

Challenge Camp After School Winter Workshops 2021



For those of you that are new to Challenge Camp, here are **tips for understanding our Winter After School Course Catalog:**

- 1) **Our Winter After School classes meet once a week for 10 Weeks starting the week of January 18th.** Unless otherwise noted, the classes scheduled for 4:00 and 5:00 meet for a period lasting 60 minutes and the classes that are scheduled for 4:30 meet for a period lasting 90 minutes.
- 2) We use student's **CURRENT GRADE as of September 2020** for class selection.
- 3) There are over 40 STEM & Arts Enrichment Options for you to customize a schedule based on your child's interests. **To streamline the process, we highly recommend referring to the course selection charts to guide you to the grade level appropriate classes** for each day and time slot.
- 4) The instructors will use the Google Classroom page to post supply lists and any software or apps that your student will need to install to participate in the selected enrichment activities. **Parents are responsible for ordering supplies in advance of the session.** We encourage you to order sooner as delivery and shipping times now are unpredictable.
- 5) Certain courses may have a materials fee listed. These are for class kits or projects. **Where possible, we are working on making arrangements with vendors to ship items directly to you and included this in the listed material fee.** However, there still may be additional supplies required by the instructor. For classes with significant projects, like Drone Flight School **we have listed an estimated fee. We are trying to expedite the logistics where possible, but we may ask you to place the order directly with the vendor.**
- 6) If you need assistance or have any questions, please email info@challengecamps.com or call the office 914-779-6024.

Alphabetical List – All Classes

1) Adventures in Art Tuesday
4:00
Grades 1-3

Calling all students who love experimenting with art materials. Inspired by famous artists, our projects will emphasize techniques that create surprising and exciting effects and rich textures such as: marbling, home-made paints, painted-paper collages, glue resists, scratchboard and more. We will draw, paint, squirt, and swirl, letting the element of discovery enhance our creativity. Share your projects during class and in our online art gallery!

2) Architecture and Design with 3Dux Monday
4:00
Grades 2-4
Grades 4-6 5:00

Join us in this fun and informative architecture and design class. Take your ideas from schematic plans to finished builds using the 3Dux kit designed specifically for Challenge Camp. We will learn about architecture from primitive structures to golden spires and modern experimental buildings. Students will draw, design, build, decorate, and furnish structures from tiny dog houses to sprawling castles and complexes while focusing on physics, geometry, problem solving, and complex spatial thinking. The kit comes with a light set that allows for some extra bright designs and innovation.

Architecture Fee: \$50

3) Astronaut Training Thursday
5:00
Grades 4 & Up

Curious about outer space and want to be an astronaut? Join us for this out-of-this-world course! Students will be introduced to STEM concepts and participate in simulated astronaut training activities as they solve STEM challenges, create various forms of rockets, and journey through the solar system. Basic engineering and physics concepts will be applied to the construction of straw rockets, simple launchers and more!

4) Black and White Drawing Monday
4:00
Grades 4 & Up

You have to think out of the box in this class to create extraordinary artwork with the absence of color. Using pencils, Sharpies and paper, you will learn how to draw graphic designs of animals, trees and faces. You will be amazed at the movement and dimension in your drawings using only simple lines, contrast and shadows!

5) Blender 3D Simulations		Wednesday
	Grades 4 & Up	4:00

Blender is a powerful 3D computer graphics software toolset which is used to create animated films, physics simulations, video games and so much more. Using Blender, you can create an impossible scene by controlling and animating physics: Quickly build a tower just to knock it down and watch how it falls from any angle, pour water into a glass cup and get the perfect, photo-realistic picture as it splashes out, write your name in big 3D letters and then hit it with a wrecking ball - smashing it into a million pieces! Computer creativity and imagination is all you need to produce endless animated possibilities.

* Students must be on a PC or Mac

6) BOLD Pop Dance		Tuesday
	Grades K-2	4:00
	Grades 3-6	5:00

This vibrant class blends the energy, freestyling, storytelling and power of hip hop and breaking, with jazz technique, while embracing the creativity of the dancers. Students will develop musicality, choreographic skills, strength, teamwork and confidence both onstage and off. A signature of all BOLD Arts programs is that each person's individual strengths and personality shine through the work we create together. All students will have the opportunity to perform at the end of the session. *Taught by BOLD Arts.*

7) Checkmate		Monday
	All Grades	5:15

An introduction to the exciting world of chess. Chess enables children to develop and enhance their skills in discipline, concentration and patience. Students will learn basic opening, middlegame, and endgame strategies and how to achieve a proper coordination of pieces. Students will learn useful skills such as pattern recognition, calculating and analyzing. Chess notation will be taught in order to review games. Interactive instruction will focus on lecture, discussion and basic strategy.

*Students should have a basic understanding of the pieces and how they move

8) Code Central: Introduction to Java		Monday
	Grades 4 & Up	4:00
		Wednesday
	Grades 4 & Up	5:00

This course aims to teach the basics of one of the most powerful and wide spread programming languages—Java. You will learn about variables, loops, control structures (if/then logic), arrays and how to write classes. You will learn to think both algorithmically and creatively. We will use Java to calculate PI, and solve problems – for example, did the Indians get a good deal when they sold Manhattan to the Dutch for \$24 in 1626? We will create games like Mad Libs, guess the state capital, and how to convert English into Pig Latin. There are no prerequisites other than a desire to learn.

9) Code Central: Javascript Animation and Design

	Monday
Grades 4 & Up	5:00
	Wednesday
Grades 4 & Up	4:00

Learn coding basics while having fun creating animation, games and sketch art. We will be using a version of Javascript known as p5.js. Javascript is the most widely used computer programming language and the backbone to most web pages. p5.js makes coding fun and easy for artists, designers and beginners. In less than 15 lines, you will be able to create an arrow shooting across the screen or a waterfall of balloons of different sizes and colors bouncing around the screen (and needing to be popped!) p5.js is great for visual learners. You will learn how to create variables, loops and algorithms.

10) Code Central: Scratch Game Creators

	Wednesday
Grades 2-4	4:00
Grades 4-6	5:00

Learn coding basics while creating games and animating stories using the online program Scratch. Scratch is a visual programming language and website that uses drag-and-drop blocks to make programming easy and fun to learn. Our young coders will learn computer science skills such as developing algorithms, variables, loops and control structures (if/then logic) while learning to work together, problem solve and think both creatively and logically. By the end of the session students will have created beautiful moving artwork, animated stories and their own video game!

11) Crazy Chemistry Science Adventures

	Tuesday
Grades K-2	4:00
Grades 2-4	5:00

In this engaging science class will have you making bubbling mixtures, toppling towers, racing vehicles, exploring outer space, testing chemical reactions, learning science magic tricks and so much more. Using experiments, demonstrations and hands on activities, we will explore real world scientific principles. Your child will be guided through fun interactive hands-on science activities in your own home. A packet of supplies will be sent to your scientist at the beginning of the term. *Taught by Dazzling Discoveries.*

Chemistry Fee: \$30

12) Curious Chefs Make Dinner

	Tuesday
Grades 1-3	4:30 – 6:00

Curious chefs will elevate their cooking into the realm of delicious salads, appetizers, soups, entrees, and desserts. We will focus on seasonal ingredients and foods that can be replicated for the winter season. Note: A parent or guardian must be on hand to help the student in the kitchen.

13) Cybersecurity 101 Tuesday
Grades 5 & Up 5:00

In this rapidly evolving technology environment, everyone needs to be cognizant of cybersecurity and its impact on all aspects of daily life. Cybersecurity focuses on protecting computers, networks, and information from unauthorized access or attacks. Through hands-on activities we will learn to be good digital citizens, best practices for staying safe online and what the future holds for this incredibly popular industry.

14) Dance a Story Monday
Grades K-2 4:00

In this class, young dancers will bring books and stories to life. Children will dance along and be given a prompt to create their own choreography, using the story. Cha Cha and Tango with *Giraffes Can't Dance*, create flashlight solos with *Firenze's Light*, dive into a painting with *Flyaway Katie*, and more! The class is active, interactive, and filled with opportunities to create. *Taught by BOLD Arts.*

15) Dancemakers Monday
Grades 3-6 5:00

This innovative class blends multiple modern dance techniques and basic dance composition skills that give dancers the tools they need to create their own exciting routines. Dancers expand their understanding of modern dance, build strength and coordination, develop creative problem-solving skills, and learn unique ways to approach choreography. Each performer's unique creative vision is celebrated as they choreograph, collaborate, and create! *Taught by BOLD Arts.*

16) Dash Robotics Thursday
Grades 3-6 4:00

Woohoo, meet Dash, a real robot that will make learning to code fun. Responding to voice, navigating objects, dancing, and singing, Dash is the robot you always dreamed of having. Students will use Wonder, Blockly, and other apps to create new behaviors for Dash — doing more with robotics than ever possible. Let Dash open a canvas for exploration and collaboration by unleashing your creativity as you program Dash to greet you, deliver a message to a friend, follow you on a journey, and become a true partner in fun.

* Estimated Robot Fee: \$150

17) DoodleMatic Game Maker Wednesday
Grades K-3 4:00

Have you ever wanted to create your own video game? Do you like to doodle or draw? In this class you will learn how to make your very own video games using DoodleMatic Game Maker! All you need to do is draw and then watch your doodles magically come to life as playable games. The students will learn and use the exciting new DoodleMatic App and all of its editing and Power-Up features! This exciting class will teach children game mechanics and concepts through STEAM and literacy exploration and mini drawing lessons! At the end of the session the students will have a collection of games they created from the stories, characters, goals, worlds, hazards and game challenges developed in class.

DoodleMatic Kit Fee: \$30

** Requires a tablet or mobile device to install the free Doodlematic App

18) Drone Racing Simulation League

Grades 4 & Up Tuesday 5:00

Our drone racing cadets will train for one of the hottest and fastest growing e-sports in the nation; right in your own home. Once registered and set up, the racers will familiarize themselves with the controller and the online simulator platform. By practicing the course, they will learn racing capabilities and procedures to compete in weekly league races. Throughout the Fall, students will have access to tutorials, mentors, workshops, tech support and unlimited simulation racing. As the pilots progress, they can unlock additional courses and drone components to make the racing more challenging and help improve their times. The Drone Racing Simulation League helps students learn drone flying skills while remaining highly challenged and engaged.

* Estimated Course Equipment, Software License & League Program Fees: \$150

19) Dungeons & Dragons

Grades 3 & Up Thursday 5:00

If you can imagine and think of lands and magical creatures, then you can role play Dungeons & Dragons. Learn the basics of D&D theater of the mind and apply them in an adventure. Mysterious places, magical items, and many surprises lie ahead.

20) Easy Weeknight Dinners

Grades 4 & Up Monday 4:30 – 6:00

Wouldn't it be fun to take over dinner one night every week? Become a better home chef while helping out your parents in the process. We will create fun and delicious meals such as meatloaf with homemade macaroni and cheese or chicken parmesan and host theme nights such as taco night or make your own pizza night!

21) Engineering with Paper

Grades K-2 Monday 4:00
Grades 2-4 Monday 5:00

Build amazing projects with one of the most versatile materials available, paper. Explore engineering, architecture and physics while inventing and creating your own toys, games, structures and so much more. You will learn the Engineering with Paper “alphabet” of techniques and how to use that to turn your ideas into projects. Re-using and up-cycling supplies you already have will also be a focus of this class. A supply kit will sent to you. *Taught by Dazzling Discoveries.*

Engineering Fee: \$30

22) Escape Room

Grades 4 & Up Thursday 5:00

Trapped in a digital breakout room with a group of friends and one way out, you must search for clues and solve several kinds of puzzles and riddles to plot your great escape. When the challenge has been mastered, you will be guaranteed laughter, a sense of accomplishment and a new respect for your classmates and their abilities. Groups will complete a series of escape room challenges together and will then design their own escape room models and games for others to solve. This is an experience that will be remembered for a lifetime... assuming you ever make it out!

23) Exploring Creative Writing Monday
Grades 5 & Up 5:00

This class will introduce students to the short story form and get them writing. Students will learn the basic elements of fiction writing such as setting, point of view, conflict, dialogue, and characterization. Students will participate in collaborative and independent writing exercises. Have fun discovering the art of storytelling. Student work will be compiled into an anthology at the completion of the course and all will be made aware of publishing and contest opportunities.

24) Finance “FUN”damentals Wednesday
Grades 4 & Up 4:00

In this engaging class we will learn the basics of personal finance. Through fun interactive games and challenges students will learn financial concepts and terminology. There are always new videogames, cell phones or apps, but how do you set a budget and differentiate between what you want and what you need? We will ask ourselves questions about how to manage our money - if you receive an allowance, how do you decide what to save, spend or share. Learn how to plan, prepare and execute financial goals in this real-life math class where we engage students to think critically and strategically.

25) Fun with Photoshop Thursday
Grades 4 & Up 4:30 – 6:00

Photoshop is a powerful and magical program. Together, we will become familiar with all of the tools, filters and applications of Photoshop as a whole. With newly learned techniques and a creative eye, we will begin editing altering and merging photos to get fun, professional results.

* Students must be on a PC or Mac

26) Graphic Novels Wednesday
Grades 4 & Up 4:00

A picture tells a thousand words, and graphic novels use these representations to tell a story. In this class children will use myths, legends, games, and their original writing and artwork to create a four-page story suitable for publication. Students will learn how to adapt text to a comic style format, to design characters, to create visual environments, and to color their creations as well. The only limit is where imagination stops!

27) The Illusionist Tuesday
Grades 1-4 4:00

Have you ever wanted to make a coin disappear, read someone else’s mind, make solid objects pass through each other or cause a rope cut in two to magically restore itself? Learn how to do this and much more by joining renowned magician Joseph Fields to uncover magic’s biggest secrets, fool your friends and be the life of the party. The delightful art of balloon sculpture will also be taught.

Transform yourself into an illusionist with a personalized magic briefcase full of tricks!

Magic Fee: \$40

28) The Illusionist 2

Grades 4 & Up Tuesday
5:00

Would you like to perform like Criss Angel, David Blaine, and David Copperfield? If you do, this is your chance to discover the magic secrets that these and many other professionals use to baffle audiences worldwide. Join Joseph Fields and learn the secrets, the sleight of hand and the proverbial tricks of the trade that helped make these professionals famous. Imagination, individuality and creativity will be encouraged to develop a personal magical act with polished showmanship. Extraordinary and advanced balloon sculpture techniques will be learned! Advanced magical secrets of illusion, levitation and sleight-of-hand will highlight this course as well as presentation and performance before an audience. Enhance your skills and transform yourself into a master illusionist with your personalized magic briefcase full of tricks.

Magic Fee: \$50

29) Iron Chefs Make Dinner

Grades 4 & Up Wednesday
4:30 – 6:00

Elevate your chef skills to the next level as we go beyond simple recipes to make more complex appetizers, salads, entrees, and desserts just in time for dinner. Seasonal ingredients and vegetables, healthier ways of cooking with less oil and sugar will be highlighted whenever possible.

30) Kitchen Chemistry

Grades 3-5 Wednesday
5:00

Everything that happens when we cook food is a chemical reaction and many ingredients that we use are chemical compounds. Join us and witness color changes with natural pH indicators such as cabbage juice, make invisible ink from household materials, create a lava lamp, make ice cream without needing an ice cream maker, and separate different pigments from a leaf or a sharpie. Behind all these fun and easy experiments there are fundamental chemistry concepts, including density, decomposition and synthesis, crystallization and polymerization, and reduction-oxidation. We will also learn about physical phenomena such as diffusion, osmosis and chromatography.

31) Minecraft: Challenge Camp Edition

Grades 3 & Up Monday
5:00
Grades 3 & Up Wednesday
5:00

Minecraft combines easy to use graphics and game play coupled with multi player in several different modes accessible to learn at different levels. Journey from simple game play, to more complex world creation and server hosting. Students will work together to create their own computer generated worlds with an almost infinite combination of primitive mechanical devices, electrical circuits, and logic gates built with an in-game material known as Redstone. Using teamwork to create a world from the ground up, Minecraft will serve as a gateway to enlighten students how to safely and securely utilize technology involved in game creation. Many aspects of the computer science and information systems worlds will be introduced including but not limited to software programming, overall concepts and principles of networking and the hardware required in building these seemingly complex systems.

***YOU MUST HAVE A CURRENT MINECRAFT ACCOUNT PRIOR TO THE START OF THE WINTER SESSION**

32) Mini Space Explorers Thursday
4:00
Grades K-3

Curious about outer space? Want to be an astronaut? Join us for this out-of-this-world class! Students will learn about the solar system, the moon, rockets and more as we journey through the solar system! We will create art based on our intergalactic travels and new knowledge using markers, cut paper and supplies you have at home.

33) Mix Masters: The Ones & Twos Thursday
5:00
Grades 4 & Up

Have you ever wanted to be the life of the party? In this workshop, students will spin into the fast and exciting world of DJ-ing. We will explore software that will enable you to cultivate an epic playlist, and perform in front of a crowd. By learning the fundamentals of cutting and transitioning music tracks to have a cohesive flow, you will become a party rocker! For our final project, we will create original DJ sets using music we've collected from each other!

34) Mummies, Mt. Olympus and Mosaics: Discovering Ancient Civilizations Monday
5:00
Grades 2-5

Explore a different facet of an ancient culture each week: Ancient Egypt, Ancient Greece and Ancient Rome. Gods and goddesses, mythology, art, architecture, pharaohs, emperors & kings, pyramids and temples, and much more will be discussed in this engaging class. Each day explores a different topic or theme within the ancient civilization, and connections between all three ancient cultures, as well as to our modern life, will be made. Virtual field trips to The Metropolitan Museum of Art to view primary objects and artworks will take place regularly. Small, themed projects will be completed each week.
Taught by Museums with Marisa.

35) Painting the Masters Thursday
4:00
Grades 4 & Up

An instructional and magical painting class inspired by the great French masters Paul Cezanne and Henri Matisse. We will create our own beautiful acrylic paintings from studying their different techniques of color, drawing and style.

36) Roblox Game Developer Tuesday
4:00
Grades 4-7
Wednesday
5:00
Grades 4-7

Roblox is one of the largest online gaming platforms, with millions of games created by its users. Students will learn to use the Roblox Editor and the Lua coding language to create adventures which can be published to smartphones, tablets, desktops, or consoles. They will explore programming concepts such as loops, arrays, and more on their journey and will learn fundamentals of game making including game mechanics and level design. * Students must be on a PC or Mac

37) Snow White		Tuesday
	Grades K-2	4:00
	Grades 3-6	5:00

This session we'll zoom together to the fairy tale forest and bring Snow White and the Seven Dwarfs to life. Join our cast as we learn all about how and why the Brothers Grimm created this classic tale. Then act, dance and use cool online camera tricks to create our show packed with laughs and magic! The class will culminate in a live shared online performance for family and friends.

38) Stop Motion Laboratory		Tuesday
	Grades 3-6	5:00

Create short, experimental animations using small toys or your favorite art materials such as clay, pastel, markers, and more. Learn to make your characters defy gravity or take them on an epic adventure using green screen backgrounds. Each week a new animation technique will be demonstrated for students to in their projects. We will share our projects at class meetings throughout the session, culminating with a virtual viewing party to see everyone's films. Bring your popcorn!

*Requires a mobile device with the Stop Motion Studio Pro version (\$4.99) app installed.

39) Watercolor Wonders		Wednesday
	Grades 4 & Up	4:00

A famous watercolor painter said "There is an extraordinary quality in the reflection of transparent watercolor against the white of the paper that is uniquely brilliant and appealing." Learn the beautiful and whimsical art of watercolor painting techniques and create original works of flowers, water, forms, skies and magical sunsets.

40) Who Was History & Improvisation		Wednesday
	Grades 3-6	5:00

Inspired by the "Who Was?" book and Netflix series, each month our class will choose a different historical character or event and work together as investigative reporters to explore its secrets. Possible subjects include Queen Elizabeth, Hatshepsut the Crowning of Egypt's First Female Pharaoh, Escapees on the Underground Railroad, Secret Soldiers of the Revolutionary War and more. We'll gather photos, stories, music of the time and collaborate to create a real and imagined live broadcast for an audience of family and friends delivering the fascinating stories and amazing facts about trailblazers, legends, places and events.

41) Winter Soups and Homemade Breads		Thursday
	Grades 4 & Up	4:30-6:00

Grab your slippers and cozy up with the best winter comfort food there is, hot soup and warm fresh baked breads. We will learn basic and easy savory and sweet bread recipes in addition to comfort classics such as Sunday chili, chicken noodle, and lentil soups.

42) Yoga & Mindfulness

Grades 3 & Up Thursday
5:00

Students will move through a fun and active yoga flow. They will learn how to utilize different breathing techniques to help calm down, cool down, and find their center. We will explore several different mindfulness activities to help all stay present, positive, and happy. Students will create their own yoga-pose deck of cards so that they can continue to practice yoga, breath work, and mindfulness activities.

43) Zoom to Algebra

Grades 5 & Up Tuesday
5:00

For students that are in pre-Algebra or want to expand their knowledge, Zoom to Algebra highlights essential topics and concepts. Algebra is logical thinking about numbers that can be applied to solving real life problems. We will dive into topics including real number operations, linear and quadratic equations, factoring, and exponents. We can use these techniques as a foray into the lighter side of mathematics using logic, magic squares, Sudoku, cryptarithms and so much more can be achieved with these skills! Join us for a math adventure as we Zoom to Algebra.