

# SUMMER GIFTED AT DOMINICAN



**course descriptions  
2019**

## **WEEK 1: JUNE 17-21**

### **Number Pyramids and Puzzles**

Increase your arithmetic knowledge and speed up your mental math skills in this thrilling journey of mathematics. In this fast-paced math class, students will practice mathematical operations and gain speed with automaticity of math facts and logical thinking. Students will participate in a variety of individual and group activities, learning games and problem-solving puzzles. Students will also practice skills related to inverse operations and number families.

*This class includes an additional \$15 supply fee.*

Grades 2/3, Week 1

### **Under the Sea**

Have you ever taken a moment and actually wondered how deep ocean volcanoes are created? Or exactly how is it that sharks have existed for more than 400 million years? Does what lay beneath the ocean's surface make you curious? In this hands-on investigative and problem-solving class, students will use scientific and engineering skills to discover the depths of our waters as they dive into the mysteries of the ocean and discover what's under the sea!

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 1

### **King Arthur's Court**

Knights, Ladies, Quests and more! Are you prepared to dive into the realm of adventure, chivalry, and the nitty-gritty daily life in Medieval England? In this class, we will examine the legends surrounding King Arthur's court, looking for what lessons are taught through the stories, why they are important even today, and the various ways they have been revised for entertainment purposes in the last 100 years. We will read stories, watch some film versions including parts of Monty Python's film, the BBC's show Merlin, and various other adaptations; then along the way we'll learn about life inside the castle and get a feel for what it was like for not just the nobility, but the commoners as well. We will also look at various aspects of the hero's journey plot form, and consider how time can lead to different variations of the "real" story. For the end of the week project we will split into groups to perform our own interpretations of the legends, while perhaps taking some liberties by putting our own spin on all things Camelot!

Grades 2/3, Week 1

**Aerodynamics: How Airplanes Fly**

Have you ever wondered how airplanes fly? This class will explore the science of flight as we investigate the parts, development, and uses of the modern day airplane. We will examine the principles of aerodynamics that make flight possible, including air pressure, force, and energy through hands-on learning activities. We will apply these concepts, along with the contributions of such pioneers as Galileo, Newton, and Bernoulli to create our own model airplanes and gliders!

*This class includes an additional \$15 supply fee.*

Grades 3/4, Week 1

**Art of Juggling!**

Persistence, patience, and practice are not only necessary in learning how to juggle but are also important life skills. Students will learn the art of juggling while exploring important life lessons such as not giving up, the value in making mistakes, creative problem solving, and working with others to provide support and encouragement. Students will explore strategies to set and achieve goals in a step-by-step progression and gain self-confidence as they demonstrate their new skills! Juggling will continue long after class ends as students find there are always more challenging levels to conquer.

*This class includes an additional \$15 supply fee.*

Grades 3-5, Week 1

**Young Authors Book Club**

Students in *Young Authors Book Club* will read, examine, and discuss several forms of writing and genres from authors who possess unique and exemplary writing styles and voice. They will then practice and develop their own writing techniques by creating various writing pieces of their own including short stories, a newspaper article, and a vignette. In this reading and writing intensive course, young authors will share their favorite written pieces and thoughtfully offer feedback to each other based on what they learn in class.

*This course includes an additional \$15 supply fee.*

Grades 3/4, Week 1

**Games of Strategy: Shuffle, Deal and Roll!**

This strategic card and dice based math class improves mental math and quick problem solving skills through classic and modern games of strategy and cunning wit. This new pilot course is currently under construction and pending full course description.

*This course includes an additional \$15 supply fee.*

Grades 4/5, Week 1

### **Jr. Naturalists**

Join this course to become a real naturalist! Participation in this course means exploring the natural components of your community that interest you the most, while observing the natural world and building your knowledge about it. Daily bird watches, hunting for tracks, and local plant and animal identification are just part of this course. Students will gain knowledge, about the environment while learning about animals, habitats, ecosystems, and niches. They will explore interdependence, changes and adaptations, biodiversity and wildlife resources, human impact, and responsible actions and service. Enjoy the observation of nature and become a citizen scientist, as well as a steward to the nature closest to you!

*This course includes an additional \$15 supply fee.*

Grades 4/5, Week 1

### **Advertising Agents**

In this creative thinking and artistically driven course, students will learn the process of advertising through television commercials, magazine print ads, outdoor billboards, as well as the relevance behind product placement. Students will work collaboratively in advertising teams as they create a complete advertising campaign for an existing, discontinued, or mock product of their choice. Advertising teams will hold specific roles such as Creative Director, Art Director, Storyboard Artist, and Copywriter. Lastly, advertising teams will pitch their commercial campaigns and spotlight their work at Open House.

*This course includes an additional \$15 supply fee.*

Grades 4-6, Week 1

### **Architecture: How Buildings Stand**

Students in this interdisciplinary class will use math, physics experiments and architectural design techniques to prove the basic building principles of architecture. Students will have the hands-on opportunities to design their own dream homes to scale, and also calculate the actual costs involved. The class will also explore the rise of the Chicago skyscraper as well as local architectural styles, such as F.L. Wright, taking full advantage of the wealth of examples that fill the city and its surrounding neighborhoods.

*This course includes an additional \$15 supply fee.*

Grades 5/6, Week 1

### **Invention Convention: Rube Goldberg**

Have you ever found a very complicated way to complete a very simple task? Rube Goldberg was a master at

doing just that! Rube Goldberg is a famous cartoonist, sculptor and author. His hilarious inventions created elaborate ways to do simple things. In this class, students will become inventors, authors and scientists examining the work of simple machines to create their own elaborate ways to complete tasks! Save up your garbage and gather your toys to get those creative juices flowing!

*This course includes an additional \$15 supply fee.*

Grades 5-7, Week 1

### **Fairytales Trials: Legal Eagles**

Did you know that the Grimm Brothers were actually lawyers? Participants will explore the judicial process via the medium of the fairy tale. In addition to learning trial procedures, students will learn skillful mediation techniques as they explore both the prosecution and the defense roles using collaboration and improvisation. Did the wolf intentionally murder the pigs, or was he a victim of pigrimication? Is Jack a victim, or guilty of stealing the golden hen? Was the Pied Piper the victim of a broken contract, or was he the perpetrator of a mass kidnapping? Students take on the roles of plaintiffs, defendants, lawyers and judges to determine the case of these fairy tale trials!

Grades 5/6, Week 1

### **Logic and Critical Thinking**

What are the mental tools humans use to solve problems? In this class, we will develop our potential to reason. Through brain teasers, logic puzzles, math/wordplay riddles, mysteries, lateral thinking problems and material challenges, you will hone your problem-solving ability. Students will be given an introduction to deductive and inductive logic, and will explore famous problems faced by ancient and modern cultures and the solutions they uncovered. *If you like puzzles and riddles, this is the class for you!*

Grades 7/8, Week 1

### **Political Science: Model U.N.**

For the globally minded citizen student, the summer is a great time to explore the issues that abound in today's world. Students in this simulation course investigate the rules and inner workings of the United Nations, choose a country to represent as they study the governing issues of that country. This class culminates with a live and real time replication of a U.N. session. This political science class is intended to foster interests in world affairs with the knowledge of issues facing the world in difficult times. Additionally, students will learn effective debating strategies, engage in healthy discussions, and work collaboratively with respect for all differences.

Grades 6-8, Week 1

**The Great Debate**

Let the debates begin! In this interactive class, students assert themselves and express their viewpoints by participating in organized and spirited debates. This course will introduce students to debate techniques and formats utilized in middle school debate clubs and competitions as they learn how to research, discuss, and write about important issues shaping their world. The Great Debate is ideal for those looking to develop and improve their writing, critical analysis and public speaking skills. This summer, everything is debatable!

Grades 6-8, Week 1

## **WEEK 2: JUNE 24-28**

### **Introduction to Chess**

Are you curious about chess? Whether you already know how the pieces move or are playing for the first time, this class will cover all the fundamentals of playing a complete game. You will learn how to efficiently deploy your pieces, coordinate your attack and checkmate the enemy king. We will break down the basics required for successful chess, explore famous games to see how the best players in history vanquished their opponents, practice checkmates, solve puzzles and play games together. Empowered with the knowledge that expert players use to win, you will leave your family and friends wondering why they can't beat you anymore!

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 2

### **Jurassic Journeys**

In this hands-on class, budding paleontologists begin researching the Paleozoic and Mesozoic eras piecing together the evolutionary chain and constructing the environment leading to the Age of the Dinosaurs. Students construct molds of life forms and practice unearthing dinosaur remains in simulated exercises and excursions.

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 2

### **Storybook Arts**

This creative reading and multimedia arts based class promotes creativity and reading with beautifully illustrated children's books and hands-on art inspired projects. A different story and discussion highlights student interests, and is paired with a meaningful art-based project. Inspired readers will use a wide variety of materials such as paints, fabrics, paper materials, chalk, crayon and colored pencils and markers, with an emphasis on utilizing responsibly recycled and repurposed materials.

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 2

### **The Number Devil**

The Number Devil is a book about Robert, a boy who discovers the amazing world of numbers, including infinite numbers, prime numbers, and Fibonacci numbers. The Number Devil's visualizations of these higher level math concepts offer a starting point for math projects in drawing, painting, construction and

dramatic play. Join us in the rollicking dream world of the Number Devil, where the sky is the infinite limit!

*This course includes an additional \$15 supply fee.*

Grades 3/4, Week 2

### **Intro to Coding**

Do you love technology? Have you ever wanted to invent your own game? In this introductory coding class students will design their own hands-on games using Little Bits Coding kits! After learning the basics of coding logic using several block-based coding systems, students will use the engineering design process to program their own simple games. The fun doesn't stop there! Students will also use their creativity to bring their games to life, building three-dimensional controls, sensors, etc. to enhance the gaming experience!

*This course include an additional \$15 supply fee.*

Grades 3/4, Week 2

### **Art of Philanthropy!**

Artful students with the desire to promote the well-being and welfare of others in their community will create thoughtful project crafts while giving generously of their time, attention, and advocacy for those who cannot. This course is intended to spark the joy of giving versus receiving, and intentionally emphasizes fundamentals principles in empathy and compassion. This hands-on pilot course is currently under construction and pending full course description.

*This class includes an additional \$15 supply fee.*

Grades 3-5, Week 2

### **Philosophy for Kids**

Students will use Socratic dialogue to develop critical and creative thinking skills by asking questions and coming up with answers that lead us right back to more questions! Through dialogue, art, music, poetry, and literature, students will discover how philosophy connects to their everyday lives. Students will engage in philosophical inquiry while exploring such topics as friendship, responsibility, courage, and compassion.

Grades 4/5, Week 2

### **Forensic Science**

This hands-on investigative course introduces students to forensic science and its applications, techniques, and scientific processes. Students evaluate and consider how forensic scientists collect, analyze and process evidence to solve a crime. Working in a variety of groups and equipped with their detective tools,

young crime scene investigators examine a series of challenging clues and gather evidence in order to solve...*What happened? And who did it?!* Each day, new skills will be acquired and used to ultimately solve the classroom crimes of the day.

This course includes an additional \$15 lab supply fee.

Grades 4/5, Week 2

### **Stick to the Script: Introduction to Screenwriting**

In this exploratory and writing intensive course, students will be introduced to the wonderful art of screenwriting. Students will transform an original story idea from pitch to story to treatment, and finally to screenplay or script. As budding screenwriters, students in this class will develop their traditional notebook stories into structural detailed works suitable for a film-short. They will learn screenwriter's language such as plot, scene development, dialogue, conflict and conflict resolution, the three-act film, and character development. The stages of screenwriting will come to fruition as students gain an understanding of what makes a story better and how it all begins with a basic screenwriting format.

*This class includes an additional \$15 supply fee.*

Grades 4-6, Week 2

### **Aerodynamics: Rocketry**

This hands-on inquiry based class takes a closer, more in-depth look at history and mechanics behind the modern day rocket. Scientific principles including Newton's Laws of Motion, weight vs. mass, thrust and air pressure will be examined through hands-on experiments. Students will apply these concepts to the building of their own more advanced rockets.

*This class includes an additional \$15 supply fee.*

Grades 5/6, Week 2

### **Scream Machine: The Need for Speed**

Roller Coasters are an exhilarating ride for people of all ages. Thrill-seekers will get their adrenaline pumping through hands-on, engineering activities to learn the physics behind a roller coaster. Using algebraic skills, students will calculate speed, as well as learn about kinetic and potential energy at work to give riders that rush! Students will examine roller coasters through simulations, ultimately building their own coaster that any of their friends would travel for miles to enjoy.

*This class includes an additional \$15 supply fee.*

Grades 5-7, Week 2

### **Creative Writing**

In Creative Writing, students will write a variety of original pieces including short stories and poems. They will read and evaluate written works by professional authors as models for their writing. Students will also practice and apply writing traits including voice, word choice, organization, and sentence fluency. In addition, students will learn about the elements of literature as well as poetic vocabulary and styles. Students will be able to integrate the knowledge they learn into their own writing pieces. At the end of this course, students will share their favorite written pieces and thoughtfully provide feedback to each other.

Grades 5-7, Week 2

### **Physics & Engineering: Newton's Academy**

Sir Isaac Newton made some of the greatest contributions to physics of all time. This is a fast-paced course full of "greatest hits" labs. Students will learn the physics needed to calculate: their speed while running, gravity while dropping balls, their reaction time using gravity, muzzle velocity of a dart gun, and the friction in a roller coaster they build. Students will be introduced to several physics concepts, and be able to use them at a high-school level. For open house, students are offered a variety of possible activities to show off how much they have learned! Some experience with algebra is suggested.

*This class includes an additional \$15 supply fee.*

Grades 6-8, Week 2

### **Lab Science: Chemistry**

This course will take an inquiry-based approach to foster students' curiosity and other scientific attitudes toward lab sciences. Students will build skills in the areas of making observations, planning the best approach to solving problems, developing focus questions, interpreting complex data, and communicating what they learned in reflective writing. This will afford students the opportunity to become more interested and confident in using higher-order thinking, to explore, test, and make their own conclusions about various aspects of science in general, and in Chemistry, specifically.

*This course includes an additional \$15 supply fee.*

Grades 6-8, Week 2

### **Star Wars Fan Fiction**

In today's world fans do not just sit on the couch passively watching television, listening to music, or reading books; rather, they take inspiration from their favorite series to create their own unofficial works of fiction based on the lives and situations of their heroes. The fan community surrounding the Star Wars series is one of the most active fandoms with millions of online discussion postings and tens of thousands

Week 1: June 17-21

Week 2: June 24-28

Week 3: July 8-12

Week 4: July 15-19

of fan creations of every possible description imaginable. Students in this class will read some online fan fiction and a full-length book of published fan fiction; for example, high-school author Alexandra Bracken's retelling of the first Star Wars movie *Star Wars: A New Hope The Princess, the Scoundrel, and the Farm Boy*. We will watch some movie clips and look at professional scripts. Students will write their own chapter sequel to a Star Wars book or movie using Star Wars characters and settings as starting points. At the end of the class, students will present their work during our end of week open house.

*This course includes an additional \$15 supply fee.*

Grades 6-8, Week 2

## **WEEK 3: JULY 9-13**

### **Chess Academy**

Love the game of chess? Eager to practice your moves with competing players? Develop your chess skills and strategic moves under the guidance of a fun and experienced chess master, and learn how to effectively play your pieces to plan your next move with confidence. This hands-on course is under construction and pending full course description.

This course includes an additional \$15 supply fee.

Grades 2-4, Week 3

### **Bug Life**

Did you know that an ant can carry fifty times its own weight? And there are more types of beetles on Earth than there are plants! How is the global bee population affected by environmental factors? Students will become insect experts as they study various types of bugs, and discover how important they are to our planet. In this hands-on class, students will examine insect anatomy, go on outdoor bug hunts, research insect facts, role-play insect societies, and discuss issues such as how non-native insects can become invasive pests.

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 3

### **Calling All Artists**

Develop your drawing, painting, and sculpture skills while examining the methods of master artists such as but not limited to Claude Monet, Georgia O'Keefe, Alexander Calder and more! Learn and apply technical drawing, painting, and sculptural methods used by artists to create masterful artistic visual effects and images in this hands-on art course. Students in this class will strengthen their knowledge and abilities in artistic technique and design, as well as cultivate and nurture their creative intelligence.

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 3

### **Adventures in Math**

Are you ALL-in for quick-witted escape adventures with a gutsy math twist? Crazy riddles that tickle and challenge your adventurous inner math wizard? Fun puzzles that are grounded in definitive logic and mathematics? Then this mind-boggling fast and fun roller coaster of an adventure in math is the course for you! Math-minded students in this engaging class participate in fun games, riddles and puzzles throughout

the week. Both group work and individual activities are emphasized in this accelerated math course for adventurous learners!

*This class includes an additional \$15 supply fee.*

Grades 3/4, Week 3

### **Chemical Reactions**

In this hands-on experimental lab course, students explore basic chemical changes and investigate a variety of chemical reactions as they develop their knowledge about the study of matter and the changes that take place: What makes up matter? How does it react and combine with new matter? Students may be surprised to discover chemical reactions that occur in their daily lives, and how it impacts the world around them. Lab safety is introduced, practiced and enforced as a daily classroom expectation. Students will be encouraged to “think like a scientist” by asking questions, making predictions, setting up experiments to test their hypothesis, collecting and analyzing data and finally, drawing conclusions. Students will discover basic chemistry concepts and experiment with many examples of different changes in matter.

*This course includes an additional \$15 lab fee.*

Grades 3/4, Week 3

### **Art of Puppetry!**

In this creative and hands-on entertaining foray into the puppet arts, students will learn how to tell stories using simple materials and engaging classic forms from 19th century England to 6th century India. Turn a plain cardboard box into an intricate toy theatre, create an original cantastoria from a large roll of paper, and tell a riveting campfire story on very your own shadow screen! <https://lankykeepuppet.com>.

*This class includes an additional \$15 supply fee.*

Grades 3-5, Week 3

### **Math Games, Puzzles & Problems**

Joshua weighs half as much as Michael, and Charlie weighs three times as much as Joshua. Their combined weight is 240 pounds. How much does each boy weigh? Students in this playful math course exercise their brains as they develop their logical reasoning skills, gain mastery of key math concepts, and apply their knowledge to increasingly advanced challenges in the form of various math puzzles, riddles and logic problems, academic board games and more!

Grades 4/5, Week 3

### **STEM Arts**

The realm of math within art is a vast and diverse world in which students will explore hands-on and high-level learning in three-dimensional, culinary, musical, technological, and functionally applicable art forms enhanced by mathematics. The course includes studies of Euclidean geometry, molecular gastronomy, engineering, and much more! Learning math through art based projects not only significantly improves student understanding and retention of key math concepts, it also produces significantly beautiful artwork that anyone can appreciate! *STEM Arts* gives artistically inclined students a chance to shine, and it also engages a critical part of the right-brain, tapping into mathematically inclined student abilities to master conceptual math.

*This course has an additional \$15 supply fee.*

Grades 4/5, Week 3

### **Extra Extra! Read All About It!**

Calling all news-hounds! Do love stories? Did you know that they're all around you? Put your noses in the air and catch that scent! Let's track down those stories, hammer out the hard copy, and send it to the presses! It's time to print that paper and let everyone know what the news is all about. This week will be filled with finding all the news that's fit to print, writing up your stories, laying out our copy and finally printing our Friday edition. If you think you're up to the task, and you love finding and telling stories, then this is the week for you; so step right up and grab your press pass because we've got a deadline to make!

*This course includes an additional \$15 computer lab fee.*

Grades 4-6, Week 3

### **Stones and Bones**

This hands-on class will introduce students to the worlds of paleontology, archaeology, & anthropology. Participants will conduct simulated digs, analyze their findings, and learn how to "read" the bones & man-made artifacts. Then they will explore what makes a human differ from other animals. Finally, they will create their own society. On Saturday, July 13, families of participants are invited to tour the Field Museum w/ Ms. Stone from 10am until noon. *Can you dig it?*

*This class includes an additional \$15 supply fee.*

Grades 5/6, Week 3

### **Environmental Science**

Integrating physical and biological sciences to the environment, students in this class will examine the delicate interrelationships of the natural world and the ways in which it has evolved. In this class, students identify and analyze environmental challenges and problems, and consider the ways in which renewable

and/or alternative solutions may resolve or prevent future issues. Students explore topics such as preservation and sustainability, global warming and pollution, energy, biodiversity, conservation, renewable and nonrenewable resources, alternative energy and fuels, recycling, and sustainability through hands-on activities and field experiences.

*This course includes an additional \$15 lab fee.*

Grades 5-7, Week 3

### **Creativity Makerspace**

This active and interdisciplinary hands-on course is designed to help students discover and develop their creativity through small and large group exercises, fun creativity games, art, drama, writing and individual creative pursuits. Students will learn classic group creativity techniques such as brainstorming, creative problem solving, synectics, and more. Classmates will share their ideas, learn to “piggyback” off the ideas of others, and produce a final personal project expressing their creativity in the medium of their choice: visual art, writing, poetry, drama, dance, song, comedy, cartooning, fiber arts...the sky’s the limit!

Grades 5-7, Week 3

### **Genius of Geometry**

In this course, students will extend their knowledge in basic geometry to include proofs, the central activity of high school geometry and all higher level mathematics. Students will create constructions using the classical construction tools, the compass and straightedge, as they justify and prove the relationships they discover with traditional two column proofs. Students will also examine Oliver Byrne’s masterful 1847 edition of Euclid’s Elements, as well as more traditional translations of Euclid’s famous book. Students will finally produce their own portfolios, elegantly composed of their constructions, proofs, and student reflections.

*This course includes an additional \$15 lab and software fee.*

Grades 6-8, Week 3

### **Physics & Engineering: Building Bridges**

Do you like building things? Do you want to learn how to build them better? Students who enroll in this high energy engineering course will learn about the physics of forces and machines, and discover ways to improve their engineering skills and develop into better engineers, no matter what they are building, or what materials they use to build! This course covers various branches of engineering, as well as concepts in forces, friction, and simple machines. Students in Physics & Engineering: Building Bridges work

Week 1: June 17-21

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independently as well as in teams, and ultimately compete with their like-minded peer groups to build the tallest, strongest, and most efficient structures employing the principles, concepts, formulas, and laws of physics covered throughout class.

*This course includes an additional \$15 supply fee.*

Grades 6-8, Week 3

### **History of Philosophy**

This philosophy based class explores introductory concepts in philosophy and Plato's *The Republic* as its central source of study. Currently under construction and pending full course description.

Grades 7/8, Week 3

## **WEEK 4: JULY 16-20**

### **Fun with Fibonacci!**

Did you know that the beautiful Fibonacci sequence, which was discovered by an Italian mathematician nicknamed Fibonacci, was best known in a famous math problem about multiplying bunny rabbits in the early 1200s? Discover the complex beauty behind the simplified answer, and realize just how much this beautifully intriguing sequence can be found throughout nature and everywhere around us! Students will become familiar with Fibonacci numbers and explore the many ways in which these numbers are expressed in our everyday world. Participating in a series of daily math-based games, cooperative and independent math activities, as well as math related stories, students will gain an understanding of the Fibonacci sequence of numbers. Students in this class will discover the fun in recognizing how Fibonacci numbers relate to our everyday world and the relevance of mathematical operations to these specific numbers.

*This class includes an additional \$15 supply fee.*

Grades 2/3, Week 4

### **Tessellations and Patterns in Math**

In this expressive geometry based course, students discover the undeniable connections between art and math in our daily world. Critically examining the artwork of M.C. Escher and his contributions to mathematics, this interactive class will rely upon artistic creativity as students produce individual and class-designed tessellations and tilings with their favorite repeating patterns and colors while reinforcing the building blocks of geometry and the study of shapes.

*This course includes an additional \$15 supply fee.*

Grades 2/3, Week 4

### **Storytellers and Illustrators**

During this week, students will learn about storytelling and using illustration to help the process. We will explore what makes a good story, the elements of story, and what contributes to being a good storyteller, because after all, even the most interesting story can lose its life to a dull performance! Students will share their favorite stories with the class, write and illustrate their own stories, share these with the class and work with a small team to produce, illustrate and perform a group story during the end of week Open House. Use of the imagination combined with setting up a solid story structure and presenting the story in an entertaining fashion is the emphasis here, as is having fun and playing with the creative process!

*This class includes an additional \$15 supply fee.*

Grades 2/3, Week 4

### **Sudoku and Such**

Keep your mind sharp and develop your brain power with the benefits of Sudoku and such! Number games, math riddles, and puzzles throughout the week assist math-minded students in improving memory, developing mental math skills and speed, and increasing levels of concentration. Students also have the opportunity to create their own Sudoku puzzles and number games to challenge their friends and family, and nourish their creative sides.

*This class includes an additional \$15 supply fee.*

Grades 3/4, Week 4

### **Sustainable Solutions**

Everyone knows 'it's not easy bein' green,' because the most famous Muppet character, Kermit the Frog, told us so. Well, what does it really mean to be green? What are the challenges facing the environment? Why is sustainability important? Most importantly, how can YOU help and make a difference?

Dominican University's scenic campus will serve as the teaching and learning laboratory for promoting sustainability. Throughout the week, students will take on fun titles such as environmental explorers, green ambassadors, composting ninjas, and grewbies (beginning gardeners) just to name a few. Get ready to get your hands dirty with daily lunch waste audits, gardening, recycling and composting; develop a thirst for water conservation; and bee-friend the honeybees! Students will practice environmental stewardship and discover just like Kermit the Frog did, that "bein' green is all you want to be" especially when it comes to protecting the planet and building a better future!

*This course includes an additional \$15 supply fee.*

Grades 3/4, Week 4

### **Word Power Challenge**

Students in Word Power Challenge engage in friendly competition, build their vocabularies and spelling skills, and learn to play word games such as Scrabble, Boggle, Word Thief, Scattergories, Password, Blurt, Dictionary Dabble and more! Incorporating daily vocabulary words of the day, Greek and Latin roots, interactive class activities such as word games, explorations in neologism, and relevant film selections, students in this class will develop notable strength in word power as they finesse their way to the top and win their high-spirited competitions with endlessly impressive words!

*This class includes an additional \$15 supply fee.*

Grades 3-5, Week 4

### **Mathopoly and Economics**

Learn math and economics while playing Monopoly! Students will begin by learning some basic economic concepts of supply and demand, budgeting and the history of monopolies. Through hands-on application and experiential learning, students will gain a deeper understanding of percentages and probability. Mathopoly students will become strategic thinkers while being introduced to meaningful concepts in investment and capital gains. Students will explore monopolies, the history of the game, and compare and contrast different versions of the game. This class will also introduce students to credit- how to establish it, use it, and the dangers of abusing it. Mathopoly students will develop their social skills and master the strategic art of negotiation. Using their notes, observations, and skills gained throughout the course, students will establish their own strategies for monopolizing the game of MONOPOLY, ultimately creating their own version of the game!

*This class includes an additional \$15 supply fee.*

Grades 4/5, Week 4

### **Disaster Science**

What causes a natural disaster and what can we do to save ourselves when an emergency strikes? How can human activity impact climate change, and how do we prepare for its disastrous results? Students will discover the secrets behind earthquakes, flooding, volcanic eruption, landslide, and hurricanes. Using problem solving skills and imaginative creativity, students will design innovative tools and techniques to utilize when faced with a natural disaster!

*This course includes an additional \$15 supply fee.*

Grades 4/5, Week 4

### **To Think or Not To Think?**

This introductory philosophy based course for young scholars is currently under construction and pending full description.

Grades 4-6, Week 4

### **Scratch That Code!**

Every student should have the opportunity to learn computer science! Coding has been called the “new literacy.” With Scratch, you can program your own interactive stories, games, and animations – and share your creations with others in the online community. *Scratch That Code!* will help students learn to think

creatively, reason systematically, and work collaboratively – essential skills for life in the 21<sup>st</sup> century!

*This course includes an additional \$15 computer lab fee.*

Grades 5/6, Week 4

### **Hunger Games: Introduction to Genetics**

In this adventurous class of survival of the fittest, students mix science with imagination to create their very own tributes and adversaries through an introduction to genetics. Determining everything from eye and hair color, height, build, and even predisposition to certain illnesses and immunities, students consider genetic principles as they construct and manipulate DNA to create their own version of a fantasy hunger game. Through class discussions, games and activities, as well as artistic interpretations of their genetically modified characters, students can determine the winner of this ultimate battle. What happens when the terrain changes or an unexpected creature bursts out of nowhere? Anything can happen so who will survive and why? May the odds be ever in your favor!

*This course includes an additional \$15 supply fee.*

Grades 5/6, Week 4

### **Exploring Photojournalism**

In this visually driven course, students will learn about the importance of photojournalism and the effectiveness of telling a story visually. Students will explore photos from The Great Depression and Civil Rights, to sports and world news. Each student will take a series of photographs, of which they will select five, and write short passages and editorials telling a story. Students will learn to understand the difference between “paparazzi” pictures of celebrities, and journalistic photographs that document emotion, culture, history and time. Note: This course will NOT instruct in photography or how to use a camera. Students will need a digital camera during this course week so images can be uploaded and printed.

*This class includes an additional \$15 course supply fee.*

Grades 6-8, Week 4

### **Pi and the Great Pyramid**

In this hands-on math course, students will dive into the mysteries of the Great Pyramid of Egypt found in the Ancient city of Giza. This amazing structure was the tallest constructed for thousands of years, and is a testament to humanity in many respects other than just its sheer size. Hidden within the various dimensions of the Pyramid are two of the most famous mathematical constants, Pi and Phi. Students will discover how these two natural ratios are embedded in the construction of the Great Pyramid, as well as many ideas as to why they manifest themselves. We will go back in history to learn about the Rhind and Moscow Papyri by

solving some of the very same problems the Ancient Egyptians solved thousands of years ago. With an understanding of Egyptian History, the ratios of Pi and Phi, as well as learning the skills of 2D and 3D geometric Constructions, each student will come up with their own conclusions as to how and why the Pyramids were built.

*This course includes an additional \$15 supply fee.*

Grades 6-8, Week 4

### **Physics & Engineering: Astrophysics**

Do you stand in awe of the stars at night, imagining what wonders could be out there so distant in the cosmos? The universe is a very big place, but is it infinite? What strange and amazing things can be found in our solar system, in our galaxy, and beyond? What would it take to visit these places, and are there things worth visiting "in our own backyard?"

Students will learn about how planets work, how to find them around other stars, and how we think they form. We will learn about the life cycle of stars and why the cycle happens this way, including favorites like black holes, nebulae and supernovae. Mathematics skills will not be necessary, but students seeking a challenge can be provided one! The physics equations governing the motions of planets, such as with velocity, acceleration, force, and universal gravitation will be offered.

Grades 6-8, Week 4

### **Improv Sketch Comedy**

Want to practice connecting with real audiences, sharpen your awareness, and improve your mental processing? Turn to comedy! This class is meant for students with or without theater backgrounds, just those with a desire to think on their feet and help an audience have a good time. We'll start with the basics of improv: connecting, building on ideas, and creating something new out of thin air. Then, you'll get a crash course in sketch writing and performance. Don't worry if only your mom thinks you're funny; if you're willing to stretch yourself in new ways, and take on a challenge, this class is for you! Let this class be a terrifically entertaining highlight in your summer program experience this year!

Grades 6-8, Week 4



**SUMMER GIFTED AND TALENTED PROGRAM**

Week 1: June 17-21

Week 2: June 24-28

Week 3: July 8-12

Week 4: July 15-19