

## LTT SCIENCE CLASSES 2020-2021

**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 - 2<sup>nd</sup> 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](http://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* (2<sup>nd</sup> 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

\*\*\*\*\*