

*Please review the Spring 2021 Class Schedule for age ranges of individual classes.*

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**THE 46: THE UNITED STATES PRESIDENTS** (Kimber) (8+) *History, Social Studies, Government*

Quirky stories, games, fascinating facts... this interesting class will explore the lighter, more human (and humane) side of American presidents through time. Many American presidents are known for their significant achievements in guiding our country's destiny, while others are not as well known, and some... maybe we wish we didn't know at all. All of our presidents though have an important place in American history. What roles have presidents played in the shaping of our nation? Can you name the parade of presidents in order? Fun activities and cool projects will have us delving into the biographies, contributions and even failures, of our presidents- and the historic time periods during their terms. And let's not forget the First Ladies. Along the way, we will also look at the qualities and characteristics that make a great leader who is able to do the job successfully, to really guide and support our country.

And boy, oh, boy... the stories, from secrets and scandals to the outright silliness. Yes, there were Generals, heroes and monumental shift changers but... did you know that one of our presidents was possibly murdered...by cherries? Or that another president donated his entire White House salary to charity? We've even had a president who had a cursing parrot and yet another who had 2 alligators that roamed the lawns of the White House. I can't wait to hear more!

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**ADVANCED CHESS CLUB** (Josh) (10+) *Strategy & Critical Analysis*

Played by everyone from nobility to peasants for over a thousand years, chess is a game of strategy with a fascinating history. In this class, students will hone in on the more advanced nuances of the game. We'll examine various opening strategies, as well as powerful end game moves. We'll study board control and piece management. Chess is a game with many layers and endless ways to improve, always giving us something to work on while having a lot of fun!

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**ADVENTURES IN ART** (Linda) (5-9) *Art*

Experimenting with materials and techniques, letting our imaginations run wild, and enjoying the process is what this class is all about. Students will play with creating rhythm through repetition, using line and color to create a feeling of movement and emotion, and employing texture as a design element. We will monoprint, repousse, collage, paint with credit cards, play with sculpey, shrinky dink, and zendoodle our way to masterpieces of silliness and self-expression.

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**ALGEBRA** (Semester 2 of 2) (Joe) (11+) *Math*

Prerequisite = Pre-algebra or equivalent

In Algebra students will really begin to discover some of the exciting things math can allow them to do. Students will begin using all the arithmetic skills they've been developing over the past few years to begin solving problems that would otherwise seem impossible. Algebra helps students develop problem-solving strategies and skills, and the ability to recognize, express and work with mathematical relationships.

*In this class we'll learn about:*

- Solving equations & inequalities
- Working with units
- Linear equations & graphs

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- Forms of linear equations
- Systems of equations
- Inequalities (systems & graphs)
- Functions
- Sequences
- Absolute value & piecewise functions
- Exponents & radicals
- Exponential growth & decay
- Quadratics: Multiplying & factoring
- Quadratic functions & equations

The two class meetings each week will be supplemented with ungraded out-of-class practice assignments. These assignments will be done online via Khan Academy. The out-of-class practice is important to student success, and although it is ungraded, the successful completion of it is required, and an essential part of the students' learning process.

Students who have taken this class will know how to solve problems!

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### **ALGEBRA 2** (Semester 2 of 2) (Joe) (12+) *Math*

Prerequisite = Geometry

In Algebra 2, we'll revisit and build upon the concepts we began exploring in Algebra 1. We'll be introduced to new concepts like logarithms and complex numbers. I'm looking forward to this class, I think we'll have a lot of fun.

*In this class we'll learn about:*

- Polynomial arithmetic
- Complex numbers
- Polynomial factorization
- Polynomial division
- Polynomial graphs
- Rational exponents and radicals
- Exponential models
- Logarithms
- Transformations of functions
- Equations with rational expressions and roots
- Trigonometry
- Modeling with functions
- Rational functions

Students who have taken this class will be better problem solvers!

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### **AMERICAN HISTORY THROUGH COOKING** (Bonnie) (8-10) *History, Math, Life Skills*

Teacher/Cook Bonnie knows her American History. I am thrilled to stir you through the timeline of America from Indigenous People to whatever food trend 2021 brings. We're going to have a tasty time, with the facts sticking to us like caramel. Each dish will tell a Nonfiction story.

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### **ANIMAL RESCUE!** (Brittany) (8+)

Dive into the exciting, brave and captivating world of animal rescue! This class will explore a variety of rescue stories and engage students in a mix of activities, investigation, creativity, and discussion. There is much to learn from and about our nonhuman animal friends!

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### **AUTHORS AS MENTORS 2** (Jessie) (7-9) *Literacy*

Back for a second round of amazing mentors to enjoy as we curiously dig to uncover their magic. This semester we will dive into books by Cythia Rylant, Grace Lin, Lane Smith, Carole Boston Weatherford and many more outstanding Authors as they lead us on a literary adventure this spring! Throughout this class, we will be inspired by various literary techniques. Each class, students will hear, analyze and discuss my favorite books and then students will put their writing skills to work as they try their hand at writing stories in these diverse styles! As we work, students will be gently coached in making their writing easier to read through following grammatical conventions such as punctuation, capitalization, word family spelling patterns, and more! This class will inspire young writers to reach for the stars as we learn from literary supernovas!

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### **AVATAR THE LAST AIRBENDER** (Liz) (9+) *Social Studies*

One of the perks of quarantine has been the ability to binge watch a show. Avatar the Last Airbender has been one of those shows that many kids (and adults) have gobbled up. And in this class we will examine all the ways our world has influenced the world of the Avatar. Students will explore religions such as Buddhim and Shintoism, plot out the Hero's Journey, and how the Inuit and Chinese culture gave rise to some of the major landmarks in the show. In addition to cultural references we will look at how our physical world, as well as our animals played a role in the creation of the show. Students will also choose which elemental path they will follow and explore how this reflects on them as a person. While having watched the show is a plus we will be watching clips to refresh our memory and inform those who have not seen the show.

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### **BEYOND BORDERS & THE HISTORY OF HUMAN GEOGRAPHY** (Kimber) (8+) *History, Geography, Social Studies, Art*

Through fun activities, engaging stories and hands-on creative projects, students in this unique class will explore the fascinating story of people- where we came from, where we've settled, and how that influences our identity and the ways we see others. Combined with history and current events, students will compare maps from different time periods to current day, explore the geographic and cultural diversity of the nation, and gain a new perspective on our changing world— To look at all sides of geography, including cultural differences, is to understand how we connect.

With exciting projects designed to have students pondering, we'll delve into questions like... Why is the world split into countries? Why can't we all just live as one big group? How do boundaries and borders created from migration, geographic features, cultural differences, and even politics, influence people? What other changes affect the borders of our world? Of course, in our exploration of these puzzlers, we will create some of our own spectacular map, globe and cultural art. Perhaps we'll discover a way that geography can be more about the connections between us than it

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is about the borders that divide us.

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**BRAIN BUSTERS: GAMES, PUZZLES, AND BRAIN TEASERS** (Nathan) (5-7)

Welcome to Brain Teasers! School all day with no play, NO WAY!! Students will forget they are learning while soaking up knowledge and connecting with classmates! We will be playing a vast array of games that will stimulate critical thinking, general knowledge, teamwork, cooperation, and sportsmanship. We will dip our toes into core subjects like science and math while keeping the foot on the gas pedal of fun! Our activities will include trivia, super cool challenges, board and computer games, decks of cards, and more! Be ready to step outside of the box for a class that is sure to be full of learning and laughs!

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**CHESS CLUB** (Josh) (7+) *Strategy & Critical Analysis*

Played by everyone from nobility to peasants for over a thousand years, chess is a game of strategy with a fascinating history. We'll examine various opening strategies, as well as powerful end game moves. We'll study board control and piece management. Chess is a game with many layers and endless ways to improve, always giving us something to work on while having a lot of fun!

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**DEBATE: VOICES OF REASON** (Bonnie) (12+) *English, Research*

So much to argue. So many perspectives. Let's cut out the grey and pick a side. We'll play animated debate games and practice strategies to catch our opponents off guard. We're going to take it to the next step too....How do you build a case? How do you defend what seems like the undefendable? We're looking for and exposing loopholes.

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**DEEP DIVERS MATH** (Semester 2 of 2) (Joe) (9+) *Math*

Prerequisite = Math Mavericks or equivalent

This class is for upper-elementary students who want to make sure they're 100% complete on all grade-appropriate educational standards. This class will serve to prepare students for our Pre-algebra course. Deep Divers focuses on 5th and 6th grade math topics. In this class students will be honing and refining their basic arithmetic skills, with special emphasis on multi-digit multiplication, long division, fractions and decimals. We'll be introduced to exponents, percentages, roots, and other upper-elementary topics.

This is a two-semester multi-level class. That means that it begins in the Fall semester and continues the second semester, picking up from where we leave off at the end of first semester. Because it covers two conventional school years of material, many students will want to take this class twice. The advantage to this type of approach is that the material is presented during the first year and then reinforced the second year. It also gives students an opportunity to experience the class as both a novice, learning with more advanced students, and as a mentor, learning with and helping less advanced students. The general outline of the class is that 5th grade topics are covered first semester and 6th grade topics are covered second semester.

Following the successful completion of this class, students will be prepared to begin Pre-algebra.

Deep-diver Math could also be appropriate for students who wish to supplement their Pre-algebra or Algebra class with foundational review.

Students who have taken this class will believe that math can be fun!

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### **DISENFRANCHISED PEOPLE AND THEIR ALLIES** (Bonnie) (8+) *History, Social Studies, Life Skills*

This is a Living History Class. Each session, someone will Zoom in, in the role of someone we should know about, but don't. We're taking a hard and realistic look at the people America systematically ignores, in hopes that we will stop ignoring them. Allies of human rights' can show you how neutrality is violence. Lots of information on history and the law. A class for listeners.

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### **DIVIDE AND CONQUER** (Joe) (8+) *Math*

Once students have mastered multiplication, all sorts of opportunities present themselves. One of the most important doors that opens, is that division becomes accessible. Students who try to move forward into division before having their multiplication to 12x12 memorized, struggle a lot. But students who have mastered multiplication are ready to turn it around and divide. In this class we'll focus on long division and lots of practice. We'll use both fractional and decimal remainders and spend a lot of time seeing how they relate to each other. We'll learn about division, fractions, decimals and percents. Many of the concepts in this class overlap with pre-algebra concepts. This class is a good supplement to pre-algebra for students who want to be thoroughly prepared for the next level!

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### **DRAWING AND SKETCHING** (Tommy) (8+) *Art*

Having a strong respect and understanding of the process and fundamentals of drawing is essential to becoming a better artist. And what's more fundamental than pencil drawing? There are several styles of pencil drawing techniques. Whether kids want to create stylised or realistic pencil drawings, this class will take their skills to the next level!

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### **DUNGEONS AND DRAGONS** (Josh) (9+) *Creative Arts*

Embark on an epic adventure to save the princess!.. or find treasures of untold value... or maybe just become the ruler of the world. Dungeons & Dragons is a team-oriented role-playing game where students get to explore their individuality and creativity. We will take on alternative personas and work together to overcome challenges with a combination of strategy, teamwork, and imagination. On top of all that, we will get to work on our acting & writing skills while having a whole bunch of fun.

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### **ENGINEERS & ARCHITECTS: BUILDER'S PARADISE - BUILDING STYLES** (Linda) (8+) *Art, History*

Students will explore architecture throughout history, from the columns of ancient Greece to physics-defying skyscrapers. Inspired by the great architects of the world they will design and build their own architectural wonders including details from various eras such as ziggurats, temples, Byzantine domes, rose windows, flying buttresses and many more defining details and innovations from early human history to current trends.

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### **ESSAY AMELIORATION** (Bonnie) (10+) *English*

For true writing enthusiasts, who already have a handle on structure and appreciate the subtleties of language. This semester, the teacher will be talking less and watching students guide each other to experiment with their craft. Writers will be asked to model their own writing after varied writers' styles, as well as be given the go ahead to critique. There will be a lot of homework; class meets twice a week and they will need to stay on top of our community goals.

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**EXPANDING THE 6 TRAITS OF WRITING** (Brittany) (11+) *Writing*

This class will utilize the 6 traits— Ideas & Content, Organization, Voice, Word Choice, Sentence Fluency, and Conventions— to develop engaging, clear, and balanced pieces of writing. Students who have already had an introduction to the 6 traits will find this class to be an extension of what they've learned, and will have the opportunity to strengthen, build, and expand their writing skills in a meaningful way. Those who are new to the 6 traits are also welcome!

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**EXPRESS YOURSELF WRITER'S WORKSHOP** (Jessie) (5-7) *Literacy, Writing*

To support our study of *Self* while we reflect on our experiences over the past year, our youngest writers will learn to capture their fondest memories in pictures and words. Students will go from mark making to storytelling as they learn to think like authors who see life's everyday moments as reasons to pick up a pencil. Our youngest writers will explore the writing process: gathering ideas from our lives, getting our thoughts on the page, stretching our stories long and strong, making our writing readable and sharing our personal stories with the special people in our world. Word study sessions will encourage writers to use their brave spelling as we gain a command of sound patterns and sight words. We will grow our library while exploring the glorious connection between reading, writing and communicating.

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**FAMOUS AWARDS AND WINNERS: NOBEL PEACE TO GUINNESS WORLD BOOK** (Nathan) (9+)

Did you know that the longest case of the hiccups ever recorded is a 68 years spell involving around 430 million hiccups or that the most babies born of the same mother is 69 separate births! Have you ever heard of the Nobel Peace Prize? This prestigious worldwide award was first given to the person who started the Red Cross in 1901 and has been a highly respected and coveted award ever since. What may be the wildest thing about any of the records and awards we will investigate is that they were all earned or won by people just like you and I. Which begs the question: what record or award do you want to achieve and what is going to take for you to get there?

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**GEOMETRY** (Semester 2 of 2) (Joe) (12+) *Math*

Prerequisite = Algebra 1

Now that we've learned a little algebra, we can begin exploring some of the other amazing things Math can do. In Geometry we'll learn about lines and shapes and angles and their properties and relationships. We'll discover conjectures and learn about logic and proof. Students will learn about angle measurements, properties of parallel lines, triangles, circles and other polygons. Students will learn about similarity and congruence. Students will gain experience in graphing and working with the coordinate plane. We'll practice thinking and figuring analytically and look for ways to tie words and numbers and shapes and symbols together to describe concepts that are otherwise difficult to imagine, discovering along the way the power, and glimpsing the potential of symbolic language.

The two class meetings each week will be supplemented with ungraded out-of-class practice assignments. These assignments will be done online via Khan Academy. The out-of-class practice is important to student success, and although it is ungraded, the successful completion of it is required, and an essential part of the students' learning process.

*In this class we'll learn about:*

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- Transformations
- Congruence
- Similarity
- Right triangles & trigonometry
- Solid geometry
- Analytic geometry
- Circles

Students who have taken this class will be more logical!

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#### **GHOSTWRITERS AND WORDSMITHS: A CREATIVE WRITER'S LOUNGE** (Brittany) (9+) *Writing*

This class will explore various forms of writing with a focus on creating compelling content. Have you ever wondered what a ghostwriter is, or what it would be like to write someone else's story? How about writing a speech? Or a memoir? Have you ever written a story in second person point of view? Do you know what flash fiction is? Join this class to engage the experimental writer in you!

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#### **GOJU RYU KARATE** (Sensei Mallica) (5+) *Physical Education*

Discipline, attentiveness, and fun are our goals! Your child will practice exercises that will develop physical strength, agility, and mental capacity – through running, jumping, and playing. Karate promotes healthy physical and mental activities for your child, and is fun because they are learning through play and discipline.

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#### **HAPPY LITTLE TREES: A TRIBUTE TO BOB ROSS** (Kimber) (8+) *Art, Habitats, Environment Protection*

Happy Little Trees... Happy Little Clouds... Students in this lighthearted creative class will use Bob Ross, along with other contemporary artists, as an inspiration and jumping off point to create a wide variety of trees and landscape paintings and sculptures. Bob Ross, best known as the positive, soft spoken man who painted happy clouds, mountains and trees in the Joy of Painting program on PBS, strongly emphasized that there are no mistakes in art (often repeated by Kimber)... only "happy little accidents". Even today, his program is still the most recognized, most watched TV art show in history. Students will watch and experiment with Bob Ross' unique style of oil painting and wet-on-wet techniques, listen to his sweet encouragement and be reminded that "with enough practice anything is possible, it's our world so we can sculpt anything we envision". With the emphasis on the joy of process and going easy on themselves, students will also work on collage, clay, sculpture, acrylic paintings, and other multimedia projects, creating a forest of lovely creations!

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#### **HEART & SOUL FOOD: DELICIOUS NARRATIVES AND STORYTELLING** (Kimber) (8+) *Literature, Speech-Storytelling, Art*

After this challenging past year, this is just the class... exploring brilliant, short, human interest stories and pieces of literature, fiction and non-fiction narratives, that impact our lives and make us feel good! We will also listen to well-crafted MOTH, Story Slam and CHICKEN SOUPish stories, that have us pondering, discovering the best, sunny-side up parts of humanity- and tug on our heartstrings long after they're told. How can we tell a story to have people really listening... really feeling? Students will also explore the important craft, and power, of storytelling. Developed and used purposefully, this telling of tales can contribute to inclusion and connection, build confidence, and even bring about change. These funny, joyful, even poignant, thought-provoking descriptions of life's pivotal moments, realizations, growing lessons and "aha" moments, will then inspire us to create supporting art pieces. Get ready to weave a yarn!

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### **'HERE YE, HERE YE' - ADVICE COLUMNS AND ARTICLES** (Bonnie) (8-10) *English*

A beginning class for Problem/Solution style essay writing. Only no essays - We're doing it: short, sweet, and fun style. Think Hints from Heloise or American Girl Book style. You tell us your problem in words, we brainstorm ways to fix it, then write it out in an attention getting way.

We'll also read Non-Fiction articles from The Week Junior magazine that highlight the latest innovations created by kids and work backwards, brainstorming what the problem was that their idea fixed.

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### **HEROES OF PEACE, DEFENDERS OF DIVERSITY** (Kimber) (8+) *History, Art, Current Events, Tolerance*

In this powerful and unique class, students will be introduced to a variety of exceptional contemporary artists who are, through a variety of mediums, highlighting diversity, and raising awareness about the necessity, even urgency, for fairness, respect and dignity. Through this art activism, along with discussion of current events and the stories of other "peace warriors", students will explore the importance of promoting equal rights for all people and honoring differences in their own community- and around the world. Students will then create their own expressive pieces about issues like Black Lives Matter, LGBTQ+ rights, and other current inequity concerns. What can we ourselves do, individually and as a group of people, to make sure that we are continuously supporting important issues in our daily lives? What actions can we take to truly make a difference Students will delve into new ways to think- and use their incredible fresh imaginations to find ways to inform, visually present information and ideas, create beautiful art- and help protect and defend everyone's rights.

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### **HISTORY DETECTIVES: NATIONAL PARKS** (Liz) (11+) *History*

From the gushing geysers of Yellowstone to the marshy lands of the Everglades to the rocky peaks of the Great Smoky Mountains the National Parks have so much to teach us. In this class students will explore the National park system from its beginnings up to today and the important ecological work being done in them. Students will create their own tourbook so visitors will know all about the flora, fauna, and attractions at the parks. In addition we will be participating in online junior park ranger programs.

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### **HISTORY GAME: THE 1900'S** (Joe) (8+) *History, Social Studies*

The History Game gives students an opportunity to learn about important people, events and historical trends through gameplay. The game revolves around a collection of date/event memory cards (now digitized for online/remote learning and gameplay) - students can acquire date cards by accurately connecting dates with events - and then dive deep through decade-specific questions and wildcards! Once a date card is acquired, the player will have opportunities to score points by asking other students questions related to the card's time period.

Outside-of-class practice is encouraged through at-home online gameplay, or printed practice sheets which are available via the google classroom. Plus our on-going collaborative google slideshows give students the chance to exercise their creative sides and research skills.

This semester we'll be looking at 19th century World History.

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### **HOW TO BE A PERFECT STRANGER** (Liz) (10+) *Social Studies*

When heading to a funeral do you reach for a black outfit or white? Do the weddings you attend last a few hours or a few days? Did cultures and religions have different rules and sometimes navigating them can be intimidating. In this

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class students will learn about some different religions and the way they influence and are influenced by their cultures. We will create a guidebook for ourselves to help us as we journey along. We will also be speaking with people from different faith traditions to go beyond the page and get into what their faith means to them.

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**THE HUMAN BODY: VIRUSES** (Linda) (8+) *Science, Health, Social Studies*

The Pandemic has been a scary and tumultuous time for all of us, but understanding the facts about how and why it is happening can help. We will explore some very important essential questions that will shine the light of knowledge on a dark and frightening subject such as “what is a virus?,” “what happens to my body during a viral infection?,” and “how does my immune system fight the infection?”. By looking back at past epidemics and pandemics we will consider the responses that were effective in fighting it as a society and those factors that may have helped it spread. Knowledge is power and in a world of conflicting information having a deeper grasp of the science involved will give our kids the tools to confidently navigate through the mire of misinformation, opinions and “alternative facts”.

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**HUMANS AND THE HUMAN BODY** (Nathan) (5-7) *Science*

Heads, shoulders, knees, and toes! Did you know that every single part of your body has a name and a purpose? Our bodies are filled with incredible features that have allowed us to become the dominant species on a planet with an estimated 8.7 million different life forms vying for the top spot. How many bones are in the human body? What else do we have in there? From healing itself to growing specialized tools, we are full of magnificent surprises that will blow your mind! This semester we will take a close look at the human body and see how it works and what that has meant for our species as a whole.

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**THE HUNGER GAMES** (Josh) (12+) *English, Literature*

In this class, students will read *The Hunger Games* and sequels. Examining and analyzing a variety of complicated ethical quandaries within. Does anyone truly win in a war? Do entertainment and media have too much influence on our culture? What dangers can come from a zealous desire for power? Does absolute power corrupt absolutely? How can good intentions be used to manipulate? These questions and more will be discussed as they become relevant throughout our reading experience.\*\*\*

**\*\*\*Note to parents: this book contains violent subject matter in order to explore unpleasant facets of society.**

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**THE IMPENDING TECHNOLOGICAL REVOLUTION** (Josh) (8+) *Social Studies, Science*

From factory robots to self-driving cars to even artificial consciousness. How has technology shaped our lives, and what can we expect going forward? As artificial intelligence becomes more and more advanced, how do we know if it's still artificial? Technology is fascinating, and the ways in which it shapes our society is still in its infancy. In this class, we will learn about the history of technology, as well as better understanding the ways in which it will continue to shape our reality.

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**INTERPRETING & CONVEYING THE WRITTEN WORD** (Brittany) (8+) *Writing*

In order to be a strong writer it is important to learn how to interpret other pieces of writing. This class will take a look at various forms of writing and engage in exercises and discussion to practice and strengthen our interpretation and analysis skills. Students will also explore their own writing in relation to the works that we are interpreting.

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**JOURNEY THROUGH A BOOK: *THE GRAVEYARD BOOK*** (Liz) (9-11) *Literature*

Come join us as we read a retelling of the classic story *The Jungle Book*. In this new twist instead of running away to a jungle our main character runs away to a graveyard. Here he will meet friendly ghosts, a helpful but aloof vampire, and mysterious Grey Lady. We follow the character of Bod as he grows up in the graveyard. The book becomes a series of short adventures where Bod gets pulled into hell, runs away to a pawn shop and gets captured, and attends a parade of the dead that only happens every 80 years. As a class we will also read the original *Jungle Book* and students will compare and contrast these two versions. Students will also create a reading journal to take notes, write summaries, and create character sheets.

\*Please note that this story does involve ghosts and ghouls and vampires. The story does start off with the murder of the main characters family and the assassin will pursue the boy throughout the book.

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**JOURNEYS: FREEDOM OF THE PRESS - HISTORICAL NEWS STORIES THAT EXPOSED TRUTH OR LIES** (Bonnie) (11+) *History, English*

It's our First Amendment, Freedom of the Press. And, is so very important. The Court of Public Opinion has been used to start revolutions! Expect two academic filled hours of reading, debating, and writing, *and* learning about the American liars and truth tellers, whose words cannot be erased. We'll be writing our own lies and truths, and see what kind of things we can shake-up.

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**LAB DABLERS: SPACE, AIR, AND FLIGHT** (Nathan) (5-9) *Science*

The science of flight, space exploration, and the chemical makeup of the universe are all on the table in this science class! Our exploration this semester will take us from the first flights to Sir Isaac Newton, from the planets to distant galaxies, all while making sure to pay close attention to the specific forces, laws of motion, and the chemical signatures involved in each. We will be using a combination of science and art to bring these concepts and the people who discovered and researched each to life.

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**LIFE ON THE MOUNTAIN** (Kara) (8+) *Outdoor Education, Sustainability, Culture*

How did people survive life on the Mountain 500 years ago and how do people survive living outside today? In this class, students will learn how to live sustainably on a mountain. Students will acquire orienteering, fire ecology, and ethnobotany skills that will help them lead a more sustainable life. In addition to sustainable living skills, the students will also become Leave No Trace certified and be able to teach others the 7 leave no trace principles in being a steward of the land. The end of the semester culmination event will be an overnight stay where the students will be able to demonstrate their new-found knowledge. More information on the events to come.

Want to hear a joke about a mountain? Nah, you'll never get over it.

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**MASTER OF THE TABLE** (Josh) (9+) *Strategy & Critical Analysis*

Strategy is at the heart of every decision we make, so why not be a tactician!? This class will engage students in a variety of strategic card & board games, allowing them to hone their ability to critically analyze all different kinds of situations and make tactful decisions. Students will learn lessons from Sun Tzu's "The Art of War," which will serve as a backdrop for all of our strategic decisions. From reading our opponents in Poker to dominating the world in Risk, there is an abundance of skills to explore.

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**MATH MAVERICKS** (Semester 2 of 2) (Joe) (7-9) *Math*

Prerequisite = Multiplication to 10x10

Math Mavericks focuses on 3rd and 4th grade math topics. In this class students will be honing their basic arithmetic skills. We'll cover the basics of written calculation: addition (stacked), subtraction (stacked with borrowing and other strategies), multiplication (the vertical algorithm and alternatives), and long division. We'll be introduced to fractions and decimals and we'll explore other mid-elementary concepts.

This is a two-semester multi-level class. That means that it begins in the Fall semester and continues the second semester, picking up from where we leave off at the end of first semester. Because it covers two conventional school years of material, most students will want to take this class twice. The advantage to this type of approach is that the material is presented during the first year and then reinforced the second year. It also gives students an opportunity to experience the class as both a novice, learning with more advanced students, and as a mentor, learning with and helping less advanced students. The general outline of the class is that 3rd grade topics are covered first semester and 4th grade topics are covered second semester.

We'll cover a certain amount of material in class each week, however students are welcome to work at their own pace. Students who want to work ahead will have access to advanced practice sheets, and students who want to review or work at a slower pace can do that as well. I'm gradually building a library of explanatory videos, so students working on non-current practice materials, will often have access to video examples and guidance.

Students who have taken this class will believe that math can be fun!

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**MATHLETES** (Shirley) (6-7) *Math*

Welcome to Mathletes where our focuses are on addition, subtraction, and multiplication. We will cover double digit addition, double digit subtraction, mad minute math, crazy multiplication, fraction fundamentals, shapes, graphs, place values, and more. The fun never ends and neither does the ability to problem solve by figuring out the solution. Can't wait to see you in class!

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**MENTAL MATH 2** (Joe) (8+) *Math, Problem Solving*

Prerequisite = multiplication to 12 x 12

Beginning to Intermediate Multiplication - plus division and advanced Addition and Subtraction.

This class focuses on developing our analytical thinking through mental computation and memorization. We'll focus primarily on arithmetical operations - building on skills developed in Mental Math 1. We'll learn methods, tactics, and techniques for multiplication, and also learn about Squares, Factors, Division, and Fractions. We'll practice holding numbers in our heads while we do two, three and four-step problems. We'll learn to parse problems and look for patterns to help us derive algorithmic methods of solution.

This class uses a collection of custom designed numbered game cards to help make learning fun. These cards are now available for online play and at-home practice. Check them out here:

<https://www.realmacademy.com/joe/numbercards/index.html>

*Please review the Spring 2021 Class Schedule for age ranges of individual classes.*

Students who have taken this class will be able to think better!

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### **MENTAL MATH 3** (Joe) (10+) *Math, Problem Solving*

Prerequisite = Mental Math 2, or equivalent

This one's for the all-stars. Students who have been developing their mental math skills for a few years will further develop their abilities in two and three digit multiplication and division. We'll also be working with fractions and percentages, and how to develop shortcuts and tricks of our own. We'll practice squaring numbers up to 100, and see if we can find ways to derive square roots. Each week we'll look for patterns and relationships within number sequences, and consider what insights those patterns can offer.

This class uses a collection of custom designed numbered game cards to help make learning fun. These cards are now available for online play and at-home practice. Check them out here:

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### **MENTAL MATH 4** (Joe) (10+) *Math*

Prerequisite = Mental Math 3, or equivalent

This one's for the super-stars. Students who have been developing their mental math skills for a significant amount of time will further develop their abilities in advanced multiplication, division, and working with fractions and percentages. Students will develop shortcuts and tricks of their own, and we'll see how far we can go. This class will move into the unknown as we develop our abilities beyond the conventional methods!

This class uses a collection of custom designed numbered game cards to help make learning fun. These cards are now available for online play and at-home practice. Check them out here:

<https://www.realmacademy.com/joe/numbercards/index.html>

Students who have taken this class will be able to think better!

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### **MESOAMERICAN CIVILIZATIONS** (Liz) (8+) *History, Art*

From the Olmec Civilization with its grand pyramids to the Aztec Empire which boasted a population of 5 million the Mesomaerican empires may not be what you think. Unfortunately so much of our information about these glorious emirates comes from those who conquered them. But in this class we will try to get as close to the source as we can examining art works, codices, and first hand accounts to get a better understanding. Students will write examinations on art works, create their own works of art in the style of the regions, and create a timeline of major events.

### **MIDDLE AGE ASIA: SAMURAI, BUDDHISM, AND THE SILK ROAD** (Linda) (8+) *Social Studies, Art, Science, History*

While knights crusade in a Europe dominated by the Catholic church, Asia experiences a time of invention and progress. This class explores the culture, art, philosophy, science and politics of the dynasties of China, the

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Mongolian empire, and feudal Japan. Innovations emerged such as gunpowder, paper, and moveable type that still have a profound effect on people today. How did life outside of the control of the Catholic church compare where philosophies such as Buddhism, Taoism, and Confucianism dominated rather than religion? While Ghengis Khan and his consolidated nomadic armies amassed an enormous kingdom through brutal warfare; how did ceramic arts, pagoda temple architecture, zen paintings, haiku poetry, and tea ceremonies bring beauty to peoples lives? What other examples of “beauty” such as foot-binding are more controversial? How did the samurai code of honor, known as bushido, become the basic code of conduct for much of Japanese society? These questions and more are the subjects of discussion and inspiration for projects in this class as we explore Asia in the Middle Ages.

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**MINI - MATHLETES (Nathan) (5-6) Math**

This class will cover a variety of concepts in the K-2nd grade math range including addition, subtraction, multiplication, division, money, time, and an introduction to fractions. We will be using art, science, games, and contests along with worksheets and flashcards to practice. Our goal in this class is to fortify existing skill sets within each student as well as introduce new concepts for them to practice that will support them in future math classes.

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**MY SAGA: A JOURNAL OF PERSONAL ESSAYS (Brittany) (8+)**

This class will explore the art of the personal essay. A personal essay serves to describe an important lesson gathered from a writer’s life experiences. It is a piece of creative nonfiction that often describes a significant event from the first-person perspective. Any moment in your life that sparked growth or changed you in some way can be written about in a personal essay. Students will learn about the elements of this form of writing and we will read and discuss examples. We will also do exercises and activities that stimulate their own personal essay writing.

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**NOVEL-TEA: THE GIVER QUARTET (Liz) (11+) Literature**

The Giver Quartet draws the reader into a dystopian future unlike any they have seen before. Here is a future that on the surface seems almost perfect, but as we progress through the series we will uncover the cracks. Students will follow the character of Jonas as his world unfolds in unexpected ways. Along the way we will ask ourselves questions of memories, destiny, forgiveness, and loss. Students will read all four books of the quartet over the semester and keep a journal so we can plot the ways these books weave together.

\*A note about these books. While appropriate for this age group I do want to let parents know that these books deal with sensitive subjects. Some of these include death of main characters, euthanasia of the elderly and the very young, young people giving birth, and mutilation. If you have any other questions about the book please contact Liz and she will answer any questions you have. (They are some of her favorite books)

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**ORDER IN THE COURT: FAMOUS LIFE ALTERING CASES (Josh) (8+) Social Studies, History**

Justice is a core tenant of our society, but what is justice? In this class, students will learn about law & justice from both a practical and philosophical standpoint. We will engage in role-playing the various characters in a courtroom, participating in mock trials and debates. Not only will everyone learn about how the court system works, but we will also experience its efficiencies and shortcomings. On top of all of that, we will learn and re-enact famous court cases in history. Are we really innocent until proven guilty?

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**THE PATH OF NON-VIOLENCE (Jessie) (8-10) History, Humanities, Peace Literacy**

The Path to Nonviolence is a class close to my heart - it has been designed to awaken students’ minds to the

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possibilities of thinking outside the 'might makes right' paradigm, allowing them to view global human rights as a part of their own cause, not something distinct from their own personal life experience. Through exploring the practices taught by the founders and practitioners of nonviolence teaches the view of history from those who have worked for radical social change and fighting injustices; it promotes the values of constructive conflict prevention and resolution as well as nonviolent resistance and direct social action. Studying the Path of Nonviolence gives students the tools to constructively deal with the problems they encounter on both a personal and worldly level, as well as helping them to understand their responsibility for elevating the collective human experience. Here is to a better tomorrow!

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**POETS, DRAMATISTS, RAPPERS AND MINSTRELS** (Brittany) (8+) *Writing*

If you like the idea of exploring different forms of creative and dramatic writing, this class is for you! Are you interested in song writing, poetry, or writing your own rap? Do you know what a monologue and a soliloquy are? This class will give students the opportunity to engage in experimental writing and let their creativity soar.

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**PRE-ALGEBRA** (Semester 2 of 2) (Joe) (10+) *Math*

Prerequisite = Deep Divers Math or equivalent

In Pre-Algebra, students who have shown expertise in multiplication and division and have developed a degree of comfort in working with fractions and decimals, will have an opportunity to acquire a thorough understanding, familiarity and expertise in advanced arithmetical operations.

Students will practice using fractions, decimals and percentages. Students will explore concepts involving exponents and roots, factorization, primes, divisors, variables, negative numbers, equations, inequalities, ratios and proportions, unit conversions, and basic geometry (angles, perimeter, area, triangles, and quadrilaterals). New topics will be introduced each week and will be supplemented and reinforced through practice and gameplay. This class will continue during the second semester.

The two class meetings each week will be supplemented with ungraded out-of-class practice assignments. These assignments will be done online via Khan Academy. The out-of-class practice is important to student success, and although it is ungraded, the successful completion of it is required, and an essential part of the students' learning process.

Following the successful completion of this class, students will be prepared to begin Algebra 1.

Pre-algebra could also be appropriate for students who wish to supplement their Algebra or Geometry class with foundational review.

Students who have taken this class will have a better understanding of how math works!

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**SCIENCE AND CULTURE IN THE AGE OF ENLIGHTENMENT** (Linda) (8+) *Science, Art, History*

The age of Enlightenment, also known as the Age of Reason, in the seventeenth and eighteenth centuries is a time of invention, philosophy, rational thought, questioning authority, and revolution. The scientific revolution begins with the publication in 1543 of Nicolaus Copernicus's *De revolutionibus orbium coelestium* (On the Revolutions of the Heavenly Spheres) and includes Isaac Newton's laws of motion, Johannes Kepler and his Laws of Planetary Motion,

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and Robert Hooke and his (Hooke's) Law. Meanwhile, John Locke and Voltaire philosophized, while Rembrandt, Rubens, and Velazquez painted to a backdrop of baroque music, and Captain Cook sailed the world. This was a time when everything was questioned and society embraced the idea that everything could be improved through rational thought. Students will embrace their own Age of Enlightenment as we recreate experiments, compare and contrast philosophies, and create works of art inspired by the masters.

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**THE SCIENCE OF ANCESTRY** (Linda) (8+) *Science*

What is a gene and where is it? Why do I have my dad's eyes and my mom's nose? Your DNA holds the instructions for the construction of every protein of every cell in your body. By studying our family histories we can often predict our own health risks and how to reduce them. We will investigate the processes of DNA replication and how traits are inherited from one generation to another and how whole species evolve to adapt to a changing environment.

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**THE STORYTELLER'S HIDEOUT** (Brittany) (8-9)

Welcome to the wonderful world of storytelling! This class will engage students in a mix of storytelling, including audio stories, written stories, visual stories, video stories, and more. It will also give students the opportunity to tell their own stories as we experiment with the craft of storytelling. What makes a powerful, engaging story? What elements are needed for a story that's suspenseful, or humorous, or scary? Can a story be told without words? All of this and more will be explored in this class.

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**SWEEPING SOUTH AMERICA: GEOGRAPHY, CULTURE, PEOPLE** (Kimber) (8+) *Geography, History, Culture, Art*

Students in this unique culture, art and geography class will journey to South America, one of the world's most beautiful continents, and get to know the incredible variety of wildlife, lands, and rich culture of the different countries. Through fun geography games, fascinating visual presentations, interesting arts and crafts- and even yummy cooking projects, students will travel across each country and discover the unique beauty, history and special characteristics. From the Caribbean beaches to the Atacama desert in Chile, across the lush Brazilian rainforest to the glacier-peaked Andes mountains, students will explore the many diverse regions, and home to some of the world's most unique animals and habitats. From centuries-old traditional crafts to interesting modern trends, we will also stretch our creative muscles with some cool art projects. Students will also celebrate Carnival in Rio de Janeiro, visit tortoises in the volcanic Galapagos Islands, discover ancient Incan cities and learn about places like Machu Picchu's ruins in Peru. Diversity, acceptance and tolerance are celebrated as students embark on a rich adventure and discover the distinct customs and everyday lives of people in the many different South American countries. ¡Nosotros vamos a tener una aventura increíble!

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**THINKING ART: MATH, PUZZLES, AND STRETCHING YOUR IMAGINATION** (Linda) (8+) *Art, Geometry*

Taking our inspiration from mind-bending artists such as MC Escher, the mathematical genius of Fibonacci, as well as the subconscious explorations of Salvador Dali we will endeavour to create art that exercises the brain of the artist as well as that of the viewer. We will play with optical illusions, extreme realism, the intersection of geometry and design, and forced perspective while also spelunking the depths of our imaginations.

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**UNQUENCHABLE IDEAS: IMPOSSIBLE QUESTIONS AND DEBATABLE ANSWERS** (Josh) (8+) *Social Studies, Philosophy*

What does it mean to be powerful? Is this something worthwhile to achieve? How can one be "successful?" Has the advent of the internet shaped society for better or worse? These questions & more will be examined in this class.

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Students will watch videos, engage in classroom discussions, research different viewpoints, give speeches, and even debate different ideas for these not so easy queries; Critical thinking for critical questions!

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### **VIKINGS OF LEGEND: NORSE MYTHOLOGY** (Josh) (8+) *History, Mythology*

Come one come all, gather 'round the hearth and learn tales of the mighty Odin, God of Gods. Join us as we sing songs of glory & valor of legends past. Feast with us for eternity in the splendid Hall of Valhalla! In this class, students will learn the Gods and heroes of Norse Mythology and all of the lessons that are buried within. We will have a blast exploring songs, poems, and stories of this fantastic culture!

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### **WAKE UP AND GET FIT** (Bonnie) (8+) *Health and Fitness*

Winter is upon it. Quarantine is going strong. We've got to be stronger. Commit to yourself to pull back the warm covers and greet the day with Bonnie. You'll sweat, stretch, and be a better you because of it. I promise. "Bring" the whole family. Hand weights recommended.

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### **A WALK THROUGH TIME - CLASSIC THROUGH CONTEMPORARY ART** (Kimber) (6+) *Art, Art History, Current Events*

Students in this fun-tastic class will journey through the ages, and using art as a reference, get a glimpse into the history, people and culture of different times — Throughout this creative class, students will be introduced to the works of many great artists, with a strong emphasis on many of today's cutting edge artists, all the while exploring history, and experimenting with artistic expression through painting and other mediums of art. We know a lot about people from past time periods through their art, but what about the present? What does our current art say about this day and time- and about who we are as individuals- and as a collective group of people? What will our art look like in the future? How will students express their own ideas and feelings, like a time capsule, through the creation of their own works? Join us on this amazing artful adventure and learn about all kinds of artists and art as we travel to the past, present and even the future. Let the creativity flow!

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### **WHERE IN THE WORLD? ASIA** (Nathan) (8+) *Geography*

Our Where in the World class will be playing our geography game where kids explore hemispheres and continents, countries, states, cities, landmarks and monuments, and important bodies of water. This semester we will be focusing on Asia! Each class will include a short lesson on an area on the continent of Asia before we begin playing the game! The goal of this class is to give the kids a well rounded global awareness. They will learn about hemispheres and continents, while being able to pinpoint the exact locations of many of the world's finest attractions.

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### **THE WILD WORLD OF COLORS W/ TOMMY** (Tommy) (8+) *Art*

Let's use the Rainbow of Colors we have, every medium we have, anything we have to create fun, brilliant one of a kind, pieces of ART! This is YOUR CLASS and almost anything goes.

So many colorS...who says the grass has to be GREEN or my dog can't be BLUE? Let's explore together colors, mixing materials, and much more.

No such thing as a mistake, these are your ideas brought to life, or put on paper, canvas, clothing....From silhouettes to Sunsets. Imagine if a Zebra was any color than black n white...We will also see many samples of the world's most

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colorful artist. Our possibilities are endless.

Nature reveals doorways and worlds of COLOR to those whose hearts and imaginations are open.

"TOGETHER let's USE COLORS for a MUCH BRIGHTER TOMORROW!" This is going to be fun!!!!

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**WORDS** (Joe) (8+) *Literacy, Spelling, Vocabulary, Word Origins*

What are words? Where do they come from? Who makes them up? How many do you know? How many do you need to know? How do you spell them? Why do you spell them like that? And does it matter how you spell them?

In Words we'll ask questions like these, as we get to know about words. We'll learn about words as things, we'll learn about language, and we'll learn about vocabulary and spelling and word origins and the development of language. Each week we'll learn about a new word, and a new spelling rule or convention. We'll practice it through exercises and game play. This class will center around a spelling game that involves letters and letter groups and fun - it involves using letters and common groups of letters to make words, phrases and sentences of growing length and complexity.

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