

## Mosaic Class Descriptions Fall 2023

Meeting Mondays & Wednesdays

**A note on class placement:** Academic age groups are recommendations with flexible boundaries. Placement is based on both age/ability and is at the discretion of the Instructor and Program Director. For inquiries, please contact [jayne@mosaicfreeschool.com](mailto:jayne@mosaicfreeschool.com)

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### MONDAY CLASSES

#### HIGH SCHOOL (ages 14+)

##### **Word History Through Art (full year class)**

In this year-long course, we will look in depth at world history through the lens of art. We will examine how people reacted to events in the world, and how it was reflected in the world of art. Our goal is to connect the dots between what was happening from a historic perspective, how it affected the lives of people at the time, how that was reflected in the art, and how it still potentially affects our lives today. The focus will be on discussing some of the more fascinating aspects of art history and the correlating historical events. Each lecture will align chronologically and will provide context for a deeper understanding of the subject matter. We will touch on politics, science, ethics, and of course history, through discussions, debate, and writing.

We will learn how religion affects art, and examine Colonialism and its effect on art. We will learn about important figures that changed the tides of time: Justinian I, Marie Antoinette, The Sun King, Leonardo Da Vinci, The Medici, and more. We will draw parallels between some of the modern influential families and The Medici, in how they influenced the world around them, and, of course, the art. We will talk at length about the Industrial Revolution, and its influence on art, and not just the first Industrial Revolution, but all four of them. Why are we obsessed with the Mona Lisa? Was Van Gogh really that crazy? We will talk about art being used as propaganda from ancient times to today, and how artists find ways around rules imposed on them by the regime in charge. We'll look at Japan's isolationist policies and how they tie in with European impressionism and how the Great War is responsible for the birth of several art movements, and what happened to the art that went missing during WWII. Finally, we will discuss more modern questions, like is graffiti considered art? Why or why not? The psychology behind people that feel the compulsion to destroy art. How has the development of digital art and the last Industrial Revolution influenced the art world? All these questions and more will be addressed throughout the course.

**Instructor:** Mariya Kovalyov

**Tuition:** \$360/semester

##### **High School Biology with Labs (full year class)**

In this year long class we will delve into the biochemical pathways and forces that power life. We'll start with atoms, build up to biomolecules, and continue through cells up to evolution

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and the study of whole organisms. We will be using the "flipped" classroom model where the reading is done before the material is presented in class. This allows students to become familiar with the concepts before each class, bring questions and insights, and allows us to go deeper with biochemistry and application of the information during class time. In addition to class discussions, we will have near weekly hands-on labs to further students' understanding and application of the class material.

All material will be presented at the standard level, as well as the Honors/AP Level for those wishing to delve deeper. Mastery at this deeper level is not required and each student may choose the level of learning appropriate for their needs and ability.

Text: We will be covering one chapter of a standard tenth-grade biology textbook per week, using Miller and Levine Biology.

**Instructor:** Cristen Pantano

**Tuition:** \$400/semester, includes all student lab/activity supplies

### High School World Literature (full year class)

This course is designed to introduce students to masterpieces of World Literature ranging from Homer's *The Odyssey* through *Things Fall Apart* by Chinua Achebe. Through class discussion and in depth literary analysis, students will hone their ability to think and talk critically about works of literary art that both shape and reflect our world through the ages. Students will read, discuss, and analyze texts from a variety of genres including poetry, plays, novels, and short stories. Through small group discussions and literary analysis, we will look specifically at the historical context of these works of literature and how they reflect and shape the world in which we live. Students will develop their thoughts through written analysis in several papers throughout the class. By the end of this course, students will be able to clearly articulate major themes, literary techniques, and devices used by a specific author as well as place the specified piece of literature within a larger world context.

Sample Reading List: *The Odyssey* by Homer, *A Midsummer Night's Dream* by William Shakespeare, *Murder on the Orient Express* by Agatha Christie, *Their Eyes Were Watching God* by Zora Neale Hurston, *In the Time of the Butterflies* by Julia Alvarez, *Night* by Elie Wiesel, *Things Fall Apart* Chinua Achebe, and *The God of Small Things* by Arundhati Roy

**Instructor:** Sachi Tripp

**Tuition:** \$360/semester

### MIDDLE SCHOOL (ages 12 - 13)

#### Literary Genre (full year class)

In this class, students will explore the major literary genres, discovering together what those genres have in common and how they differ. The year will be broken into units based on those genres, including fiction (both short story and novel), nonfiction, poetry, and drama. Students will become familiar with each genre and be able to identify distinguishing

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characteristics of each. Within each of these units, we will study various literary devices, including the author's use of figurative language, theme, tone, and style of writing. Through small group projects and in class discussions, students will get comfortable talking about literature with their peers.

Sample Reading List: Romeo and Juliet by William Shakespeare, Emily Dickinson's poetry, "Thank You, Ma'am" by Langston Hughes, Lord of the Flies by William Golding, and The Boy Who Harnessed the Wind by William Kamkwamba

**Instructor:** Sachi Tripp

**Tuition:** \$360/semester

### **Inquiry Physical Science (full year class)**

This middle school class engages students in the practice of science not just the memorization of facts. Using an Argument-Driven Inquiry (ADI) methodology, we will cover four core areas in physical science: matter, motion and forces, energy, and waves. Through labs and activities, students will actively engage in scientific practices as they design their own investigations to answer a variety of thought-provoking research questions - from how thermal energy works to what could make an action figure jump higher.

The ADI process is multi-layered and collaborative with a strong focus on developing scientific writing and presentation skills. Working in small groups, students respond to a guiding question, design their own method, develop models, collect and analyze data, and construct an argument for presentation. Each investigation will conclude with peer critique, class discussion, and written lab reports.

Pre-requisites: Students must possess appropriate maturity for effective small group lab work and solid communication and writing skills.

**Instructor:** Jayne Besjak

**Tuition:** \$400/semester, includes all student lab/activity supplies

### **Public Speaking (Fall semester)**

Students in public speaking will first spend time analyzing excellent speeches by others to discern the techniques used to make them effective. Simultaneously, the students will select a speech delivered by a famous person to memorize and perform in class. During the second half of the term, the students will write and memorize their own platform speech. Through this process, they will learn to develop a thesis, research their topic effectively, and utilize excellent speech-writing techniques. From the very first class, the students will work to improve the important speaking skills of diction, inflection, eye contact, and use of movement.

**Instructor:** Natasha Benkendorf

**Tuition:** \$360/semester

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### **Art Workshop II (full year or semester option)**

This class is aimed at middle and high school students that have completed Art Workshop I. The course will focus on taking a student's art skills to a superior level. Students will be taught advanced drawing, painting, palette knife and sculpting techniques and will be introduced to a number of new mediums. Mediums: Graphite pencil, watercolor, colored pencil, charcoal, acrylics, oil pastel, ink, and polymer clay.

Please contact the instructor with questions about student placement.

**Instructor:** Lisa Young

**Tuition:** \$360/semester

### **Academic Teams**

We are eager to sponsor academic/competition teams at Mosaic next year! We welcome your ideas. Several we are evaluating are: [Future City](#), [Future Problem Solving Program International \(FPSPI\)](#), [Odyssey of the Mind](#), [NASA Plant the Moon/Mars Challenge](#)

### **Student Clubs**

We would like to offer space and time for students to participate in clubs such as leadership and service, literary magazine, music, etc. Let us know their interests!

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## [WEDNESDAY CLASSES](#)

### [HIGH SCHOOL \(ages 14+\)](#)

#### **High School Writers Workshop: Literary Analysis (full year or semester option)**

This course is designed as an introduction to written literary analysis for high schoolers and can be taken in conjunction with High School World Literature or independently. In this class, students will hone their abilities to formulate and develop a thesis based on a text and defend that thesis using citations from a text as well as outside sources. In this highly personalized writing class, students will meet individually with each other and the instructor in order to sharpen their writing skills and develop their own style of written expression.

**Prerequisite:** A foundational writing class and significant practice writing a five paragraph essay

**Instructor:** Sachi Tripp

**Tuition:** \$360/semester

#### **Introduction to Computer Science: Computational Thinking and Algorithm Development Through Java (Fall semester)**

In this class, we will learn the foundations of computer science through computational thinking, algorithm development, and problem-solving. Computational thinking is a way to

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approach any problem in a systematic manner and find a solution that can be resolved via a computer program. The application of the computational approach is extraordinarily wide, and can be applied not only to computer science but can be used to find real-world solutions that have an impact on our lives in a multitude of fields. For the purpose of this course, we will be using java, and after covering the fundamentals of the syntax, we will learn by being presented with problem/solution assignments. For example, we will make a talking calculator, a magic 8 ball, a number guessing game, and more.

Textbooks and an online compiler will be shared with enrolled students before the first class.

**Instructor:** Mariya Kovalyov

**Tuition:** \$360/semester

### Screenwriting & Film (for both middle and high school students)

In this hands-on filmmaking workshop, students will learn the art of filmmaking from script to screen. Students will work together as a film crew to generate ideas, write short screenplays, direct actors, and learn camera, lighting, and sound techniques. Students will also learn the basics of editing in Adobe Premiere Pro. In each class, students will work both behind and in front of the camera, in both exterior and interior locations, so that they can gain as much experience as possible.

This class will build on skills learned from previous Screenwriting & Filmmaking classes offered at Mosaic and is appropriate for both returning and new students.

**Instructor:** Montclair Film

**Tuition:** \$400/semester, includes all equipment and supplies

### MIDDLE SCHOOL (ages 12 - 13)

#### VEX Robotics (full year or semester option)

Students will work independently and in teams to design, build, and code robots using [VEX](#), a snap-together robotics system designed from the ground up that provides novice users the chance to find success quickly, while still being able to challenge more advanced users.

Students will first work with standard builds following basic directions and then move to create their own unique robots. They'll learn how to program their robots to perform a variety of tasks and will compete in classroom Battle Bot competitions with their custom designs!

Robotics programs offer students the chance to become confident innovators and thinkers.

Students learn real-life skills like project planning & management, teamwork and collaboration, time management, and hands-on problem-solving. We hope our program will be a launch pad for developing a Mosaic competition team for interested students.

No experience is necessary, but maturity and appropriate classroom behavior is expected.

**Instructor:** Jayne Besjak & Caitlin Ayers

**Tuition:** \$400/semester, includes all student supplies

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### **Foundations in Writing (full year or semester option)**

This class will focus on improving academic writing and strengthening foundational skills in grammar/mechanics, paragraph construction, and text analysis. Students will learn how to craft paragraph and essay responses with clear, evidence-based reasoning. Students will use the standard MLA format to structure their essays. Along the way, they will learn strategies for revision, editing and proofreading, and reflection on the writing process. What makes the workshop come alive is the ability for the students to share their writing within a supportive class community and to receive and offer constructive feedback. This class will supplement Literary Genre for Middle Schoolers but can also be taken separately.

**Instructor:** Sachi Tripp

**Tuition:** \$360/semester

### UPPER ELEMENTARY (ages 10 - 11)

A one-day-per-week program consisting of academic and enrichment classes that will be engaging and challenging but with minimal at-home work required for students.

### **Art Workshop I (full year or semester option)**

Art class focused on bringing each student to the next level in their art journey. The course will lead the student from basic drawing skills through to advanced painting techniques using a wide range of mediums. Students will have the opportunity to express themselves in both realistic and abstract visual arts, as they work towards developing good foundational art skills. Class will include still life, portraiture, landscape, life drawing, cubism, impressionism, surrealism and sculpture. Mediums: Graphite Pencil, colored pencil, charcoal, watercolor, pastel, clay and acrylic.

**Instructor:** Lisa Young

**Tuition:** \$360/semester

### **Science Investigations (Fall semester)**

Who doesn't enjoy the fun and challenge of trying to solve a mystery? In this class, students will work together to solve two mysteries using science: a crime scene and an environmental disaster. Scientific investigation is about gathering evidence to determine a solution. Student understanding of science will deepen as they experience the ways that science is like the process of detection with an important distinction between evidence and inference. Crime lab testing will include thread tests, powder tests, DNA, chromatography, fingerprinting, and more. To solve the environmental mystery students will study and discuss reference materials, including records, newspaper articles, charts, graphs, and even "secret documents," and integrate all of this information with their own test results. Students will become aware of the interconnectedness of the natural world and of environmental problems, and see how one small change can trigger a whole chain of events.

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**Instructor:** Jayne Besjak

**Tuition:** \$360/semester

### **Literary Geography (full year or semester)**

This class will blend literature and geography as students read and discuss a variety of stories from around the globe! We'll explore what makes great literature as we navigate the world through weekly hands-on activities, class discussions, and presentations. The class will integrate the study of physical geography - maps, mapping tools and physical features - with projects centered on culture, history, natural resources, cuisine and economy related to the stories we read. The book (and short story) list will be finalized based on the preferences and ability levels of registered students. Some possible novel choices include: *A Long Walk to Water*, *The Night Diary*, *Call it Courage*, *The Red Umbrella*, *When Stars are Scattered*, *Esperanza Rising*, *The Last Mapmaker*.

At-home work required for this class will consist of reading assigned chapters and preparing for class discussions and projects.

**Instructor:** TBD

**Tuition:** \$360/semester

### **Makerspace (by semester, Unit, and Open Maker Time)**

Innovation & Invention! Students who join our Makerspace program enjoy hands-on projects building strong foundational skills in STEAM. Makers will advance through our project-based curriculum with units dedicated to Robotics, Electronics, Engineering & Digital Creation. With access to tools like Sphero Robotics, VEX Robotics, Makey Makey, Micro:Bit, Arduino, CircuitScribe, and an entire resource center of Engineering supplies, students will use their inner strengths to find solutions to a variety of exciting challenges. Not only will students learn to program, build robots, create innovative structures, use electronics to create solutions, and learn to solder to name a few; they will gain skills in critical thinking, problem-solving, collaboration, programming, inventing and more!

Mosaic Makerspace will offer a variety of multi-week Units as well as Open Maker Hours where students will have access to Maker supplies and equipment to unleash their creativity!

**Instructors:** Caitlin Ayers & Jayne Besjak

#### **Tuition Options:**

\$280/semester, includes all Units and Open Maker Time

\$22/week for each multi-week Unit (Units will be of variable length, typically 4 weeks)

\$22/week for Open Maker Time

**Unit Schedule:** will be posted in June for sign-up