisites for the class. Students will spend the semester reading the defining Greek epic that has had an incalculable influence on the western world (*The Iliad* by Homer) as well as a Greek tragedy (*Trojan Women* by Euripides). Both texts were originally performed either by bards or on stage so they lend themselves well to being read aloud. Each week students will read the text at home and then the following week, a major portion of the class will be spent reading aloud and unpacking pertinent monologues and excerpts. Reading aloud will greatly enhance comprehension of the text. Because students need to be able to both establish meaning and analyze meaning, class conversations will toggle back and forth between broad discussions of the universal truths found in the text along with deep dives into excerpts to notice text structure and author's word choice. Both *The Iliad* and *Trojan Women* were written in a pagan pre-Christian society, so students will learn to appreciate the story in the context of the ancient culture it was written in while comparing and contrasting it with the Judeo-Christian worldview. Although *The Iliad* is long, this particular translation is very accessible. Each week students should expect to read about 50 pages, complete work in a study guide, and write at least one paragraph (generally from the Progymnasmata).

Notes: This class is the first of two semester long, upper level, classical literature classes offered this year at LTT. The two classes are similar in many ways but differ in that the first semester is less reading per week and is more focused on reading orally in class while the second semester requires more reading per week but there will be less reading aloud in class. Taking the two classes together is ideal as the first semester lays a foundation for the second semester, but students can choose to take just one semester as long as all of the prerequisites for that semester have been met.

Prerequisites: In order to enroll in this class, students must have successfully passed one year of LTT's Foundational Writing (formerly Writing B or an equivalent). In addition, students should have fulfilled ONE of the following options:

- Completed one full year of a high school literary analysis class (such as LTT's Fundamentals of Literary Analysis) AND either the instructor's mythology class or be very familiar with Greek mythology. I suggest reading Edith Hamilton's

book Mythology prior to taking this class. Students will need to pass a basic test on Greek mythology the first week of class.

- Completed Advanced Writing (formerly Writing C) AND the instructor's mythology class.

If students have not met the prerequisites, permission will need to be granted by emailing the instructor **PRIOR** to registering for this class.

Credits: This class is equal to ½ high school classical literature credit.

Required materials you should purchase: 1 ½ inch binder, with 4 tabs (marked: handouts, homework, quizzes, compositions), a pen and some three-ring binder paper. Students will need *The Iliad* by Homer (must be the Robert Fagles translation ISBN 0140275363 or ISBN 0670835102 or ISBN 0140275360). And students will need *The Iliad: Memoria Press Study Guide* available at Christian Book Distributors for 11.00 (stock #WW389872). *Trojan Women* will be provided by the instructor.

Materials fee: \$35

Tutor: Allison Desautell, allisondesautell@gmail.com

CLASSICAL LITERATURE II: (1.5 hours) **Offered in the spring semester.** This one semester upper level (11th-12th grade) high school literature class will explore the hero's journey. The hero's quest is a common pattern of human experience which underlies all literature and film. Tracing the growth and transformation of several characters, this class will look at quests that are all very different, some physical, some moral, and some spiritual. The journeys studied will range from Jonah's defiant flight from God (from the Bible) to Odysseus's arduous journey to get home full of physical obstacles and temptations (*The Odyssey* by Homer) to Atticus Finch's steadfast quest for justice (*To Kill a Mockingbird* by Harper Lee) and finally to a spiritual bus ride to heaven with characters unwilling to let go of their vices (*The Great Divorce* by C. S. Lewis). Class discussions will focus on what each novel has to say about God, honor, truth, faith, mercy, justice, and sin. Because students need to be able to both establish meaning and analyze meaning, class conversations will toggle back and forth between broad discussions of the text's big ideas and Biblical truths along with deep dives into excerpts to notice text structure and author's word choice. Each week students should expect to read about 75 pages, keep a dialectical journal, complete additional handouts, and write at least one paragraph (generally from the Progyrnasmata).

Notes: This class is the second of two semester long classical literature classes offered this year at LTT. The two classes differ in that the first semester is less reading per week and is more focused on reading orally in class while the second semester requires more reading per week but there will be less reading aloud in class. Taking the two classes together is ideal as the first semester lays a solid foundation for the second semester, but students can choose to take just one semester as long as the prerequisites for that semester have been met.

Prerequisites: In order to enroll in this class, **ALL** students must have successfully passed one year of LTT's Foundational Writing (formerly LTT's Level B or an equivalent). In addition, students should have fulfilled **ONE** of the following options:

- Completed one full year of a high school literary analysis class (such as LTT's Fundamentals of Literary Analysis) AND either the instructor's mythology class or be very familiar with Greek mythology. I suggest reading Edith Hamilton's book Mythology prior to taking this class. Students will need to pass a basic test on Greek mythology the first week of class.
- Completed Advanced Writing (formerly Writing C) AND the fall Classical Literature class.

If students have not met the prerequisites, permission will need to be granted by emailing the instructor **PRIOR** to registering for this class.

Credits: This class is equal to ½ high school classical literature credit.

Required materials you should purchase: 1 ½ inch binder, with 5 tabs (marked: handouts, current book, past books, quizzes, compositions), a pen and three-ring paper, and a composition notebook. Students will need any unabridged version of *The Great Divorce* by C. S. Lewis and *To Kill a Mocking Bird* by Harper Lee. *The Odyssey* by Homer must be the Robert Fagles translation ISBN 0140449952 or ISBN 0140449957.

Materials fee: \$35

Tutor: Allison Desautell, allisondesautell@gmail.com

ABOUT LTT'S SCIENCE PROGRAM: We recognize at LTT the importance of quality science classes that include complete lab sections. The tutors have developed a program that allows students to progress in science knowledge from middle school through high school. Our tutorials are blessed with authentic science equipment including microscopes and dissections pads

plus so much more. We have everything needed including safety equipment to replicate a science course including labs. Our science tutors purposely teach students the skills to write labs and document them correctly in a laboratory notebook. At the end of our high school lab classes, this laboratory notebook also serves as proof for college admissions that course included the full lab requirements. We have also found doing science in a group setting helps facilitate discussion, teamwork, and understanding.

GENERAL SCIENCE (1.5-hour tutorial) – This Apologia (biblical worldview) junior high school level course is the foundation for all the upper-level Apologia high school science courses due to its easy introduction to areas of biology, physical sciences, and human anatomy and physiology in a simple and approachable manner. Labs and fun projects will be done in class while bi-weekly tests will be proctored at home. Apologia science courses follow a routine and rhythm that helps the students, and that routine is established effectively in this foundational course.

Required Materials: Apologia Exploring Creation with General Science, 2nd edition, by Jay Wile; ring binder with college ruled filler paper and 16 insertable dividers with tabs.

Material fee: \$40

Tutor: Dana Cloutier, clouts4@yahoo.com

PHYSICAL SCIENCE (1.5 hour tutorial) – This is a full year high school level course (that can also be taken in late middle school) focusing on physics and general chemistry. In physics students learn about motion, forces, energy, and heat; in chemistry students learn about matter, its composition, and the changes it undergoes. This course consists of abundant laboratory experiences where students will learn how to measure, investigate, analyze and report. Students will be expected to complete assigned reading, written work, and tests outside of class so that we can focus on the activities during class.

Prerequisites: Students should be proficient with basic arithmetic skills and currently taking pre-algebra or above.

Required Materials: Please purchase a scientific calculator (any style, does not need graphing capability) and 2” binder with dividers. Students will also need access to a device that connects to the internet, such as a laptop or cell phone. These do not need to come to class and will only be used at home to turn in homework and complete supplemental assignments. All other course materials will be provided to each student by the instructor.

Material fee: \$40

Tutor: Melissa Lamb, melissa745@gmail.com

BIOLOGY (1.5 hour tutorial) - This is a rigorous college-prep high school course with corresponding lab work including dissections that covers the basic principles of Biology. Topics include structure and function, inheritance and variation of traits, matter and energy in organisms and ecosystems, interdependent relationships in ecosystems, and creation/evolution. This course will emphasize the skills used by scientists and increasing scientific literacy such as critical thinking, creating and interpreting models, and planning and carrying out investigations. This course will prepare students for college-level biology courses. The student will be responsible for homework assignments and maintaining a laboratory notebook designed to document the experiments performed. This laboratory notebook also serves as proof for college admissions that the Biology course included a laboratory section.

Required Materials: Apologia’s Exploring Creation with Biology – 3rd edition, (ISBN 978- 1-946506-45-0) along with the Solutions and Test Manual (ISBN 978- 1946506467) by Vicki Dincher, a binder with dividers, and access to a device that can connect to the internet (this can be a computer or smart phone and will only be used at home to turn in homework or complete supplemental assignments). The instructor will provide the lab notebook.

Material Fee: \$35

Tutor: Melissa Lamb, melissa745@gmail.com

CHEMISTRY/HONORS CHEMISTRY (2 hour tutorial) - This is a rigorous college-prep high school course with corresponding lab work that covers the basic principles of Chemistry. Topics include significant figures, moles, stoichiometry, acids and bases, atomic structure, gas laws, and thermodynamics. This class will complete the text, labs, as well as additional practice problems. Students who complete this plan of study will be well prepared for college level Chemistry. Additional independent study work will be offered for those who wish to take this course at the Honors Level. The student will be responsible for homework assignments as well as maintaining a laboratory notebook designed to document the experiments performed. This laboratory notebook also serves as proof for college admissions that the Chemistry course included a laboratory section.

Prerequisites: Algebra 1

Required Materials: *The Spectrum Chemistry* by Wilemon and Dobbins ISBN 978-0966657869 (textbook only, available at www.beginningspublishing.com or you may use other available retailers), scientific calculator, and a binder with dividers and a device with access to the internet such as a smartphone or laptop (this does not need to travel to class but will be used to turn in homework and complete assignments). The instructor will provide the lab notebook.

Material Fee: \$35

Tutor: Melissa Lamb, melissa745@gmail.com

PHYSICS (1.5 hour tutorial) - This is a rigorous college-prep course with corresponding lab work that covers the basic principles of physics. Topics include general physics concepts, vectors, waves, optics, electricity and magnetism. This class will complete the entire text, labs, as well as additional practice problems. Students who complete this plan of study will be well prepared for college level Physics. The student will be responsible for homework assignments based on questions in the chapters as well as maintaining a laboratory notebook designed to document the experiments performed. This laboratory notebook also serves as proof for college admissions that the Physics course included a laboratory section.

Prerequisites: Algebra 2 and a basic knowledge of trigonometric functions (sine, cosine, tangent), or permission of the instructor.

Required Materials: Glencoe Physics: Principles and Problems, Student Edition (2012) ISBN 978-0076592524, scientific calculator, and a binder with 4 dividers.

Material Fee: \$55

Tutor: Shayne Picard, shaypic@gmail.com
