

SAC Day
Course Description
Guide

English Classes

MS English (*The Art of the English Language*)

Monthly Course Fee: \$40

Prerequisites: None

Text: *The Giver* (Lois Lowry), *Swiss Family Robinson* (Johann David Wyss)

Tutor: Melissa Laster

Supply Fee: \$30

Grade Level: 7th/8th

Course Description: Reading should not be a dreaded assignment. Writing should not be a chore. Together, we'll discover the wonderful art of the English language as we dive into texts across all genres and find purpose in writing while developing voice. This middle school class will introduce/refine the concepts of summaries, essays, note-taking, and journaling, as well as completing a fun research project. Using mentor texts as a guide, students will experiment with persuasion writing techniques and creative elements for personal narratives. We will be reading books such as *The Giver* and *Swiss Family Robinson* in addition to many short stories. A more detailed list will be decided once classes begin. I fully intend to meet each student at the level where he/she is currently and base grades on the individual, not the whole class.

Materials Required:

- Standard 3-ring binder, 2 inches, with pockets inside (any color)
- A wide ruled composition notebook, 100 sheets (any color)
- Plenty of good pencils with erasers

HS English (*Inspired Expression: Discovering Your Voice*)

Monthly Course Fee: \$50

Prerequisites: None

Texts: *The Outsiders* (S.E. Hinton), *Fahrenheit 451* (Ray Bradbury)

Tutor: Melissa Laster

Supply Fee: \$30

Grade Level: 9th – 12th

Course Description: In a world of internet wonders and captivating screens, books and written expression seem to have taken the back seat. Let's take back the wonderful art of the English language and make it engaging and relevant to our lives. This high school English class will cover various reading genres and elements of writing using mentor texts as learning tools. Inspired by a New York Times unit study, students will develop their voice in writing by expressing opinions through persuasive papers, telling stories in personal narratives, investigating ideas with research projects, and analyzing culture based on real-world examples. Some novels we will be reading include *The Outsiders* and *Fahrenheit 451*, as well as many short stories and articles. I will have a more detailed list once classes begin so that I can assess which books most students have previously read.

Materials Required:

- Standard 3-ring binder, 2 inches, with pockets inside (any color)
- A college ruled composition notebook, 100 sheets (any color)
- Plenty of good pencils with erasers

Math Classes

7th Grade Math

Monthly Course Fee: \$55

Prerequisite: 6th Grade Math

Tutor: Andrew Locker

Supply Fee: \$15

Grade Level: 7th

Text: Saxon Math 7/6 4th Edition ISBN 9781591413196

Course Description: Covers decimals, fractions, number lines, measurement, area, perimeter, volume, place value, solid figures, percent, ratio, unit conversion, probability, angles, coordinates.

Materials Required: pencils, erasers, spiral notebooks

Course Make-up Policy: It is the student's responsibility to contact the teacher or another student and find out what work is missed. Absences follow SAC Day absence policy.

Pre-Algebra

Monthly Course Fee: \$55

Prerequisite: 7th Grade Math

Tutor: Andrew Locker

Supply Fee: \$15

Grade Level: 7th-9th

Text: Saxon Algebra 1/2 3rd Edition ISBN 9781565771314

Course Description: Covers area, percent, ratio, order of operations, beginning algebra concepts.

Materials Required: pencils, erasers, spiral notebooks, scientific calculator (Texas Instruments ti-30xlls is a good one and will be all you need until pre-calculus).

Course Make-up Policy: It is the student's responsibility to contact the teacher or another student and find out what work is missed. Absences follow SAC Day absence policy.

Algebra 1**Monthly Course Fee:** \$55**Prerequisite:** Pre-Algebra**Tutor:** Andrew Locker**Supply Fee:** \$15**Grade Level:** 8th-11th Grade**Text:** Saxon Algebra 1 3rd Edition ISBN 9781565771376

Course Description: Covers signed numbers, exponents, solving equations, two equations with unknowns, graphing equations, scientific notation, ratio, percent, variation, unit conversions, geometry, perimeter, area, volume, English to metric conversion, surface area. Completion of this book gives your student 1 credit of Algebra as well as 1/2 Credit of Geometry. If you also complete Saxon Algebra 2, you end up with 3 high school credits and do not need a separate geometry class.

Materials Required: pencils, erasers, spiral notebooks, scientific calculator (Texas Instruments ti-30xlls is a good one and will be all you need until pre-calculus).

Course Make-up Policy: It is the student's responsibility to contact the teacher or another student and find out what work is missed. Absences follow SAC Day absence policy.

Algebra 2**Monthly Course Fee:** \$55**Prerequisite:** Algebra 1**Tutor:** Andrew Locker**Supply Fee:** \$15**Grade Level:** 10th to 12th Grade**Text:** Saxon Algebra 2 3rd Edition ISBN 9781565771437

Course Description: The completion of algebra. Covers uniform motion, chemistry-related problems, simultaneous equations with 2 and 3 variables, non-linear equations, geometry, right-triangle trigonometry, conversion from rectangular to polar coordinates, addition of vectors, complex numbers, quadratic formulas. Completion of this book gives your student 1 credit of Algebra as well as 1/2 Credit of Geometry.

Materials Required: pencils, erasers, spiral notebooks, scientific calculator (Texas Instruments ti-30xlls is a good one).

Course Make-up Policy: It is the student's responsibility to contact the teacher or another student and find out what work is missed. Absences follow SAC Day absence policy.

Science Classes

Middle School Life Science and Astronomy

Monthly Course Fee: \$55

Prerequisites: None

Texts:

- *Focus on Biology, Middle School* by Rebecca Keller, Gravitas 3rd ed, 2019. ISBN: 9781941181690
- *Focus on Astronomy, Middle School* by Rebecca Keller, Gravitas 3rd ed, 2019. ISBN: 9781941181683
- Students will be reading a life science/astronomy book of their choice. A list of ideas will be provided.

Tutor: Michelle Wanders

Supply Fee: \$60

Grade Level: 7th/8th

Course Description: Middle School Life Science and Astronomy is a foundational course that introduces scientific inquiry and develops the basic skills needed to observe, record, analyze, and write about data, preparing students for more advanced scientific studies in the coming years. We will begin the school year with the study of Biology and work our way through the different kingdoms of life, studying topics such as cells, botany, genetics, and microscopy. There will be a unit to educate students on the ecosystems and wildlife specific to our great state of Texas. Next, we will venture through the wonderful world of Anatomy and Physiology to discover the workings of our organ systems. I will be using my experience as a former Speech Language Pathologist to dive deep with my students into the topics of swallowing, speech production, and how the brain learns. Basic health and nutrition will also be included, covering topics like reading a nutrition label, essential vitamins and nutrients, and how stress and sleep affects our health. Lastly, we will travel through the cosmos studying astronomy. Students will be completing at home observations of our skies to aid in their understanding of subjects that include moon phases and the movements of celestial bodies.

Communication, language, and cognitive skills training are always integrated into my classes. I will be using science as a vehicle to improve your child's critical thinking skills, logic, reasoning, problem-solving, and written and oral expression. Compelling and engaging demonstrations and experiments will be used to facilitate understanding of the topics in this class. There is an emphasis on literacy in this course. Students will have additional readings outside of their textbooks. By being exposed to scientific literature, students will improve their ability to understand and produce it on their own. The year will culminate with a science fair project on a subject of the student's choice to be presented to the class.

Questions asked about 8th graders in this course:

- Can my child take this class in 8th grade? YES!

- If my child took General Science in 7th grade, will there be any overlap between the classes? Yes and No. First off, General Science is an omnibus course that covers a lot of material over a lot of different subjects and does include material covered in BOTH Physical Science and Middle School Life Science and Astronomy. Both science courses available to 8th graders take different subjects from General Science and spend more time on those areas. You get to choose whether you want your child to go more in depth in physical science or life science/astronomy for 8th grade.

If my child takes this class in 8th grade, will they be prepared for freshman lab sciences? Yes. If this course is taken in 8th grade, I recommend that Introductory Physics be taken in 9th grade to prevent the study of life science 2 years in a row.

Materials Required: Textbook, 1.5-inch Binder with dividers, Spiral Notebook or Sketchbook to record observations, Curiosity :)

Course Makeup Policy: Contact tutor for missed work and instructions.

Course Grading Policy: Grades are based on Class Participation, Projects, Group Work, Lab Work, Presentations, Homework, and Quizzes. Students will be keeping an observation notebook that will be turned in periodically for grading. Quizzes are used for the purpose of review and are corrected in class before being turned in for grading. There will only be a mid-term and final exam, both take-home.

Physical Science

Monthly Course Fee: \$55

Prerequisite Required: Pre-Algebra (completed or taking)

Text:

- *Exploring Creation with Physical Science*, 3rd ed Apologia, ISBN: 978-1-946506-51-1
- *Exploring Creation with Physical Science Solutions and Test*, 3rd ed Apologia, ISBN: 978-1-946506-52-8

Course Description: This course is the last science course a student takes before high school biology. The Apologia text used discusses topics including metrics, matter, atmosphere, the earth, physics of motion, Newton's Laws, and general Chemistry and Physics. In the pre-AP format set up of this class, the student can expect more emphasis on problem - solving and inquiry than the standard Physical Science class. He needs to bring to the class the ability to do basic fractions and simple Algebra. We will use the apologia Physical Science text with a large amount of added material (more labs, more problems, more thinking).

Materials Required: Textbook, 3-Ring Binder recommended for keeping work, hand-outs, etc, notebook, Basic calculator (not your phone), pen or pencil, Solution manual

Biology**Monthly Course Fee:** \$60**Prerequisite Required:** None**Text:**

- *Exploring Creation with Biology*, 3rd ed, Apologia, ISBN: 9781946506450.
- Apologia Biology Student Notebook 3rd ed, ISBN: 9781946506481

Course Description: This course provides a detailed introduction to the methods and concepts of general biology. Instruction will provide a strong background in the scientific method, the five-kingdom classification scheme, biochemistry, cellular biology, molecular and Mendelian genetics, dissection, and ecosystems.

Materials Required:

- 1.5" or larger 3-ring binder dedicated to saving weekly science material.

Honors Chemistry**Monthly Course Fee:** \$60**Prerequisite Required:** Algebra I completed**Texts:**

- *Exploring Creation with Chemistry*, 3rd ed, Apologia 2015, ISBN: 978-1-940110-25-7
- *Exploring Creation with Chemistry Solutions and Test*, 3rd ed, Apologia, ISBN: 978-1-940110-26-4

Course Description: This 90-minute class in high school chemistry is designed to give the student a rigorous foundation in chemistry. Topics include significant figures, metric units, the mole concept, stoichiometry, writing chemical formulas, balancing equations, and predicting products etc. Other areas include, equilibrium, thermodynamics, atomic structure, rate of reactions, and redox. Work is a mix of experiments, problem solving, and general theory. Students should be prepared for advanced high school chemistry or freshman college chemistry with the completion of this course. Students will need significant study time outside of class each week for this class. Chemistry is hard but FUN. The new 3rd edition contains more practice problems and more explanation.

Materials Required: Textbook, Solutions Manual, 3-Ring Binder, Calculator (Not your phone)

Introductory Physics**Monthly Course Fee:** \$60**Prerequisites:** Pre-Algebra, Algebra 1 (or taking)**Texts:**

- *Introductory Physics* by John Mays, Novare/Classical Academic Press 3rd ed, 2019. ISBN: 9780998169958
- *Introductory Physics Solutions Manual* by R. Mays J. Mays, Novare/Classical Academic Press 2nd ed, 2018. ISBN: 9780997284553
- *Storm in a Teacup* by Helen Czerski, Norton, 2018. ISBN: 0393355470

Tutor: Michelle Wanders**Supply Fee:** \$50**Grade Level:** 9th – 12th

Course Description: Introductory physics can be taken in any grade in high school, giving students and families more flexibility in their high school science studies. The Novare (no-VAH-ray) curriculum supports a “physics first” approach, placing the study of physics in the 9th grade to give students a firm foundation in concepts such as matter, energy, radiation, and heat transfer before they enter biology and chemistry. In this course, students will develop strong mathematical computation skills. The author describes Introductory Physics as a “celebration of basic math skills that are used ubiquitously in science.” We will be covering scientific notation, performing unit conversions, determining significant digits, and isolating variables in equations, leaving students confident and prepared for more complicated computations later in Chemistry and Advanced Physics.

Communication, language, and cognitive skills training are always integrated into my classes. I will be using Physics as a vehicle to improve your child’s critical thinking skills, logic, reasoning, problem-solving, and written and oral expression. Taking notes, study skills, and writing lab reports will be explicitly taught in Introductory Physics and scaffolded over the year to lead to independence. Compelling and engaging demonstrations and experiments will be used to teach the fundamentals of physics. There is an emphasis on literacy in this course. Students will have additional readings outside of their textbook. By being exposed to scientific literature, students will improve their ability to understand and produce it on their own. Don’t worry about reading volume. Novare textbooks are not door stops. The content has been purposefully carved down to the most important concepts, so students are able to actually master the material.

Recommended Course Sequences:

If students took Physical Science in 8th grade, it may be best that Biology be taken in 9th grade, so Physics isn’t covered 2 years in a row. In this case, the course sequence would be: Biology, Introductory Physics, Chemistry.

For students who took a life sciences course in 8th grade, I recommend starting 9th grade in Introductory Physics, so Biology isn’t covered 2 years in a row. In this case, the course sequence would be: Introductory Physics, Biology, Chemistry.

Of course, Introductory Physics can also be taken in 11th grade for students not needing to take an Advanced Physics course that includes trigonometry and vectors.

With Introductory Physics, you can place your child's physics studies in the sequence that best works for you.

Physics does not have to be scary or boring! Join me in Introductory Physics to marvel at how the amazing creation works!

Materials Required: Textbook, Solutions Manual, Binder with dividers, Scientific Calculator with EE or EXT buttons to make following along with the textbook easier, Notebook Paper, access to a computer and word processing software, Curiosity ;)

Course Makeup Policy: Contact tutor for missed work and instructions.

Course Grading Policy: Grades are based on class participation, projects, group work, presentations, lab work and reports, homework, quizzes, and portfolio reviews. Homework is graded for completion. Students will use the solutions manual to correct work at home. Quizzes are used for the purpose of review and are corrected in class before being turned in for grading. The mid-term and final exams will be a review of the student's portfolio showcasing their best work from the semester. There will only be 5 experiments that require a full lab report to be completed.

Marine Biology

Monthly Course Fee: \$60

Prerequisites: Biology

Texts:

Title: Exploring Creation with Marine Biology Copyright: 2017
Author: Sherry Seligson Publisher: Apologia
Edition: 2nd ISBN: 978-1-946506-61-0
Purchase: Rainbow Resource, Apologia, Christian Book
Cost: \$63.20-79.00, new

Tutor: Sara Cogar

Supply Fee: \$80

Grade Level: 11th – 12th

Recommended, but not required:

Title: The Student Lab Report Handbook Copyright: 2014
Author: John Mays Publisher: Novare/Classical Academic Press
Edition: 2nd ISBN: 9780988322875
Purchase: Rainbow Resource (cheapest), Classical Academic Press, Christian Book
Cost: \$19-\$25, new

*Can be used as a reference throughout high school and college.

Course Description: From Apologia: “Marine Biology is an upper-level high school science course that requires knowledge of general biology and assumes that students have previously participated in biological lab activities such as experiments, dissections, and microscopy. About 71% of our world is covered by water. God filled this marine world with fascinating, alien, and bizarre creatures that are remarkable to study and understand. Most students have a natural captivation for the oceans and their mysterious residents. New discoveries are being made in the ocean world all the time, but our oceans are still one of the least explored areas in the solar system. *Exploring Creation with Marine Biology* is one of the few courses available to the homeschool community that includes marine ecology.”

Prerequisites: Biology

Course Makeup Policy: Contact tutor for missed work and instructions.

Course Grading Policy: TBD

Required Supplies: Textbook, Binder with dividers, Notebook and Graph Paper, access to a computer and word processing software, Curiosity ;)

Foreign Language Classes

ASL 1

Monthly Course Fee: \$50.00

Prerequisite Required:

Tutor: Tilly Copley

Supply Fee: \$10.00

Grade Level: 9th – 12th

(and highly motivated 8th graders)

Text: *Signing Naturally* (student workbook) Units 1-6; includes 2 DVDs. ISBN: 978-1-58121-210-5 DawnSignPress.com \$84.95 + tax. Please order as soon as class is confirmed as it is important to have this book on the first day of class.

Course Description: This course is an introduction to the basic skills needed in the production and comprehension of American Sign Language (ASL). Topics include the manual alphabet, numbers, conversational skills, culturally appropriate behaviors, and ASL grammar. This is the same course that is taught at San Antonio College (SAC). Upon successful completion of this course, a student may be able to test out of the class or will have a much easier time taking the class for college credit. Many students at various public schools come to SAC with sign language experience and have an easier time with the semester long course. This course can be used to fulfill the foreign language requirement at many universities. The course will be a year-long course.

Outcomes

- Learning Outcome 1: The student will express and comprehend a core vocabulary in American Sign Language based on "Signing Naturally" - Units 1-4, with a minimum of 70% accuracy.
- Learning Outcome 2: Using American Sign Language and "Signing Naturally," Units 6, "Storytelling", the student will retell a story with a minimum of 70% accuracy.
- Learning Outcome 3: The student will demonstrate and comprehend the linguistic components of American Sign Language (grammar) with a minimum of 70% accuracy.
- Learning Outcome 4: The student will demonstrate and identify culturally appropriate behaviors in the Deaf Community with a minimum of 70% accuracy.

Attendance Policy: Attendance is important to student success in this course.

Materials Required:

- 3-ring binder, notebook paper, dividers
 - Video Feedback: Students should have access to video software either through their computer or mobile device to submit video assignments throughout the year. Videos will be assessed for proper expressive skills and feedback will be provided to improve.
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Bible Classes

Bible Survey

Monthly Course Fee: \$50

Prerequisites: None

Text: *Echoes of Exodus; A House for My Name; others TBD*

Tutor: Pastor Gabriel Wetmore

Supply Fee: \$20

Grade Level: 7th-12th

Course Description: This class will immerse your student in the grand story of history, the story of redemption. It will give an overview of Redemptive history and will trace various biblical themes from Genesis through Revelation. It will not only seek to instill knowledge, but a love for Scripture and help them to think about themselves, the world, and salvation in the language and themes of Scripture.

Pastor Gabriel Wetmore received his B.A. in Philosophy from California State University, Long Beach. He then received a Master of Divinity from Greenville Presbyterian Theological Seminary, a conservative Protestant seminary. He has pastored churches in Michigan, Louisiana, California, and is currently moving to Boerne to start Christ Church Boerne. He has taught in multiple Classical Christian schools and is committed to training up Christian kids to embrace their faith, love God's word, and to faithfully fight under Christ's banner until their life's end.

Apologetics

Monthly Course Fee: \$50

Prerequisites: None

Text: *Pushing the Antithesis; possible others TBD*

Tutor: Pastor Gabriel Wetmore

Supply Fee: \$20

Grade Level: 9th-12th

Course Description: This class is designed to give your student confidence in their faith in the face of a world that is increasingly hostile to Christianity. It will enable them to not only give a defense of their faith, but to challenge any unbelieving worldview. It will instill in them the confidence that the Christian faith is the only possible worldview that can coherently account for human rationality and experience.

Pastor Gabriel Wetmore received his B.A. in Philosophy from California State University, Long Beach. He then received a Master of Divinity from Greenville Presbyterian Theological Seminary, a conservative Protestant seminary. He has pastored churches in Michigan, Louisiana, California, and is currently moving to Boerne to start Christ Church Boerne. He has taught in multiple Classical Christian schools and is committed to training up Christian kids to embrace their faith, love God's word, and to faithfully fight under Christ's banner until their life's end.

Electives

Individual Private Music Lessons (30 min)

Monthly Course Fee: Voice: \$85

Piano: \$85

Guitar \$85

Tutor: Gabe Rios

Supply Fee: \$0

Grade Level: 7th-12th

Course Description: No experience required for any lesson. Lessons are taught according to each individual. Please email sacday@myhcch.com to make your selection between guitar, voice, or piano. If you would like to do more than 1 option, please register for another 30-minute time block.

Materials Needed for Guitar lessons: Guitar, Folder for sheet music

High School Theater

Monthly Course Fee: \$60

Prerequisite: None

Tutor: Cayce Yarbrough

Supply Fee: \$0

Grade Level: 9th - 12th Grade

Must be 14 by August 1, 2022

Course Description: Students will learn the basics of theater and production while producing a full-length play. From auditions through the final performance, students will work on their acting skills, blocking, and learning the technical aspects of theater production. NOTE: This class requires commitment for tech week, the week leading up to the performance of the play in April. Rehearsals will be in the evening during this week, and students must attend. Thus arrangements must be made in advance for students who will miss work or evening activities, because attendance at rehearsal during this week is **mandatory**. Theater is fun and full of joy, but students must be willing to memorize lines and commit to the class, as a play only works if everyone does his or her part.

This class meets once a week. There will be a parents' meeting in September, as we will be re-activating the famous SAC Day "Drama Mamas." For each family in Drama, one parent must sign up for one task for the play. Most jobs are not time-consuming and take place only during tech-week, i.e. picking up snacks for rehearsal (budget provided), etc.

Materials Required: 1 Composition book (for theater journal), 1 spiral notebook for note taking. Pen/pencil

Course Grading Policy: Percentage Grade Scale

Art 1**Monthly Course Fee:** \$50**Prerequisite:** None**Tutor:** Willie Shook**Supply Fee:** \$100**Grade Level:** 7th - 12th Grade

Course Description: Students will learn the Principles of Art and the Elements of Design and will apply them by learning how to draw using lines and shading to create drawings in perspective and human portraits by using pencil, chalk, and charcoal mediums. Students will also create a color wheel learning how to mix paint to create secondary and intermediate colors and then applying this knowledge by painting on canvas using acrylic paints. Positive and negative space will also be explored by completing a glass etching project, followed by learning and applying the role of texture in art by completing a weaving. Other projects and activities may be added as time allows.

Materials Required: The materials required for this class will be supplied by the tutor through the use of the supply fee.

Journalism/Yearbook**Monthly Course Fee:** \$50**Prerequisite:** None**Tutor:** Danielle Frederick**Supply Fee:** \$15**Grade Level:** 9th - 12th8th Graders by Interview,

Contact SACday@myhcch.com

Text: Curriculum will be provided by tutor and is included in the supply fee.

Course Description: In this course, students will discover the world of journalism through the lens of planning, designing, promoting, and producing the HCCH yearbook. Skills covered in this course include working as a team, meeting deadlines, interviewing techniques, taking photos, and writing effective captions. While the focus of the course is Yearbook Journalism, we will cover basic journalism topics like ethics, style, photography, and copywriting.

Materials Required:

- Access to computer with internet (laptop for class encouraged, but NOT required)
 - Spiral notebook w/pockets OR spiral notebook and poly folder (for handouts)
 - Willingness to work with a team!
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Unshaken Fitness**Monthly Course Fee:** Middle School: \$35
High School: \$40**Tutor:** Nate Tennison

Course Description: Our program delivers a fitness that is, by design, broad, general, and inclusive. Unshaken Fitness is a strength and conditioning that develops students to reach elite levels of fitness through constantly varied functional movements. Unshaken we train incredibly hard, and we push our students to their limit and beyond. The Fitness program is designed for universal scalability making it the perfect application for any committed individual

regardless of experience or athletic background. This class will create a bond among the students. Together we sweat, we bleed, we expose weaknesses, and we get stronger. There are no egos, no room for bad attitudes and no time for negativity. We are supportive, we are competitive, we are strong, we are humble, we are athletes.... we are Unshaken Fitness.

Materials Required: Gym clothes and tennis shoes required.

Kaizen Krav Maga

Monthly Course Fee: \$50

Prerequisite: None

Tutor: Raul Meza

Supply Fee: \$50

Grade Level: 7th – 12th

Course Description: *Kaizen* is a Japanese word that means constant improvement. Mr. Meza specializes in helping his students reach their potential by using martial arts and self-defense as a vehicle to teach confidence, discipline and respect for yourself and others. In this course students will develop the confidence to know how to handle any physical confrontation. They will learn basic strikes and self-defense techniques while getting a workout in a fun and safe family environment. We look forward to helping your student earn their first belt at the end of the program, but more importantly, learning skills that they can take with them the rest of their lives.

Mr. Meza has been training for almost 38 years. He holds Black Belts in various styles of martial arts.

- 5th degree Master instructor in American Karate
- 5th degree in American Taekwondo Association
- 1st degree in American Kenpo Karate
- 1st degree in Toshindo Ninjitsu (YES, he's a real Ninja!)
- 3x World Champion
- 2x Guinness World Record Holder

He has helped create and develop many other instructors and 100's of Black Belt leaders including his own students earning various world champions, stunt performers, actors and even a Black Belt Hall of Fame member.

Materials Required: Gloves, t-shirt, & belt (included in supply fee)

C# Programming

Monthly Course Fee: \$50

Prerequisite: None

Tutor: Tilly Copley

Supply fee: \$10

Grade Level: 9th-12th

Course Description: We use computers in many aspects of our daily lives. Public and private schools are providing students with introductory courses in programming and desktop software applications. Shouldn't our homeschool students have the same advantage? I taught my two older sons their first computer science class when they were twelve and ten years old. They

were so excited about computers that they are still active in that field. My oldest graduated from A&M with a computer science degree and my second oldest works in network communications today.

C# is a modern, general-purpose programming language developed by Microsoft and is easy to learn. Students will develop their understanding of programming fundamentals: input/output operations, decision making, and looping. They will have many opportunities for hands-on experience programming real-life examples. They will build a professional-looking and intuitive Graphical User Interface (GUI) application on their own computer. We will be using CompuScholar online course, which provides video and text explanation of all the lessons. I will provide accountability, guidance, and grading of their work.

CompuScholar online course, **Windows Programming (C#)** requires Windows OS.

Topics Covered

This course covers fundamental programming topics and skills such as:

- Using Integrated Development Environments
- C# Data types and variables
- Logical expressions and flow control
- Math and string operations
- GUI design and Windows input controls
- Writing functions
- Debugging and exceptions

Student Work

All lesson quizzes and chapter tests are **auto-graded** by the system. Students will complete hands-on coding projects in every chapter.

Pricing: The pricing for the CompuScholar C# course is to be determined based on how many students sign up for the computer programming classes I am offering. The cost is \$500 for up to 10 students. For example, if 5 students sign up in either this C# or the Python class the cost will be \$100 each. If 10 students sign up, the cost will be \$50. I believe we will have a minimum of five students sign up since a knowledge of computer science is such a beneficial skill that all students will most likely need in college.

Supplies: Students should have their own laptop with Windows Operating System to bring to class.

For more information check out CompuScholar's website for this particular course. We will not be completing all the chapters in the course due to our limited class times but your student is welcome to forge ahead at their own pace.

<https://www.compuscholar.com/homeschool/courses/intro-csharp/>

Should I start with C# or Python?

If you want to quickly learn a programming language and then start to build things, then the answer is **Python**. If you want to learn a programming language that enables you to build big and complex projects, something maintainable in long term, then the answer is C#.

C# is a compiled language and Python is an interpreted one. Python's speed depends heavily on its interpreter; with the main ones being CPython and PyPy. Regardless, **C# is much faster in most cases**. For some applications, it can be up to 44 times faster than Python.

In short, C# and Python are both high-level, object-oriented, and easy-to-learn languages. They ensure fast development and good performance. However, C# is more clear and organized, and it's **much faster at runtime**. While Python is easier to learn and write than C# and has vast standard libraries

On GitHub Language Rankings, it holds a place at the #9 position in the second quarter of 2021. C# is one of the fastest evolving programming languages.

What companies use Python?

Python is used by **Intel, IBM, NASA, Pixar, Netflix, Facebook, JP Morgan Chase, Spotify**, and a number of other massive companies. It's one of the four main languages at Google, while Google's YouTube is largely written in Python. Same with Reddit, Pinterest, and Instagram.

What industries use C# and for what purposes?

- C# is widely used for developing desktop applications, web applications and web services.
- It is used in creating applications of Microsoft at a large scale.
- C# is also used in game development in Unity.

Python Programming

Monthly Course Fee: \$50

Prerequisite:

Tutor: Tilly Copley

Supply fee: \$10

Grade Level: 9th-12th

Course Description: We use computers in many aspects of our daily lives. Public and private schools are providing students with introductory courses in programming and desktop software applications.

Shouldn't our homeschool students have the same advantage? I taught my two older sons their first computer science class when they were twelve and ten years old. They were so excited about computers that they are still active in that field. My oldest graduated from A&M with a computer science degree and my second oldest works in network communications today.

I will be using CompuScholar's online Python course, which provides video and text explanation of all the lessons. The Python language is used to teach introductory computer programming. No previous programming course is required. Students only need to have typical computer usage skills prior to starting this course. The format of the software is written to appeal to the students who prefer written text and to those who prefer an audio-visual instruction. I will provide accountability, guidance, and helping answer questions students have about their programming projects.

Topics Covered:

This course covers fundamental programming topics and skills such as:

- Printing and User input
- Data types and variables
- Logical expressions and flow control
- Debugging skills
- Lists and Loops
- Working with numbers, dates and strings
- Writing and using functions
- Simple Object-Oriented Programming
- ... and more

Student Work

All lesson quizzes and chapter tests are **auto-graded** by the CompuScholar system. Students will complete hands-on coding projects in every chapter, which are also **auto-graded** by the system.

Pricing: The pricing for the CompuScholar Python course is to be determined based on how many students sign up for the computer programming classes I am offering. The cost is \$500 for up to 10 students. For example if 5 students sign up in either the C# or this Python class the cost will be \$100 each. If 10 students sign up, the cost will be \$50. I believe we will have a minimum of five students sign up since a knowledge of computer science is such a beneficial skill that all students will most likely need in college.

Supplies: This course requires a computer or tablet with an Internet connection.

The course can be completed using a Windows  or Mac  computer, Chromebook or any other web-capable device with sufficient web browser.

No local software installation is required. The entire course and all hands-on projects can be completed through the web browser!

For more information check out CompuScholar's website for this particular course. I am not sure how many lessons we will complete in class as I want to be sure the students understand the material and I've never taught this course before. I will be providing an introduction to the lessons as well as providing support for questions and programs. Your students are welcome to forge ahead at their own pace and will have access to CompuScholar's Python course for 12 months from their registration.

<https://www.compuscholar.com/homeschool/courses/python/>

https://www.compuscholar.com/docs/syllabus/Python_Programming_Planner_Syllabus.pdf

Should I start with C# or Python?

If you want to quickly learn a programming language and then start to build things, then the answer is **Python**. If you want to learn a programming language that enables you to build big and complex projects, something maintainable in long term, then the answer is **C#**.

C# is a compiled language and Python is an interpreted one. Python's speed depends heavily on its interpreter; with the main ones being CPython and PyPy. Regardless, **C# is much faster in most cases**. For some applications, it can be up to 44 times faster than Python.

In short, C# and Python are both high-level, object-oriented, and easy-to-learn languages. They ensure fast development and good performance. However, C# is more clear and organized, and it's **much faster at runtime**. While Python is easier to learn and write than C# and has vast standard libraries

On GitHub Language Rankings, it holds a place at the #9 position in the second quarter of 2021. C# is one of the fastest evolving programming languages.

What companies use Python?

Python is used by **Intel, IBM, NASA, Pixar, Netflix, Facebook, JP Morgan Chase, Spotify**, and a number of other massive companies. It's one of the four main languages at Google, while Google's YouTube is largely written in Python. Same with Reddit, Pinterest, and Instagram.

What industries use C# and for what purposes?

- C# is widely used for developing desktop applications, web applications and web services. It is used in creating applications of Microsoft at a large scale.
 - C# is also used in game development in Unity.
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