

LTT CLASS DESCRIPTIONS 2020-2021

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

- LTT mathematics 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, Desmos.com for hands on math activities, Symbolab, for online graphing, and geogebra.com for exploring geometric relationships.
- 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.** Depending on which class you take, these assignments will be in IXL.com, teachingtextbooks.com, or downloadable pdf files. The assignments, which will review all of the prerequisites, will be due the first day of class and count as your first homework grade. If you have significant trouble with it, you should consider taking a review class over the summer.

TRANSITION TO ALGEBRA (1.5 hour tutorial) - This class is a gentle introduction to Algebra and is designed to build students' algebraic habits of mind and key mathematical ways of thinking. This class is targeted at both younger students who have finished elementary math and pre-algebra but do not feel quite ready for the rigors of our Algebra I class as well as older students who may have tried Algebra and had difficulty. This class could also work as a supplement to a student taking a pre-algebra course at home. Students explore algebraic logic puzzles and activities that connect to and extend algebra course topics as well as learn broadly applicable tools and strategies to help them make sense of basic algebra. We discuss and refine ideas as students work through mental mathematics activities, written puzzles, and spoken dialogues that engage them in cultivating mathematical knowledge, intuition, and skills. This class is a great transition from elementary level math to algebra. There are weekly homework assignments and students should expect to spend approximately 2 -3 hours per week on homework. Worktexts "Transition to Algebra" provided.

Prerequisites: pre-algebra skills with average elementary school arithmetic background. Previous experience with algebra is not required, however if initial algebra studies were problematic, this class may provide the solution! Placement test can be made available upon request.

Required Materials: 3 subject notebook with built in folder/dividers, scientific calculator

Material fee: \$55 - includes required worktexts

Tutor: Melissa Lamb, melissa745@gmail.com

ALGEBRA 1/HONORS ALGEBRA 1 (2 hour tutorial) – This course is intended for students with a firm foundation in the skills covered in a typical Pre-Algebra class and is geared for students who are dedicated to serious work done at home. This is a high school level class that can be taken at either the standard or honors level. You should expect 4+ hours of homework a week with periodic take-home tests. Because we only meet once per week, students must be prepared to do significant daily homework at home in between meetings including at least one IXL assignment. 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.

Structure of the class: This class will meet once a week on-line for two hours. During that time, there will be a review of homework questions and instruction on new concepts. Students will have the ability to save screen shots of the instruction to refer to later. Students will also do practice problems on the white board which allows me to see how they are approaching the work and correct any mistakes they are making. Additionally, students will periodically be put into breakout rooms to work collaboratively to solve problems.

Students will have two types of homework assignments. One is work from the textbook. Students will be required to do the work (show their work, not just answers), check their answers, and turn it in electronically. The second type of work is done through IXL. Students will be assigned certain skills and told the level of proficiency they are to attain. The work through IXL gives instant feedback on the students' work and gives explanations of how to solve the problems if they get it incorrect.

Additionally, students are able to ask me questions during the week. There are even certain times when I will be available to meet with students individually on Zoom to help with their questions.

Prerequisites: Students should have a good command of order of operations, evaluation simple and complex expressions, solving linear equations, problem solving process, signed number arithmetic, positive exponents, and the distributive property. Prerequisite to admission into this class is passing an Algebra readiness test administered by the instructor.

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 (the Casio FX-300 ES PLUS, the Casio fx-300MS, and the TI-30XS MultiView are examples for under \$20). Do not purchase a graphing calculator.

Material fee: \$40 – includes one year subscription to IXL.com, summer review assignments, and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

GEOMETRY (2 hour tutorial) – This course is intended for students who have successfully completed Algebra 1. This is a high school level class that can be taken at either the standard or honors level. You should expect 4+ hours of homework a week with periodic take-home tests. Because we only meet once per week, students must be prepared to do significant daily homework at home in between meetings including at least one IXL assignment. Required summer assignments will review some key Algebra concepts before the school year starts. Some of the topics covered in this class include parallel and perpendicular line, triangle relationships, similarity, polygons and area, surface area and volume, right triangles and basic trigonometry, circles, and working with proofs.

Structure of the class: This class will meet once a week on-line for two hours. During that time, there will be a review of homework questions and instruction on new concepts. Students will have the ability to save screen shots of the instruction to refer to later. Students will also do practice problems on the white board which allows me to see how they are approaching the work and correct any mistakes they are making. Additionally, students will periodically be put into breakout rooms to work collaboratively to solve problems.

Students will have two types of homework assignments. One is work from the textbook. Students will be required to do the work (show their work, not just answers), check their answers, and turn it in electronically. The second type of work is done through IXL. Students will be assigned certain skills and told the level of proficiency they are to attain. The work through IXL gives instant feedback on the students' work and gives explanations of how to solve the problems if they get it incorrect.

Additionally, students are able to ask me questions during the week. There are even certain times when I will be available to meet with students individually on Zoom to help with their questions.

Prerequisites: Successful completion of the Algebra 1 class taught by the instructor or passing an Algebra Exit 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: **Holt McDougal Geometry Concepts and Skills (2010 edition)**. A **3-ring binder** with 5 dividers, lined and graph paper. You will also need a **calculator** that can handle trig. functions and logarithms (the Casio FX-300 ES PLUS, the Casio fx-300MS, and the TI-30XS MultiView are examples for under \$20). Do not purchase a graphing calculator.

Material fee: \$40 - includes one year subscription to IXL.com, summer review assignments and practice workbook.

Tutor: Sandy Tracy, sandy@tracysite.com

ABOUT LTT's WRITING PROGRAM: Our Intro to Writing, Writing B, and Writing C are based on middle school and high school writing levels from *Institute for Excellence in Writing* (www.iew.com). Many students will remain in the same writing classes for two years to solidify the concepts presented, giving them the confidence to move to a higher level of writing. Although the writing and grammar concepts do not change, the writing assignments rotate every other year within the level, creating little repetition for second-year students.

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 writing units and the report writing units. Along with the nine IEW structural models, students will be taught some basic grammar rules and IEW's stylistic techniques to improve the syntax of their sentences. Students will build a binder throughout the year that includes some of the contents of the IEW Student Resource Notebook and many supplemental resources. Students should plan on about 2 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 in order to fully master the material.

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.

Required Materials: 2-inch, three-ring binder with 6 tab dividers (marked: models, style reference, style homework, grammar, thesaurus, compositions) 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 weekly grammar handouts.

Material Fee: \$55 per student which will cover the cost of the *IEW Level B* source materials and any other costs incurred for copies and materials which will be provided by the instructor.

Tutor: Allison Desautell, allisondesautell@gmail.com

Writing B (1.5 hour tutorial): This 32-week course is a continuation from LTT's Introduction to Writing class or it can be used as an accelerated entry course for a high schooler. Using *Excellence in Writing's Level B Continuation* curriculum as a starting point, students review the basic structural models and lay a solid foundation for essay writing by learning how to develop a working thesis statement, choose appropriate evidence, and integrate quotations. Because writing an essay is paramount to success in high school and college, during the second semester students will learn, in incremental lessons developed and classroom tested by the tutor, how to structure a basic argument essay. A good analogy for this class is that this class is to high school essay writing what Prealgebra is to Algebra—foundational! Along with reviewing basic grammar conventions and mastering IEW's stylistic techniques, students will add all of the IEW decorations to their writer's toolbox and imitate some famous authors' styles. Instead of a textbook, students will build a comprehensive binder throughout the year. Students should plan on about 3 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.

IMPORTANT NOTES: It has always been the norm at LTT that students remain in this level for two years so that they can truly master the material. Each year reviews the same concepts, but the source texts 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. How to know if your student is ready for Level B? If your student successfully completed the introductory class without much help from their parent and the tutor recommended that they were ready, then they should be able to handle Level B. Just know, however, that they will probably remain in Level B for two consecutive years. Since this is also an **accelerated entry** class for high schoolers, 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.

Required Materials: 2-inch, three-ring binder with 8 tab dividers (marked: models, style reference, style homework, grammar, thesaurus, compositions, and tests/quizzes), a blue or black pen, a colored pen or pencil (except red), and a highlighter. Because this class is taught so that students can take it for two consecutive years, a different grammar book will be used each year. This year students should purchase *Grammar for Middle School A Sentence Composing Approach* by Don and Jenny Killgallon, ISBN 9780325009568. This grammar book is not consumable, so you may purchase a used copy (Amazon has used copies that are very reasonable).

Materials Fee: \$55 per student which will cover the cost of the *IEW Level B Continuation* source materials which will be ordered by the instructor and any other costs incurred for copies and materials.

Tutor: Allison Desautell, allisondesautell@gmail.com

Literary Composition (1.5 hour tutorial): Because analyzing and writing about the ideas found in literature are essential skills for high school students to learn, a literary composition class is being offered this year that is geared for students in grades 9-12 who have successfully completed one year of LTT's Writing B or an equivalent. This popular class was developed by the tutor as a foundational course for high school literary analysis and composition and has been successfully taught for 15 years. Each week students will read in a text, discuss it in class using the Socratic method, and write about what they have read using the writing skills learned in the Level B writing class. Texts are intentionally chosen for a variety of worldviews and text complexities, such as: multiple characters, narrators, and plots; non-linear time sequence; symbolic elements; or archaic language. Students will read from a wide variety of genres, including: *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, *Witness* by Karen Hesse, and *Much Ado about Nothing* by William Shakespeare, along with short stories by O. Henry, Edgar Allan Poe, and other notable authors. As in all of her classes, the tutor breaks down writing the analytical essay into incremental lessons so that all students can succeed. Even if your student has read many of these books on their own, there are so many reasons for taking this class, such as: discerning an author's message and worldview, questioning everything they read using the

Socratic method, learning how to slow down and annotate a text, writing coherent literary analysis paragraphs and essays, and effectively and politely participating in a robust dialectical discussion by backing up their opinion with evidence from the text. Students should plan on about 3-4 hours of homework per week. All paragraphs/papers must be typed before submission and must be handed in during class, not by e-mail.

IMPORTANT NOTE: This year a high school literature composition class is being offered and then the following year Writing Level C will be offered to high schoolers. This is so your high school student will be exposed to both analysis writing (literary) and synthesis writing (essay and research paper) over the course of two years. Both types of writing are essential for a college preparatory course.

Required materials you should purchase: 1 ½ inch, three-ring binder with 4-tab dividers (marked: study guide, handouts, writing, tests/quizzes), three ring binder paper, and a blue or black pen. I suggest that you buy used copies of all the books ahead of time so that students have all the books when they need them and can freely mark up the text. Using library books is not recommended for three reasons: We read through the books quickly, so it is difficult to stay on top of ordering them; students will need the books for longer than libraries allow; and if we are faced with another virus shutdown, ordering books from the library is impossible. Please know that if your student does not have the required book, they are still responsible for the work assigned and will receive a lower grade, so please don't put your student in this position. You may purchase any UNABRIDGED version of the books (and they can be used), except for *Much Ado About Nothing* which must be the No Fear version ISBN 9781411401013.

Materials Fee: \$55 per student which will cover the cost of any study guides and materials the tutor provides.

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.

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. Lab reports will be introduced and students will generate several full lab reports. 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 calculator (scientific or graphing) and 2" binder with dividers. A *Glencoe Physical Science* textbook will be provided to each student the first day of class by the instructor and will be returned at the end of the course unless you would like to purchase from the instructor.

Material fee: \$35

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 overview of the classification of organisms and a survey of representative species, basic cell biology and biochemistry concepts, the anatomy and physiology of representative organisms, genetics, ecology, and a discussion of evolution. 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 Biology course included a laboratory section.

Required Materials: *Apologia's Exploring Creation with Biology* - 2nd edition, (ISBN 978-1932012545) along with the *Solutions and Test Manual* (ISBN 978-1932012552) by Jay Wile and a binder with dividers and 500 notecards of any size/color. 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. 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: *Apologia's Exploring Creation with Physics* (2nd edition required) by Jay Wile, scientific calculator, and a binder with dividers. The instructor will provide the lab notebook.

Material Fee: \$55

Tutor: Shayne Picard, shaypic@gmail.com
