



## **2017 MIDDLE SCHOOL SUMMER SESSION COURSE DESCRIPTIONS**

### **Sixth Grade**

#### **Read-Write**

This course will focus on those strategies that will enable a student to be successful when reading an informational text such as a science or social studies book. Topics will include vocabulary development/contextual understanding; pre-reading strategies such as, but not limited to, K-W-L and SQ3R; research strategies; concept/story mapping; and graphic organizers.

This course will also build skills in the six analytical traits of writing--ideas and content, organization, voice, word choice, sentence fluency, and conventions. Pre-writing, editing, and revision will be used to produce at least two final writing products in one of these three modes: expository, narrative, or persuasive. Topics will be student choice.

#### **Master Your Math**

This course will focus on the essential math strategies necessary for success in the middle school math program. Topics included will be addition, subtraction, multiplication, and division of whole numbers, decimals and fractions; order of operations; estimation and rounding; proper use of a calculator; basic geometric definitions, perimeter, and area; measurement; statistical analysis (mean, median, mode, range). The topics are derived from the mastery list at the pre-algebra level from the Millard math frameworks.

#### **Math Prep for Pre-Algebra**

This will be a fast-paced course reviewing the math skills normally taught in sixth and seventh grade math including multi-step equations, problem solving, exponents, square roots, and 2- and 3-dimensional geometry. This course consolidates the arithmetic of previous grades and prepares students for Pre-Algebra.

#### **Be Cool in Middle School**

Students will start middle school on the right foot with this course. They will explore Multiple Intelligences and discover their own learning style. Students will learn how to manage time and stay organized. Note-taking within each subject area will be explored as well as other study techniques such as mnemonic devices, singing and visualization. Students will also practice listening, goal setting and test-taking.

### **Seventh Grade**

#### **Read-Write**

This course will focus on those strategies that will enable a student to be successful when reading an informational text such as a science or social studies book. Topics will include vocabulary development/contextual understanding; pre-reading strategies such as, but not limited to, K-W-L and SQ3R; research strategies; concept/story mapping; and graphic organizers.

This course will also build skills in the six analytical traits of writing--ideas and content, organization, voice, word choice, sentence fluency, and conventions. Pre-writing, editing, and revision will be used to produce at

least two final writing products in one of these three modes: expository, narrative, or persuasive. Topics will be student choice.

### **Master Your Math**

This course will focus on the essential math strategies necessary for success in 7<sup>th</sup> grade math. Topics included will be addition, subtraction, multiplication, and division of rational numbers, decimals and fractions; order of operations; estimation and rounding; further use of a calculator; basic geometric definitions and calculations; perimeter, area and volume; measurement; statistical analysis (mean, median, mode, range); and algebraic expressions. The topics are derived from the focus list at the 7<sup>th</sup> grade level in the Millard math frameworks.

## **Eighth Grade**

### **Read -Write**

This course will focus on those strategies that will enable a student to be successful when reading an informational text such as a science or social studies book. Topics will include vocabulary development/contextual understanding; pre-reading strategies such as, but not limited to, K-W-L and SQ3R; research strategies; concept/story mapping; and graphic organizers.

This course will also build skills in the six analytical traits of writing--ideas and content, organization, voice, word choice, sentence fluency, and conventions. Pre-writing, editing, and revision will be used to produce at least two final writing products in one of these three modes: expository, narrative, or persuasive. Topics will be student choice.

### **Master Your Math**

This course will focus on the essential math strategies necessary for success in 8<sup>th</sup> grade. Topics included will be operations with all rational numbers and solving linear equations; decimals and fractions; order of operations; geometry and measurement; analyzing two and three-dimensional space and figures; statistical analysis (mean, median, mode, range) and algebra, analyzing and representing linear functions. The topics are derived from the focus list at the 8<sup>th</sup> grade level in the Millard math frameworks.

## **Sixth, Seventh and Eighth Grade**

### **Unplugged**

This course will allow students the opportunity to learn to play the acoustic guitar, at the beginner and intermediate levels. Students will learn to play chords using a chord chart, as well as melodies and a variety of rhythm styles. Students will use only acoustic guitars. A few guitars are available to borrow, but students should plan to use their own guitars if possible.

### **Computer Coding and Robotics Level 1**

Students will be introduced to basic mechanical engineering and the design process by learning key STEM principles and robotic concepts through the construction of a VEX robot. The class leverages the excitement of robotics combined with project-based activities to teach the design process. Students will be challenged to problem solve and use critical thinking skills to design, program, develop, and test their robots throughout the duration of the course. No prior robotics experience is required; beginners are able to advance gradually increase their knowledge and skill level.

## **Computer Coding and Robotics Level II**

This STEM based class is an in-depth investigation of building and programming robots using a VEX robot. Students will enter the world of computer science and continue to develop problem solving and critical thinking skills by working with a robot and programming it with a computer to move, react, and make sounds. Students will also build their knowledge of concepts such as variables, loops, conditional statements, and event handling. Students will work in pairs and small teams, sharing a VEX robot and computer. Students must have taken Computer Coding and Robotics Level 1 to enroll in this course.

## **App Inventor**

Students will learn computer science by building socially useful mobile apps for Android devices. Students will be challenged to problem solve and use critical thinking skills to design, program, develop, and test their apps during the completion of this course. In addition to programming and computer science principles, the course is project-based and emphasizes writing, communication, collaboration, and creativity. No prior programming experience is required.

## **Virtual Explorations**

Participants will solve real-world problems using virtual reality by Google. To find solutions, students will listen and look carefully as they search the Smithsonian Museum, explore a coral reef, or walk on Mars to find clues and answer questions. Students will experience virtual field trips in order to travel through history, examine new cultures, and dig in to science. They will collaborate with classmates to look at multiple perspectives and challenge one another to think critically.

## **Introduction to Photojournalism**

Students will explore summer school through the eyes of a photojournalist by creating a journalistic slideshow documenting the summer school experience. Students will learn about camera operation, legal issues, proper photography techniques, interviewing techniques, caption writing, and headline writing.

## **Drama**

In this course, students will learn and practice basic acting skills and techniques to effectively communicate on stage. Activities will include theatrical warm up, improvisational games, and discussion of actors' obstacles and objectives within a scene. We will explore what it means to develop a character for a play using imagination, body, and voice. The course will cover stage directions and theatre terminology.

## **Art Expressions**

Students will experience pottery, painting, sculpture and more in this course where art is integrated with language arts and writing.

## **Students Going into 9<sup>th</sup> Grade**

### **Step-Up to High School**

Held at the high school, this course is for students preparing to enter 9th grade. This class is designed to help students tackle the most challenging courses they will face during the first year of high school: English and Math. Participants will brush up on the math, reading and writing skills that students can struggle with the most. They will also learn some valuable study and life skills, as well as strategies to make the transition seamless and make high school a great experience! Please register using the high school registration form.

## **High Ability Learners: Sixth, Seventh and Eighth Grade**

### **Literary Explorations**

In this class, students will study the concept of change through discussion and collaboration. Autobiographies of various writers and artists will be explored by examining, comparing, and contrasting life stories, self-portraits, literature and works of art from various cultures. Through discussion, research, presentations and reflective writing, students will gain insight into the development of talent and will explore their own identities. Students will experience high-quality literature selections, hands-on lessons, and will gain a deeper understanding that will enhance writing, reasoning, reading, and analytical skills.

### **Exploring Mathematics**

This course is designed for middle school students identified as HAL in the areas of mathematics and visual spatial skills. Students will practice problem-solving, logical analysis and critical thinking skills. Algebra concepts will be explored using various strategies.

## **Mini-Course: Sixth, Seventh and Eighth Grade**

### **Babysitting Basics\* (4 one-week sessions available)**

Prepares students to provide safe and nurturing supervision and care while babysitting infants through school age children. Class activities will include preparing a babysitting kit, children's snacks, and craft activities. Child and Infant CPR and First Aid training will be included. The CPR booklet and certification is included in the course fee.

### **Cool Chemistry**

Bubbles, slime, elephant toothpaste and more! Class will explore "Kitchen Science". Students will conduct multiple experiments that can be repeated at home with family and friends (with parent permission, of course!). Explanations for why things react the way they do, and hands on inquiry to keep students learning as they have fun.

### **Entrepreneurship**

Are you interested in owning your own business someday? Do you have a great idea for a new product or service? In this course, students learn what it means to be an entrepreneur and how to use their unique skills and talents to start a small business venture. Students will:

- Recognize characteristics and practices of successful entrepreneurs
- Demonstrate business-planning skills for the following: business set-up; marketing; financing; management and ethical decision-making

It will be a week full of activity and fun!

### **Exploring Engineering**

Do you like ice cream? This course will focus on the Engineering Design Process as students engineer a process for making ice cream. Students will have the opportunity to build skills in problem-solving, teamwork, communication and creative thinking.

### **Forensic Science**

Use hands-on lab activities to solve “crimes” and explore the world of forensic science. Participants will learn about crime scene analysis and evidence. In addition, students will practice proper lab techniques and develop skills needed for scientific inquiry.

### **Textiles and Technology**

A course for the creative mind, Textiles and Technology enables students to learn or review basic sewing fundamentals while also incorporating technology applications. This course explores the popular trend of “upcycling” clothing or textile items into new products. Using iPads or computers, students will research possible recycled textile projects and develop their own pic-collage of ideas. Pre-owned or unused fabric items will be used to create new products. Possible projects are t-shirt lunch sacks, jean bean-bag games, beach towel summer bag, or t-shirt gym bags. Students gain sewing experience in cutting, stitching, hand-stitching, seam and hem finishes, pressing, and finishing techniques. The technology portion of the class will provide students with hands on experience of the computer/iPad. Possible program applications are Microsoft Word, Publisher, PowerPoint, Pic-Collage, and navigation of Google Chrome/IE/Safari.

### **Light and Sound**

Students will explore the similarities and differences between light and sound and apply their knowledge to real-world situations. Activities will allow students to discover the composition of light, a mirror’s effect on rays of light, the definition of sound, and how both sound and light have a source, means of transfer and a receiver. Students will gain an understanding of how their eyes and ears work as they experiment with shadows, color, music and much more.

### **Music and Digital Design**

Music and Digital Design is a course for students to explore music with more modern ensemble settings. This class will be to advance any skills the students already possess and focus on improvisation and composition. Students will improvise and compose music with the aid of electronic devices. Students will work in groups and alone to write, arrange and share their work.