



zinkerz

Course Catalog



Table of Contents

3 Math

4 Math Fundamentals

5 Math Principles

Module 1

Module 2

Module 3

6 AP Math

AP Calculus AB

AP Calculus BC

AP Statistics

7 English

8 Reading Basics

9 English Fundamentals

10 English Principles

Module 1

Module 2

11 AP English

AP English Language and Composition

AP Seminar (Individual)

12 Languages

13 French

French Conversation, Reading, and Math

14 Chess

15 Chess

Chess Basics

Chess Strategies

16 Coding

17 Scratch

Scratch For Beginners: Level 1

Scratch Basics: Level 2

Intermediate Scratch: Level 3

18 Roblox

Roblox Basics: Level 1

Roblox Concepts: Level 2

16 Coding

19 Code.org

App Development: Level 1

App Development: Level 2

App Development: Level 3

20 Advanced: Python

Python: Level 1

21 Advanced: Java

Java: Level 1

22 AP Coding

AP Computer Science A

23 History & Humanities

24 AP History and Humanities

Modern AP World History

AP Microeconomics

AP Macroeconomics

AP Psychology

26 AP Sciences

AP Biology

AP Physics

27 Standardized Test Prep

28 Elementary, Middle, High School Entrance Exams

ISEE

SSAT

29 Undergraduate

SAT: Math And Verbal

ACT: Math, Verbal, And Science

IELTS

TOEFL

Duolingo English Test

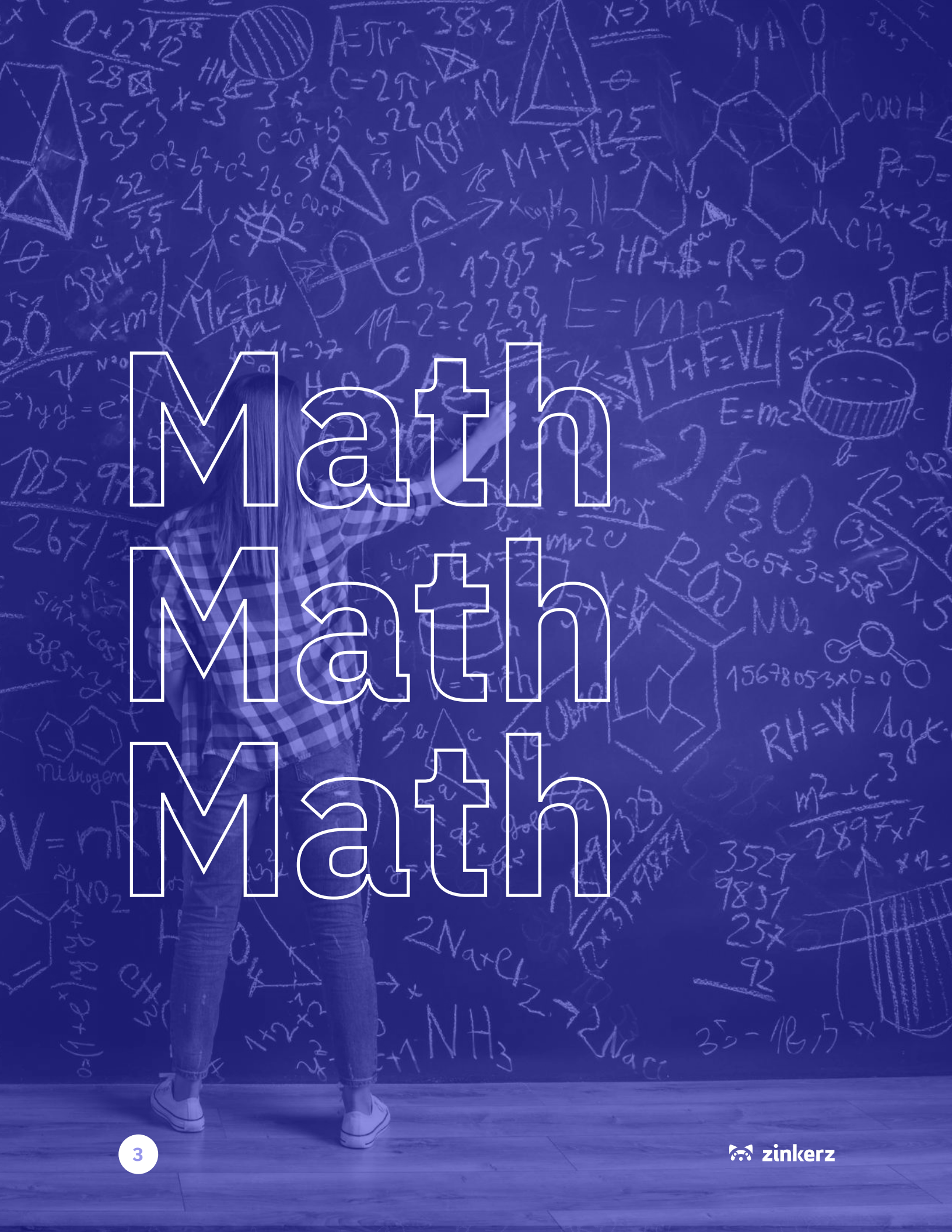
31 Graduate

GRE

GMAT

LSAT

32 Homework Help



Math Math Math

Math Fundamentals

Overview

Math Fundamentals provides a personalized math course targeting specific areas where students can improve. After an initial assessment is analyzed, students begin one of the courses below. The speed and difficulty of the courses are modified for individual students. In addition, the course material and topics covered are modified based on the assessment and periodic unit quizzes. Math Fundamentals is designed to strengthen students' math foundations, fill in any "holes", and increase each student's ability and confidence in math.

Timeline

Courses are equivalent to a full year of math, but can be condensed or modified based on the assessment.

 **Grades: K-8**

Math Fundamentals

Major Topics: Common Core aligned curriculum integrates coursework from towns and states to align with each student's needs. Coursework includes a review of old material, a preview of upcoming material, added challenges and extensions where applicable, and homework help if needed. Additionally, coursework can integrate State Testing requirements.

Math Principles

Overview

The Math Principles course creates a personalized learning path for students to review concepts, learn new topics, and expand their overall understanding of the most important mathematical ideas. Courses cover topics in: Pre-Algebra, Algebra 1, Algebra 2, Geometry, and Pre-Calculus. These courses focus on topic mastery and ensure the proper foundations are built so students develop confidence and necessary skills for success. Periodic assessments allow for adaptive learning paths to focus on the most needed skills while creating a deeper understanding of other topics.

Timeline

Total course length ranges from 9-24 months based on assessment and progress.



Grades: 7-11

Module 1

Major Topics: Expressions and Equations, Real Numbers, Solving Equations, Ratios and Rates, Slope, Equations of Lines, Graphing Inequalities, Systems of Equations, Exponents, Operations on Polynomials, Roots and Radicals, Quadratic Equations, Functions, Sequences, Statistics

Module 2

Major Topics: Absolute Value Equations, Advanced Equations of Lines, Absolute Value Graphs, Systems of Inequalities, Graphing and Solving Quadratic Equations, Complex Numbers, Polynomials, Radical Functions and Inverses, Exponential and Logarithmic Equations, Rational Functions and Equations, Triangles, Conic Sections, Matrix Operations

Module 3

Major Topics: Function Operations, Graphing Exponential and Logarithmic Equations, Right Triangle Trigonometry, Trigonometric Basics, Graphing Trigonometric Functions, Solving Trigonometric Equations, Power Functions and Polynomial Graphs, Operations on Rational Expressions, Graphs of Rational Functions

AP Math



Overview

The mathematics AP courses build on the foundations learned in Test Prep courses and expand into college level material. The speed depends on the equivalent college semesters. In the courses, students will use theoretical knowledge to help solve problems in real world scenarios.



Timeline

AP courses start in June and continue for one year until the AP exam in May. Courses are a mixture of group lectures and individual recitations.



Grades: 10-12

AP Calculus AB

AP Calculus AB is roughly equivalent to a first semester college calculus course devoted to topics in differential and integral calculus. The AP course covers topics in these areas, including concepts and skills of limits, derivatives, definite integrals, and the Fundamental Theorem of Calculus. The course teaches students to approach calculus concepts and problems when they are represented graphically, numerically, analytically, and verbally, and to make connections amongst these representations. Students will learn how to use technology to help solve problems, experiment, interpret results, and support conclusions.

AP Calculus BC

AP Calculus BC is roughly equivalent to a full year of college calculus. The AP course covers all topics from the AB curriculum and increases the complexity of the material by adding in polar, parametric, and vector functions. Additionally, students study infinite sequences and series. All students learn how to integrate technology to help solve real world problems.

AP Statistics

AP Statistics prepares students to receive college credit and/or placement in mathematics. AP Statistics is equivalent to a one-semester, introductory, non-calculus based, college course in statistics. Students considering this course should have a strong background in algebra. The purpose of this course is to introduce students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. Students are exposed to four conceptual themes: exploring data; planning a study; producing models using probability and statistics; and statistical inference.



English
English
English

Reading Basics

Overview

Reading Basics provides a personalized reading course targeting specific areas where students can improve. The speed and difficulty of the courses are modified for individual students. Reading Basics is a fun way to strengthen students' reading foundations and confidence while they learn about new topics.

Timeline

Courses are equivalent to a full year of English but can begin at any point in the year to complement the curriculum in school.



**Grades:
Pre-K - 3**

Reading Basics

Major Topics: All current course topics, Review topics, Preview topics, Applications, State testing practice

English Fundamentals

Overview

English Fundamentals courses provide students with a solid foundation in critical reading, written expression, and standard English grammar in order to prepare younger students for the rigors of Middle School or High School level English courses. English Fundamentals courses are designed to help students build confidence in their English Language Arts abilities, and develop skills that will help them continue to thrive in the future.

Timeline

Courses are equivalent to a full year of English but can be condensed or modified based on the assessment.

 **Grades: 1-8**

English Fundamentals

Major Topics: Common Core aligned curriculum integrates coursework from towns and states to align with each student's needs. Coursework includes a review of old material, a preview of upcoming material, added challenges and extensions where applicable, and homework help if needed. Additionally, coursework can integrate State Testing requirements.

English Principles

Overview

English Principles is designed to give students a strong foundation in critical reading and academic writing in order to prepare them for more advanced English and Humanities courses or for college entrance exams, such as the SAT or ACT. Units are divided between critical reading and academic writing in order to adapt to individual student's strengths and weaknesses in reading comprehension and standard written English. Students who follow through to the end of the course are introduced to the fundamentals of essay writing. The course is individualized according to the needs of the student, and it accommodates students who require both shorter and longer times for adequate preparation.

Timeline

Courses are equivalent to a full year of English but can be condensed or modified based on the assessment.

 **Grades: 8-12**

Module 1

Major Topics: Background Information, Active Reading, Parts of a Sentence, Main Idea, Purpose, Theme, Tone, Point of View, Sentence Structure, Textual Evidence, Drawing Conclusions, Sentence Types, Description, Sequence, Compare and Contrast, Paragraph Structure, Literary Devices, Literary Genre, Essay Development

Module 2

Major Topics: Literary Analysis, Advanced Purpose, Tone, Point of View, Sequence, Textual Evidence, Drawing Conclusions, Advanced Standard English Grammar, Paragraph Development, Essay Development

AP English

Overview

The AP English courses prepare students for the rigor of college-level writing and research by exposing them to the most commonly assigned essay types. Students also learn the importance of argumentation and the responsibility of accurate research, and acquire presentation skills that they can take with them into a university environment.

Timeline

AP courses start in June and continue for one year until the AP exam in May. Courses are a mixture of lectures and individual recitations.


 **Grades: 8-12**

AP English Language and Composition

AP English Language is a college-level reading and writing course that centers around critical reading and effective written communication skills. In this course, students focus on learning how to analyze and apply rhetorical and argumentative skills in addition to research and synthesis. Students will spend time reading various nonfiction texts and composing different styles of essays in order to practice these skills.

AP Seminar (Individual)

AP Seminar makes up the first part of the College Board's Research Capstone. Over the course of one year, students are introduced to the process of developing scholarly research through two major research papers and two presentations. The research papers are scored by the College Board in tandem with the instructor's evaluation of the student's individual and group presentations. This course is one year long. Though not required, many students take AP Research the following year in order to gain credit for the AP Capstone diploma. Students may not proceed to AP Research without first taking AP Seminar. Students are expected to sit for a written AP exam at the end of the year. With Zinkerz, students work on an individual basis with a tutor in order to develop, hone, and finesse their research papers while developing research skills that they will take into college. Students also prepare for the AP exam in May with their tutors through practice prompts.

A woman with glasses and a young boy are looking at a globe in a classroom setting. The woman is pointing at the globe, and the boy is looking at it with interest. The scene is lit with a warm, yellowish light.

Lan- guages

French

Overview

French courses focus on specific areas to help reinforce and improve French reading, writing, and speaking. Individual and small group classes allow for targeted instruction and group conversations.

Timeline

Courses have flexible start dates and lengths depending on what each student or group is looking for.

 **Grades: 1-12**

AP English Language and Composition

Through short stories, passages, conversations, and games, the French courses target reading, writing, and speaking. Themed lessons target any current coursework and expand on vocabulary. Additionally, lessons target building math foundations from the common core and are taught in French.



Chess Chess Chess

Chess

Overview

Online chess opens a world of possibilities allowing you to connect with others from around the world while you develop logic and critical thinking skills. Chess is proven to increase your concentration and memory and teaches planning and foresight.

Timeline

Chess classes meet once a week for 8 weeks and can start anytime throughout the year. Lessons are done in groups or individually.

 **Grades: 1+**

Chess Basics (Grades: 1-6)

Learn the basic moves, the names of the squares, captures, and the simplest checkmates. Play mini games against humans and the computer to build your foundation. Learn the basic CPR (capture, protect, run away) strategies.

Chess Strategies (Grades: 1+)

Practice tactical and strategic moves designed to strengthen your skills. Play games in every class and learn how to position your board for success. Expand your abilities while focusing on expanding your CPR (capture, protect, run away) strategies.

Coding
Coding
Coding

Scratch

Overview

Scratch is an online learning platform developed by Massachusetts Institute of Technology (MIT) to teach a young audience how to code. The platform uses distinguishable blocks that can be joined together to make objects come to life. The curriculum covers the basic logic behind object oriented programming (in other words, how to talk to the computer in a way that it understands). The concepts learned will form the foundation for the next Scratch course.

Timeline

Scratch courses meet twice a week for 12 weeks (with the exclusion of the beginners class, which meets one time a week for 12 weeks) and can start anytime throughout the year. These courses are done in groups or individually.

 **Grades: 1-9**

Scratch for Beginners: Level 1 (Grades: 1-4)

In this beginner course, students will be introduced to the basics behind Scratch block coding. They will slowly add to their toolbox of programming knowledge as complexity is added to their programs each week. Students will learn new concepts about coding in a student-paced curriculum. The pace and complexity of the course are student driven so all students are challenged.

Scratch Basics: Level 2 (Grades: 3-6)

Upon completion of this class, students will have a solid understanding of programming with Scratch. They will be able to integrate different coding techniques to create unique and interesting programs. Students will start to combine all aspects of Scratch to create advanced level programs and they will be able to debug and modify other programs already created. The pace and complexity is student driven to ensure challenging and exciting material.

Intermediate Scratch: Level 3 (Grades: 5-9)

After completion of this class, students will know all available operators in Scratch and be able to code objects to do what they want. The purpose of the class is to learn high level concepts such as objects, conditions, loops, if statements, variables, functions, and arrays in a fun and interactive environment. Students will learn how to make games and use documentation as well as innovation to reverse engineer popular retro games.


Roblox

Overview

Roblox is an online environment filled with different forms of games that allow you to collaborate with others from around the world. Roblox Studio is a development program developed by Roblox offering an assortment of coding and building tools for developing games for Roblox for all levels. Once students create their own worlds, they enhance the features with different coding techniques. They can then share their creation with friends.

Timeline

Roblox courses meet 1-2 times a week for 8 weeks and can start anytime throughout the year. These courses are done in groups or individually.

 **Grades: 1-8**

Roblox Basics: Level 1 (Grades: 1-4)

After completion of this class, students will be able to create their own world in ROBLOX. They will learn how to create and modify parts as well as terrains. They will integrate basic coding principles such as if-statements, variables, functions, and assignment of properties. The world created can be shared with friends to play together online.

Roblox Concepts: Level 2 (Grades: 3-8)


After completion of this class, students will be able to create their own world in ROBLOX. They will learn all of the basic concepts and add additional levels of difficulty and coding concepts. Students will master variables, functions and plug-ins. They will use the animation tool and integrate it with booleans and conditional-loop coding concepts. Continuation of this course will allow students to master additional coding-loops and replication concepts to allow for an advanced world creation. The world created can be shared with friends to play together online.

Overview

Code.org is an online learning platform that has a built-in tool for application development. It uses block level programming as well as text based code. The primary language is JavaScript, as it is a more forgiving programming language, but the syntax is the same as with other programming languages. The app lab within code.org will allow you to download your own code and show it off on any smart device.

Timeline

App Development courses meet twice a week for 12 weeks and can start anytime throughout the year. These courses are done in groups or individually.

 **Grades: 7-12**

App Development: Level 1 (Grades: 7-10)

Students will learn how to make a user interface (UI) and program interactive pages and objects. They explore how variables, conditionals, and functions allow for the design of increasingly complex apps. Then students will build their own app to share with friends to help them make rational decisions. While being exposed to a true programming language, students will expand their skills to create their own apps or games of their choosing.

App Development: Level 2 (Grades: 8-11)

This course introduces lists, loops, and traversals. Students will explore the way these mechanisms can be used to build apps that store and process large amounts of information. Students will also learn to program with the data library in App Lab and complete a hackathon project at the end of the unit where they can design a program about any topic of their choosing.

Intermediate Scratch: Level 3 (Grades: 9-12)

This course is a quick exploration of how computer scientists design algorithms to solve problems and how they analyze the speed of different algorithms. Students will learn about the concept of algorithmic efficiency through a variety of hands-on activities. They will also learn how algorithmic efficiency is being applied in modern computing. Additionally, this unit introduces parameters, return, and libraries. Students will be able to apply these concepts to build new kinds of apps as well as libraries of code that they can share with their classmates. They will end the course by designing a library of functions around any topic of their choosing.


Advanced Python

Overview

Python is an interpreted, object-oriented, advanced programming language. Python is a commonly used programming language because of its high-level built-in data structures and simple, easy to learn syntax. Python is known for its ease of program creation and shorter, easier to follow code when compared to Java.

Timeline

Python courses meet twice a week for 12 weeks and can start anytime throughout the year. These courses are done in groups or individually.

 **Grades: 9-12**

Python: Level 1 (Grades: 9-12)

In this advanced lesson plan, students will be introduced to Python as they complete engaging lessons, solve challenging puzzles, and build their own games. This course will help them adapt to the additional challenges of text-based syntax. Students who successfully complete this lesson plan will demonstrate a strong mastery of Python syntax, as well as the ability to creatively program games/other projects and debug their own code.


Advanced Java

Overview

Java is a class-based, object-oriented programming language that is known for its ability to run anywhere. It is more complex than Python and code is typically longer for a similar program. However, its few dependencies allow it to run without being recompiled, which allows its classes to be reused and called upon anytime, anywhere. Java is known for its quick running time which enables more complex programs.

Timeline

Java courses meet twice a week for 12 weeks and can start anytime throughout the year. These courses are done in groups or individually.

 **Grades: 9-12**

Java: Level 1 (Grades: 9-12)

In this advanced lesson plan, students will be introduced to Java as they learn best coding practices through game development. Students will learn about the complex yet intuitive challenges associated with text based coding. Students who successfully complete this lesson plan will demonstrate a strong mastery of Java syntax, as well as the ability to creatively program games and reusable classes.


AP Coding

Overview

AP Computer Science courses are introductory college-level computer science courses. Students cultivate their understanding of coding through analyzing, writing, and testing code as they explore concepts like modularity, variables, and control structures.

Timeline

AP courses start in June and continue for one year until the AP exam in May. Courses are a mixture of lectures and individual recitations.

 **Grades: 9-12**

AP Computer Science A (Grades: 9-12)

AP Computer Science A is a programming class that emphasizes object-oriented programming methodology with a particular focus on problem solving and algorithm development. The course also provides an overview of data structures and abstraction. The course teaches students to code using Java and to create interactive programs. Students focus on designing a program, developing the algorithms it needs, and writing code to implement them. They learn about testing program code and correcting errors as well as documenting and explaining how program code works.



History & Human- nities

AP History & Humanities

Modern AP World History

Modern AP World History is an introductory college-level course that explores global history since 1200 CE. The course places particular emphasis on analyzing primary documents in order to understand how local, regional, and global events influenced the development of civilizations and created global interconnectedness. Students learn to analyze and contextualize primary sources, and read deeply into secondary sources in order to write about historical events. This course is traditionally offered as homework help.

AP US History

AP US History is an introductory college-level course that explores the historical development of the United States from 1492 to the present day. Student learn to interpret historical changes through the analysis of secondary and primary sources in order to understand how the complex web of political, economic, social, religious, and cultural events created the United States. Students also learn how to write like historians by interpreting primary sources.

AP Microeconomics

AP Microeconomics is an introductory college-level course that focuses on the principles of economics that apply to the functions of individual economic decision-makers. The course also develops students' familiarity with the operation of product and factor markets, distributions of income, market failure, and the role of government in promoting greater efficiency and equity in the economy. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

AP Macroeconomics

AP Macroeconomics is an introductory college-level course that focuses on the principles that apply to an economic system as a whole. The course places particular emphasis on the study of national income and price-level determination; it also develops students' familiarity with economic performance measures, the financial sector, stabilization policies, economic growth, and international economics. Students learn to use graphs, charts, and data to analyze, describe, and explain economic concepts.

AP History & Humanities

AP Psychology

The AP Psychology course introduces students to the systematic and scientific study of human behavior and mental processes. While considering the psychologists and studies that have shaped the field, students explore and apply psychological theories, key concepts, and phenomena associated with such topics as the biological bases of behavior, sensation and perception, learning and cognition, motivation, developmental psychology, testing and individual differences, treatment of abnormal behavior, and social psychology. Throughout the course, students employ psychological research methods, including ethical considerations as they use the scientific method, effectively communicate ideas, and evaluate claims and evidence.

AP Sciences

AP Physics

AP Physics 1 is an algebra-based, introductory college-level physics course. Students cultivate their understanding of physics through classroom study, in-class activity, and hands-on, inquiry-based laboratory work as they explore concepts like systems, fields, force interactions, change, conservation, and waves.

AP Biology

The AP Biology course is organized into commonly taught units of study that provide a suggested sequence for the course. These units comprise the content and skills colleges and universities typically expect students to master to qualify for college credit and/or placement. This content is grounded in big ideas, which are crosscutting concepts that build conceptual understanding and spiral throughout the course. Topics cover evolution, energetics, information storage and transmission, and systems interactions.

Standardized

Test Prep

Elementary, Middle, High School Entrance Exams

Overview

School entrance exams are required for many students to gain admittance to private schools. Students learn how to maximize their scores by strengthening core concepts and developing test-taking skills.

Timeline

Typically, students start preparing 3-4 months before their exam.

 **Grades: 4-11**

ISEE

The ISEE is a standardized test that assesses a candidates' skills in Reading Comprehension, Verbal Reasoning, Quantitative Reasoning, and Math Achievement. It is typically required as part of an application to a private or exam school. There are three levels. Courses focus on math and verbal topics, as well as test taking strategies and time management.

SSAT

The SSAT is a standardized test that assesses a candidates' skills in Quantitative Skills, Verbal Abilities, Reading Comprehension, and Writing. It is typically required as part of an application to a private or exam school. Courses focus on math and verbal topics, as well as test taking strategies and time management.

Undergraduate

Overview

Standardized test prep courses prepare students for the most commonly required college entrance exams. Students develop content knowledge and skills in preparation for the requirements of the exam and, in the process, acquire strategies that allow them to deftly handle the test-taking environment.

Timeline

Typically students start in Test Prep Math and/or English and transition to Standardized Test Prep 2-3 months before their exam.

 **Grades: 10-12**

SAT: Math and Verbal

The SAT Course is divided into math and verbal, allowing students to hone their skills in each of these disciplines. Students build content knowledge and develop the test-taking skills necessary for a timed exam. They also learn how to address a diverse range of verbal and mathematical problems. Students are offered multiple opportunities to evaluate their progress by regularly taking full-length mock exams.

ACT: Math, Verbal, and Science

The ACT Course is divided into math, verbal, and science, allowing students to hone their skills in each of these disciplines. Students build content knowledge and develop the test-taking skills necessary for a timed exam. They also learn how to address a diverse range of verbal and mathematical problems. Students are offered multiple opportunities to evaluate their progress by regularly taking full-length mock exams.

Undergraduate

IELTS

The IELTS course prepares students for a university-level English proficiency exam. Throughout the course, students learn skills in listening, writing, reading comprehension, and speaking in English. Students are also prepared with strategies that allow them to understand the requirements of the exam graders.

TOEFL

The TOEFL course prepares students for a university-level English proficiency exam. Throughout the course, students learn skills in listening, writing, reading comprehension, and speaking in English. Students are also prepared with strategies that allow them to understand the requirements of the exam graders.

Duolingo English Test

The Duolingo English Test course offers an alternative English university entrance exam for students who prefer a more flexible testing schedule. The course focuses on the basic elements of written and oral English language expression. Students are also given the opportunity to demonstrate general English writing skills.

Graduate

Overview

Graduate test prep courses prepare students for graduate and professional school entrance examinations. Students are exposed to graduate level verbal and mathematical content, and are given the skills to address these requirements in a test-taking environment.

Timeline

Graduate level test prep courses range in times based on projected test date.



**Grades:
Undergraduate
& beyond**

GRE

The GRE course is divided into math and verbal classes in order to best build students' skills in each of these disciplines. Students are exposed to each of the questions and problems they are likely to encounter on the exam and given test-taking strategies to make the most of their content knowledge.

GMAT

The GMAT course prepares students for the admission exam of graduate management programs, such as the MBA. Students are exposed to analytical, writing, quantitative, verbal, and reading skills during the course and practice each of the questions and problems they are likely to encounter on the exam. Additional focus is given to test-taking strategies to make the most of their content knowledge.

LSAT

The LSAT course prepares students for the Law School Entrance exam. Students are prepared through a variety of reading comprehension, analytical, and argumentative tasks, and are offered the opportunity to apply those skills in practice exams. Students are also given test-taking strategies to make the most of their content knowledge.

A blue-tinted photograph of a woman leaning over a desk, smiling and pointing at a laptop screen. A young woman with long hair is sitting at the desk, looking at the laptop with a thoughtful expression, her hand resting on her chin. The background shows a bookshelf and a window.

Home- work Help

Homework Help

Overview

Zinkerz has tutors available to help with all courses. They can help with homework, studying for exams, long term projects and papers, and more!

Timeline

As needed

 **Grades: 5-12**



RISE TO YOUR POTENTIAL

zinkerz.com