

## LTT SCIENCE CLASSES 2022-2023

**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](mailto: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](mailto: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](mailto: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](http://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](mailto: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](mailto:shaypic@gmail.com)

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