

**Classes at Town North Presbyterian Church
2024- 2025 School Year**
www.greenroofcoop.com

Please note the following:

- **Grades listed for all classes are strongly suggested guidelines for placement.**
- **All classes are held on Thursday at Prairie Creek Baptist Church located at 3201 W 15th St, Plano, TX 75075. The church is just west of W 15th and Independence Pkwy**
- **Please contact individual class teachers for more information or to register.**

WRITING

Grammar Lab

Instructor: Lisa Pfeifer

214-418-1126

MrsPfeifer.CATN@gmail.com

Recommended for 7th- 8th grades. Intended for those students who need to work on their grammar knowledge and their beginning writing skills. The purpose of grammar is to aid in communication, primarily written communication. This class will provide a strong foundation in English grammar and beginning writing. Students will memorize their prepositions, linking verbs, helping verbs, study the parts of speech, the function of words in a sentence, parts of the sentence, phrases, clauses, punctuation, and capitalization rules. Students taking Pre-Academic Writing will find this class especially helpful.

Texts: *Easy Grammar Plus: Student Workbook* by Wanda Phillips

Monthly Tuition: \$50

Materials Fee: \$10

Time: 8:30 – 9:30 am

Pre-Academic Writing

Instructor: Lisa Pfeifer

214-418-1126

MrsPfeifer.CATN@gmail.com

Recommended for 7th- 8th grades. The class objective is to strengthen the skills that form the foundation of good writing. In this introductory paragraph writing class, students will develop the fundamental skills for good descriptive, informative and narrative writing. Learning to use sentence variety and to identify many of the problems that occur in sentence formation, the student will apply good grammar techniques to create well-formed paragraphs.

Texts: *Write Shop I* available through Demme Learning

Monthly Tuition: \$50

Materials Fee: \$10

Time: 9:30 – 10:30 am

Academic Writing 1

Instructor: Debby Schneider

972-955-2920

MrsSchneider.CATN@gmail.com

Recommended for 8th – 9th grades. Throughout the year, students will transition from writing strong sentences and paragraphs to building well-organized essays. Students will gain experience in a wide variety of composition styles, such as descriptive, narrative, and persuasive. In-class discussion, exercises, and writing prompts will be used to reinforce skills. Students will learn to edit their work through regular practice in draft revision. Writing skills will be taught systematically to prepare students for upper-level writing. Texts: *WriteShop II*

Monthly Tuition: \$50

Materials Fee \$10

Time: 10:30 -11:30 am

Academic Writing 2

Instructor: Rhonda Helmreich

972 -762-8982

MrsHelmreich.CATN@gmail.com

Recommended to be taken in tandem with Beginning High School Literature or before taking upper high school literature classes. Open to students in the 9th grade and higher. The students will learn the essay-building process. Using the short story, the students annotate, collect, and organize vital information into a usable format to create compelling and robust thesis statements. The student will learn to develop a logical, coherent, and well-supported argument favoring the stated thesis. Emphasis is on various writing techniques to strengthen writing skills for academic situations, ensuring that no student will ever have to stare at a blank page again, wondering how to begin the writing process. Texts: *Windows to the World, The Elegant Essay Writing Lessons: Building Blocks for Analytical Writing*

Monthly Tuition: \$50

Time: 10:30 – 11:30 am

Academic Writing 3

Instructor: Debby Schneider

972-955-2920

MrsSchneider.CATN@gmail.com

Recommended for 11th-12th grades. Prerequisite: Academic Writing 2, or submission of a five-paragraph essay demonstrating essential skill in thesis construction and essay development.

In this upper-level class, students will develop the skills necessary for transition into college-level writing. The focus will be given to studying and developing the rhetorical elements, such as consideration of audience, interacting with sources, and the effective use of reason, emotion, and word choice to create a convincing argument. Skills will be reinforced through in-class discussion and analysis of a variety of essays and notable works. Written assignments will include argumentative essays, essays on literature, and research papers. As time allows, the ACT and SAT essays will be discussed, as well as the personal essay used for college admissions.

Texts: The Elements of Style, 4th Edition by William Strunk and E. B. White; Essays and Arguments: A Handbook for Writing Student Essays by Ian Johnson; They Say/I Say: The Moves that Matter in Academic Writing, 4th Edition by Gerald Graff and Cathy Birkenstein; Writing Research Papers: The Essential Tools by Lesha Myers

Monthly Tuition: \$50

Materials Fee \$10

Time: 9:30 – 10:30am

LITERATURE

(Junior High Level)**Intro to Literature 1**

Instructor: Jaree DeMetrotion

972-569-7437

MrsDeMetrotion.CATN@gmail.com

Open to students in the 7th and 8th grades. This course is designed to be a first formal experience for literature. Key literary concepts like plot and character analysis will be introduced. Enriching discussion, book projects, writing, and critical thinking will prepare the student for success within a warm, learning community. Several book titles included: *The Bronze Bow, Bridge to Terabithia, Hatchet, Redwall* and *The Prince and the Pauper*.

Monthly Tuition: \$50

Materials Fee: \$10

Time: 11:30 – 12:30 pm

The classes listed below are in the recommended order. Taking the corresponding History Class with the Literature is also highly recommended.

Intro to Literature 2

Instructor: Jaree DeMetrotion

972-569-7437

MrsDeMetrotion.CATN@gmail.com

Open to students in the 8th and 9th grades.

Intro to Literature 2 provides a broad experience to a variety of classic books for middle school or young high school students. It transitions students into analysis of literary concepts and themes through essays, tests, and projects. This transition takes place with classic books like *To Kill a Mockingbird, The Red Badge of Courage, The Adventures of Tom Sawyer*, and several other classic books. While preparing students for the academic rigors of high school, this course remains strongly personal and engaging in its approach to literature and encourages the expression and discussion of opinions in a welcoming environment. This course is appropriate for all students in need of preparation for high school literary studies. (This course is a complement to American History)

Monthly Tuition: \$50

Materials Fee: \$10

Time: 8:30 – 9:30 am

(High School Level)**Beginning High School Lit.**

Instructor: Jaree DeMetrotion

972-569-7437

MrsDeMetrotion.CATN@gmail.com

Open to students in the 9th and 10th grades

Beginning High School Literature provides a broad experience to a variety of classic books for young high school students and transitions students into analysis of literary concepts and themes through essays and tests. This transition takes place with classic books like *Jane Eyre, Romeo and Juliet, Oliver Twist*, and several other classic books. While preparing students for the academic rigors of high school, this course remains strongly personal and engaging in its approach to literature and encourages the expression and discussion of opinions in a welcoming environment. This course is appropriate for all students in need of preparation for upper level high school literary studies.

Monthly Tuition: \$50

Materials Fee: \$10

Time: 9:30 – 10:30 am

American Literature

Instructor: Rhonda Helmreich

972 -762-8982

MrsHelmreich.CATN@gmail.com

Prerequisite: Beginning HS Lit or permission from the teacher. Recommended to be taken concurrently with American Government. This class introduces students to the richness of American Literature reflecting the unique dynamism of our culture and history as exemplified in the rollicking humor of Twain, the moral consciousness of Hawthorne's *The Scarlet Letter*, and the simple beauty of rural life admixed with universal facets of the human condition from the play "Our Town." Literature studies establish the basics of worldview thinking from the transcendentalism of *Walden* to the naturalism of *Moby Dick*. Invigorating class discussion and in-depth literary analysis develops student's critical thinking skills. Writing assignments offer opportunities for logical assessment of theme and characterization and logical argument on the story's more profound meaning and import. Uses many books from Sonlight 400 (This course complements American Government.)

Monthly Tuition: \$50

Materials Fee: \$20

Time: 8:00 – 9:30 am**20th Century Literature**

Instructor: Rhonda Helmreich

972 -762-8982

MrsHelmreich.CATN@gmail.com

Prerequisite: American Literature or permission from the teacher. This course examines the mindset of the 20th century through modern classics like *The Old Man and the Sea*, *The Great Gatsby*, and *The Metamorphosis*. Reading *Mere Christianity* provides a firm foundation of a Christian worldview, empowering students to formulate a personal statement of Christianity and the theistic worldview. Anchored in the bedrock of theism, students will then analyze the fundamental worldviews displayed in 20th-century Literature utilizing the worldviews outlined in James Sire's *The Universe Next Door*. Literary analysis of themes, characters, plot, historical and social context, symbolism, and style enables students to compare, judge, and evaluate the philosophies presented in each novel. Writing assignments focus on the logical evaluation of the worldview presented in the novel compared with a biblical worldview. The book list is from Sonlight 300. (20th Century Literature complements 20th Century History.) **Students planning to graduate with CATN are required to complete 20th Century Literature or Understanding the Times (Advanced Worldviews).**

Monthly Tuition: \$50

Materials Fee: \$20

Time: 11:30 – 1:00 pm**British Literature**

Instructor: Rhonda Helmreich

972 -762-8982

MrsHelmreich.CATN@gmail.com

Prerequisite: 20th Century Literature or permission from the teacher. British Literature introduces students to the full breadth and beauty of British Literature. Studying masterpieces like *Paradise Lost*, *Beowulf*, *Tale of Two Cities*, *Hamlet*, and several other classics completes the foundation for university-level study and life. Rhetoric literary analysis skills, deepen as the students evaluate an author's message compared with a biblical worldview. Students participate in stimulating class discussions and write essays that focus on literary analysis at an advanced level. Also, individual book projects encourage students to interact with a piece of Literature using their unique gifts, interests, and talents. Many of the novels studied are at the Advanced Placement level. The class includes many books from Sonlight's "Survey of British Literature" 530.

Monthly Tuition: \$50

Materials Fee: \$20

Time: 9:30-10:30 am**SPEECH and COMMUNICATION****Speech and Career Explorations**

Instructor: Lisa Pfeifer

214-418-1126

MrsPfeifer.CATN@gmail.com

Recommended for 10th-12th grades. Students will learn essential communication skills and interpersonal skills by studying how to present a Bible reading, teach a Bible study, a Children's Bible lesson, humorous monologue, writing a "Visual Aid How-to" speech, presenting a biographical report (expository speech), presenting a sales pitch, and an infomercial (group project). For the second semester, students will begin a study in careers, take personality tests, discover their giftings and passions, and explore careers and how prepare for a job interview. Students will practice job interview skills, how to research companies and employers, and how to find a match for their personalities and goals in life. Students earn 2 high school electives (1/2 credit each).

Texts: Teacher will provide handouts

Monthly Tuition: \$50

Materials Fee: \$30

Time: 1:30 – 2:30 pm

ECONOMICS, HISTORY & WORLD VIEWS

American History - [High school credit] Instructor: Barbara Walsted

972-816-5242

MrsWalsted.CATN@gmail.com

Open to students in 8th - 9th grade. A survey of American History using Joy Hakim's award-winning series "A History of US" [HUS]. This class will take a balanced approach to points made in this series. Using these tools, we will focus on key events and people, and seek to understand how our country was established and developed. This class will help students appreciate our heritage as well as have a better understanding of our culture and world today. **Current events will also be a frequent topic of group discussion in the classroom.** (This course is a complement to either the Intro or Beginning High School Literature class.) **You'll need to purchase the 3rd edition of HUS 10 Volume Set. I'll supply the Student Guide, binder and consumable map.**

Monthly Tuition: \$55

Materials Fee: \$30

Time: 9:30 – 10:30 am

20th Century World History

Instructor: Lundy Taylor

214-870-2293

MrTaylor.CATN@gmail.com

Open to students in the 10th – 12th grades. A high school level survey of 20th century world history using some core books from Sonlight's 20th Century World History core. The text is newly revised for this year. Unique in all human history, the 20th century is the first to be documented, not just in word, but also in images. This period saw unprecedented change in many areas of our lives including the way we travel, communicate, entertain, and resolve conflict. Focusing on the 20th century and into the beginning of the 21st century, we see the formation and basis of conflicts and philosophies that still greatly affect our world today. Resources used include 1 core book covering events of the 20th century, biographies and historical fiction, movies, eyewitness interviews, and film clips from the various time periods and the internet. (This course is a complement to 20th Century Literature.)

Monthly Tuition: \$50

Materials Fee: \$20

Time: 10:30 -11:30 am

American Government

Instructor: Jenn Vermeulen

214-226-6021

MrsVermeulen.CATN@gmail.com

Open to students in the 10th – 12th grades. This course offers an in-depth study of American civil government, including a study of the U.S. Constitution, the structure of the federal government, and the merits of limited government. Through critical analysis of historical documents, including *The Federalist Papers*, students develop a rich appreciation for how the government is supposed to work and what it means to be a citizen of the United States. Class time will be spent discussing current events, discussing predominant political ideologies since the Enlightenment, and discussing how the government impacts daily lives and personal freedom. Maximum class size: 12.

Monthly Tuition: \$50

Materials Fee: \$20

Time: 10:30 – 11:30 am

Personal Finance/Economics

Instructor: Larry Walsted

972-793-3391

MrWalsted.CATN@gmail.com

Open to students in the 11th and 12th grades.

The homework is very minimal and averages approximately 1-1.5 hours a week.

This class blends together traditional economics along with the most crucial part of economics, the personal finance equation, using an exciting Dave Ramsey program designed specifically for high school students.

Economics: focuses on a practical understanding of our economy, covering both micro and macroeconomic principles – including supply and demand and how our lives are affected by government, business, and banking practices.

Text: *Economics – 2nd Edition.*

Personal Finance: Effectively teaches students the practical applications of personal finance, using methods that are both entertaining and engaging, building a solid foundation on which to build their financial future that they will use daily. This is a new Dave Ramsey curriculum specifically designed for students in a classroom setting.

Major topics covered include:

1. Introduction to Personal Finances
2. Savings
3. Budgeting
4. Debt
5. Life after High School
6. Consumer Awareness
7. Bargain Shopping

8. Investing and Retirement
9. Insurance
10. Money and Relationships
11. Careers and Taxes
12. Giving

This class will mold the financial future of students. They will be empowered, equipped, and entertained while building confidence in their own financial decision-making abilities. *The Personal Finance student workbook will be provided.*

Monthly Tuition: \$75

Materials Fee \$50

Time: 11:30-1:00pm

World Views I - Lightbearers [LB]. Instructor: Barbara Walsted
MrsWalsted.CATN@gmail.com

972-816-5242

Open to students in 9th – 10th grade. It is recommended to take this class before upper-level UTT high school class. Christians need to understand the truth of God's Word and how it applies to all areas of life. They need to be able to discern truth from error, whether sitting in a classroom setting or watching a movie with friends. *Lightbearers* is a program written by Summit Ministries and is designed to help students clearly understand the tenets of the Christian worldview, and how they compare to the tenets of the leading humanistic and transcendental worldviews so prevalent in today's culture. Students will learn how to apply their Christian faith to every area of life: theology, philosophy, ethics, biology, sociology, psychology, law, politics, economics, and history. Some of the issues hot topics we will cover include abortion, apologetics, cults, evolution, feminism, homosexuality, naturalism, moral relativism, pluralism, relationships, and socialism. To prepare students for TNPC HS literature classes: Islam, Secular Humanism, Marxism, Socialism, New Spirituality, and Postmodernism will be introduced. **Current events will also be a frequent topic of group discussion in the classroom. Materials fee also includes curriculum: workbook, *How to Be Your Own Selfish Pig* book, and USB drive.**

Monthly Tuition: \$60

Materials Fee: \$110

Time: 8:30 – 9:30 am

World Views II – Understanding the Times [UTT] Instructor: Barbara Walsted
MrsWalsted.CATN@gmail.com

972-816-5242

Open to students in 11th - 12th grade. Understanding the Times is designed by Summit Ministries to equip students to become champions of the Christian Faith - before heading off to university. The writers of the program believe that those who are using this curriculum are playing a major strategic role in reclaiming our Christian youth in our current post-Christian/post-modern culture. *The curriculum* brings a host of Christian worldviews and apologetic ideas into focus. It is designed to help students understand the system of belief of the Christian worldview and how it compares with the beliefs of other leading worldviews such as Islam, Secular Humanism, Marxism, New Spirituality, and Postmodernism. The class uses a flipped classroom approach where group discussion is the major focus. We will cover a host of hot topics in this class. **Current events will also be a frequent topic of group discussion in the classroom. You'll need to purchase the UTT Student Manual + Textbook directly from Summit's website before classes begin. Approx. cost currently is \$55 + shipping.**

Monthly Tuition: \$60

Materials Fee: \$40

Time: 10:30 – 11:30 am

GEOGRAPHY

Geography
MrsVermeulen.CATN@gmail.com

Instructor: Jenn Vermeulen

214-226-6021

Open to students in the 10th – 12th grades. Continent by continent, we will tour the nations and learn traditional geographical knowledge including countries, river systems, mountain ranges, bodies of water, and other important landmarks. The students will explore the cultural heritage of people groups, as well as the economic conditions, systems of governance, and geopolitical realities across nations and regions. Over the course of the year, students will memorize country names, give oral presentations, and discuss current events from around the world. It is recommended to take this course either prior to or during the study of 20th Century World History. Class size: 5-11.

Monthly Tuition: \$50

Materials Fee: \$20

Time: 9:30 – 10:30 am or 11:30 – 12:30 pm

MATH

PreAlgebra

Instructor: Cindy Moser

214-557-3102

MrsMoser.CATN@gmail.com

Prerequisite: None, taking placement test from Math-U-See website recommended. This class covers negative numbers, order of operations, solving for the unknown, and other topics listed on the Math-U-See website.

Text: Math U See Pre-Algebra Student Workbook & Test Booklet

Monthly Tuition: \$40

Materials Fee: \$20

Time: 1:30 - 3:00pm

Algebra 1/2

Instructor: Lori Taylor

214-870-2242

MrsTaylor.CATN@gmail.com

Course Description: This course serves as a transition between Pre-Algebra and Algebra to solidify pre-algebra skills while learning to solve math problems algebraically and learn the elementary concepts of algebra which is also applied to basic geometry. Other topics include fractions, order of operations, ratios, proportions, exponents, roots, unit conversions, probability, Pythagorean Theorem, and more. More than half of the lessons are covered in the first semester. The second semester is supplemented with worksheets to focus on a different variety of word problems and to include two additional topics in the curriculum: polynomials and linear graphs. Saxon is incremental and cumulative, introducing new concepts in small steps while reviewing previously learned material. Additional online study/help sessions are available as needed.

Text: Saxon Algebra 1/2, 3rd edition, Textbook and Solutions Manual.

Monthly Tuition: \$50.

Materials Fee: \$25

Time: 9:30 – 10:30 am

Algebra 1

Instructor: Lori Taylor

214-870-2242

MrsTaylor.CATN@gmail.com

Prerequisite: Completion of a Pre-Algebra course with a grade of 'B' or better.

Course description: This course uses the classic Saxon Algebra 1 (3rd edition) which covers the traditional topics covered in a first-year algebra course providing a firm foundation for higher level math courses. Topics include functions and relations, linear and quadratic equations and graphs, polynomials, inequalities, systems of equations and inequalities, rational and radical expressions, probability, data analysis, and more. Saxon is incremental and cumulative, introducing new concepts in small steps while reviewing previously learned material. This course is supplemented with a weekly homework worksheet (1 page) with SAT/ACT-like multiple choice questions. Additional online study/help sessions are available as needed.

Text: Saxon Algebra 1, 3rd edition, Textbook and Solutions Manual.

Monthly Tuition: \$70

Materials Fee: \$25

Time: 8:00 – 9:30 am

Geometry

Instructor: Michelle Price

214-507-9549

MrsPrice.CATN@gmail.com

Prerequisite: Completion of Algebra 1 with a grade of 'B' or better.

Course Description: This class features a proof-based approach to geometry. We will cover lines, angles, direct and indirect proofs, congruence, inequalities, parallel lines, quadrilaterals, transformations, area, similarity, triangles, circles, concurrence theorems, and more.

Text: Geometry: Seeing, Doing, Understanding, 3rd Edition by Harold R. Jacobs.

Monthly Tuition: \$60

Materials Fee \$15

Time: 11:30 - 1pm

Algebra 2

Instructor: Michelle Price

214-507-9549

MrsPrice.CATN@gmail.com

Prerequisite: Completion of Algebra 1 with a grade of 'B' or better and preferably Geometry.

Course Description: This course will cover the topics typically covered in a High School Algebra 2 course as well as a considerable amount of geometry. Designed to prepare students for pre-calculus and college level math, this text will use real-world, abstract, and interdisciplinary applications. Topics include geometric functions like angles, perimeters, and proportional segments; negative exponents; quadratic equations; metric conversions; logarithms; and advanced factoring. In addition, the course covers uniform motion, chemistry-related problems, simultaneous equations with 2 and 3 variables, non-linear equations, right-triangle trigonometry, conversion from rectangular to polar coordinates, addition of vectors, complex numbers, and quadratic formulas.

Pre-Calculus

Instructor: Rick Moser

214-557-2364

MrMoser.CATN@gmail.com

Prerequisite: Successful completion of Algebra 2 and Geometry.

Course Description: Entry to the Pre-Calculus course follows successful completion of Algebra 2 and Geometry; its purpose is to prepare the student for college Calculus and related STEM classes. The course provides in-depth coverage of trigonometry, logarithms, analytic geometry, and upper-level algebraic concepts. Intermediate algebraic concepts will be reviewed, and related to lessons about functions, matrices, and statistics. A graphing calculator (TI-84 Color Edition highly recommended) is required as part of the course. *Saxon Advanced Math, 2nd Edition* is the assigned textbook for this course. Students should purchase both the textbook and the Solutions Manual for this course.

Monthly Tuition: \$70

Materials Fee: \$20

Time: 1:30 – 3:00pm

Individualized Math Instruction

Instructor: Jon Motter

972-897-9490

MrMotter.CATN@gmail.com

Open to students in the 10th – 12th grades. Some students experience challenges mastering critical mathematical concepts that are essential to success with higher level Mathematics. This offering is intended to review and reinforce key mathematical skills on an individual basis so that students can successfully pursue higher-level STEM-related classes or more rudimentary college math classes. Instruction is customized based on individual student needs. For example, students may review subjects such as arithmetic fundamentals, geometry, fractions, ratios, probability, and statistics. Moreover, students may review concepts such as the metric system, repeating decimals, scientific notation, Pi, graphing inequalities, and the slope intercept form of linear equations. In addition, major mathematical theories, such as the Pythagorean Theorem can be reviewed. Finally, students can apply these concepts to SAT-type problems so that they can successfully integrate concepts with mathematics test questions in a variety of formats. A graphing calculator (TI-84 or higher) is required as part of the course. Textbooks will vary based on individual student needs.

Monthly Tuition: TBD

SCIENCE

Using Apologia Science Curriculum, the following science classes are offered:

General Science

Instructor: Cindy Moser

214-557-3102

MrsMoser.CATN@gmail.com

Open to students in 7th and 8th grade; this class provides an in-depth introduction to science and the scientific method, including labs and lab reports. Other topics covered include an introduction to various branches of science: Earth Science, Biology, Chemistry, Physics, Marine Science and Environmental Science.

Text: *Apologia Exploring Creation with General Science, 3rd Edition* by Sherri Seligson, released in Spring 2019.

Monthly Tuition: \$40

Materials Fee: \$15

Time: 10:30 – 11:30 am

Physical Science

Instructor: Cindy Moser

214-557-3102

MrsMoser.CATN@gmail.com

Prerequisite: For students in 8th or 9th grade, concurrently at a minimum of pre-algebra math level and able to work with fractions and decimals. Physical Science will first review concepts covered in General Science, including the scientific method, making observations, hypotheses, analyzing data, and measuring. This will be followed by modules on chemistry, physics and earth science.

Text: *Apologia Exploring Creation with Physical Science 4th edition* by Vicki Dincher. Please note that this is a new edition of the textbook, **scheduled to release Spring 2024**. Previous editions will not be compatible.

Monthly Tuition: \$40

Materials Fee: \$15

Time 11:30 – 12:30 pm

BiologyInstructor: Stacy Thorne

214-755-4993

MrsThorne.CATN@gmail.com

Open to students in the 9th-11th grades. The focus of this class is to foster the exploration of God's creation. As we study the five major kingdoms, cell structure and function, cellular respiration, photosynthesis, DNA, reproduction, genetics, evolution, and ecology, we simultaneously practice hands-on lab learning through microscopic studies, creative experiments, and specimen dissection. This allows for discussion and real-life application of the topics and their importance to our living world. Major concepts are introduced early and continually applied throughout the course. This allows a deep-rooted understanding of living organisms and biological processes as we recognize the work of God as Creator.

Module work is submitted online so students receive immediate responses and can check their comprehension. Additional study sessions are available online prior to each test to ensure student confidence.

Text: Apologia Exploring Creation with Biology, 3rd Edition

Monthly Tuition: \$70

Materials Fee: \$40 Dissection Kit \$10 (you may provide your own)

Time: 11:30 – 1 pm or 1:30 – 3 pm**Chemistry**Instructor: Lori Taylor

214-870-2242

MrsTaylor.CATN@gmail.com

Prerequisite: Successful completion of Algebra I with a grade of 'B' or better.

Course Description: With an atoms first approach, students receive a thorough introduction to the study of matter and changes in matter. Experiments are integrated with the topics to give the student hands-on experience to conceptualize the concepts. The math work involved is also applied in the experiments to provide quantitative understanding and reasoning. All the experiments in the curriculum are completed with additional activities, labs, and demos and worksheets to facilitate a greater depth of understanding. Topics include the atomic and molecular structure, molecular geometry, polyatomic ions, basic types of chemical reactions, acid-base chemistry, redox reactions, gas laws, thermodynamics, kinetics, equilibrium, and more. All lab equipment, materials, and experiment sheets for this course are included in the monthly tuition. Additional online study/help sessions are available as needed.

Text: Apologia Exploring Creation with Chemistry, 3rd Edition, 2nd or later printing, Plourde and Hughes

Monthly Tuition: \$70

Materials Fee: \$50

Time: 11:30 – 1 pm OR 1:30 – 3 pm**Human Anatomy and Physiology**Instructor: Stacy Thorne

214-755-4993

MrsThorne.CATN@gmail.com

Prerequisite: For students in the eleventh grade or higher who have completed chemistry with an average of "B" or above or tenth graders who have completed the above requirements with approval from the instructor. The course covers in-depth human anatomy and physiology with a focus on the integumentary, skeletal, muscle, nervous, endocrine, circulatory, lymphatic, digestive, respiratory, urinary, and reproductive systems. Lab work consists of microscopic experiments with prepared slides of human tissue. Dissection work includes sheep's eye, heart, kidney and brain, and a fetal pig.

Monthly Tuition: \$70 Materials Fee: Varies from \$98 - \$114 (See instructor for fee chart.)

Time: 8 – 9:30am**Physics**Instructor: Lundy Taylor

214-870-2293

MrTaylor.CATN@gmail.com

Prerequisite: This college-prep physics course is designed for the student who has completed Algebra 1 and Geometry. *Co-requisite:* Algebra 2. This course covers aspects of motion, 2D motion, free fall, Newton's Laws, momentum, energy and their circular motion equivalents, simple harmonic motion as applied to periodic motion and waves. in linear and circular form, work and energy, momentum and angular momentum, periodic motion, waves, optics, circuits, electrostatics, magnetism, motors and more. Experiments have been completely redesigned. The course emphasizes hands-on, quantitative physics. Students get to see the concepts work. Through Phyphox, an open source free app, the phone becomes a measurement device.

Textbook and equipment to perform all experiments are included in the monthly tuition.

Monthly Tuition: \$70

Materials Fee: \$50

Time: 8 – 9:30 am**ROBOTICS**

RoboticsInstructor: Lundy Taylor

214-870-2293

MrTaylor.CATN@gmail.com

Note, that this course requires the student to have a laptop for class as well as access to a computer at home. Open to students in grades 9 – 12. The course is project based and projects are assigned based on a student's previous experience. Students come from different backgrounds, some will be absolute

beginners, others can be quite familiar with working and programming robots. Languages used are Scratch, Python and C. The languages are all in the public domain and can be downloaded and installed for free. Students progress at their own pace; when one project is done, they will be assigned the next. When a project is completed, students are required to present their design and solution in the form of a technical presentation to the class. Robots are from Make Media (mBot Neo, mBot Ranger, etc.) and TI-MSP430. The “brain” of each robot is a microcontroller, the ones used in this course are Arduino, Raspberry Pi MSP430 based. If the class size is large enough, then students can work in teams. Project progress is much faster when that happens, and cooperation skills are learned. Note that debugging can be time consuming and frustrating. Equipment is provided and the cost is included in the tuition.

Monthly Tuition: \$70

Materials Fee \$75

Time: 1:30 – 3:00 pm