

**MOUNTAINSIDE MIDDLE SCHOOL
CURRICULUM GUIDE
2018-2019 / 8th GRADE**

Eighth grade students are required to take the following courses:

Math	2 Semesters
English	2 Semesters
Social Studies	2 Semesters
Science	2 Semesters
Physical Education	2 Semesters

Students may choose from the following:

Band	(Year long class)
Choir	(Year long class)
Orchestra	(Year long class)
Spanish I	(Year long class)
General Electives:	(Semester long classes)

**Video Game Design/Intro to Programing
Art 8
Robotics 8
Design Fab Lab 8
App Creators
Cultural Awareness
Leadership**

MOUNTAINSIDE MIDDLE SCHOOL COURSE DESCRIPTIONS

Mead School District #354 / 8th Grade

REQUIRED COURSES

MATHEMATICS:

PRE-ALGEBRA II - Students take their understanding of unit rates and proportional relationships to a new level, connecting these concepts to points on a line and ultimately using them to solve linear equations that require them to apply algebraic reasoning as well as knowledge of the properties of operations. Students will also expand their understanding of numbers beyond rational numbers.

ALGEBRA - The following concepts will be covered in this course: functions (including exponential, linear and quadratic), solving functions in applied contexts, basic transformations of functions, integer exponents, scientific notation, radicals, solving linear equations and inequalities with two variables and sequences. Problem-solving practices are extended and applied to more challenging algebraic problems. This is an advanced class and students must maintain a “B” average to remain in the class. Students will be assigned to this class.

GEOMETRY - Prerequisite is a "B" grade or better in Algebra. The following concepts will be covered in this course: inductive and deductive reasoning; writing formal proofs using definitions, axioms, and theorems; congruence; similarity; general properties of polygons, circles, triangles, including right triangles and special triangles; proving and applying the Pythagorean Theorem and its converse; applying the basic trigonometric ratios of sine, cosine, and tangent; geometric transformations. Students extend and formalize their work with geometric formulas for perimeter, area, surface area, and volume of two- and three-dimensional figures. Problem-solving practices are extended and applied to more challenging geometric problems. This is an advanced class and students must maintain a “B” average to remain in the class. Students will be assigned to this class.

ENGLISH:

ENGLISH 8 – The eighth grade English program focuses on building communication skills through a variety of literature, reading, writing, and speaking activities. Literature includes reading novels, short stories, and poetry. The students will also learn several reading strategies to improve their comprehension in both their English and content classes. Narrative and argumentative writing skills will be practiced and expanded upon using the Six Writing Traits (Ideas, Organization, Word Choice, Voice, Sentence Fluency, and Conventions). Students will also expand language usage and vocabulary through the study of grammar, and Greek and Latin roots.

HONORS ENGLISH 8 – This course covers the 8th grade English curriculum in an enriched and challenging sequence of study with the additions of classic literature and a full-length Shakespearean play. This class is for the accelerated English student. Students will be assigned to this class. Students must maintain a B grade or better to continue in the class.

SOCIAL STUDIES:

SOCIAL STUDIES 8 – The class begins with the review of the five themes of geography within the settlement of the 13 colonies. United States history begins with the American Revolutionary War, and includes the foundations of the government, the Constitution, the acquisition and settlement of the western states and the Civil War. Reading and research skills are also emphasized.

SCIENCE:

SCIENCE 8 – Introduction to Engineering Technology - This course offers students the only year-long opportunity available during their secondary school experience to explore the natural and physical wonders of the earth and space. The three big ideas addressed in 8th grade science are: Energy, Astronomy and Earth. Career Technical Education (CTE) and Science Technology Engineering & Mathematics (STEM) principles are infused in a project-oriented curriculum. Students will use the Engineering Design Process to build a model Mars Colony, water rockets, earthquake resistant buildings, mousetrap cars, and solar powered cars.

PHYSICAL EDUCATION:

HEALTH AND FITNESS EDUCATION - This course emphasizes team and individual sports, lifetime activities, and health and fitness concepts. Students will participate in a wide variety of activities, as well as gain an understanding of how to plan their own lifelong health and fitness.

MUSIC: Continuing Music Elective (Year Long)

SYMPHONIC BAND - For 8th and very advanced 7th graders with band experience. Along with music fundamentals at the individual level, students will learn group techniques in an advanced band setting. This band has a number of performances during the school year. Students will be graded on performance, preparation, participation in class and attendance at additional rehearsals and events. Permission of the instructor is required.

WIND ENSEMBLE - An elite band of advanced 8th graders with band experience. Musicians are expected to perform at the 4th year level. The curriculum consists of developing and refining techniques introduced in previous bands. Along with stressing individual musicianship, group ensemble techniques will be dealt with on an advanced level. Students will be graded on performance, preparation, participation in class and attendance at additional required rehearsals and events. Permission of the instructor required.

JAZZ ENSEMBLE I - An elective class for the most advanced 7th and 8th graders that have auditioned and been selected as members of the ensemble. Students in Jazz I are required to also have a concert band as their elective unless their instrument is piano or bass. The curriculum consists of advanced jazz techniques such as ensemble playing, style, feel, jazz theory and improvisation. This band has a number of performances throughout the year.

JAZZ ENSEMBLE II - A “Zero Hour” class for 7th and 8th graders that have auditioned and been selected as members of the ensemble. Students in Jazz are required to have a concert band as their elective unless their instrument is piano or bass. The curriculum consists of developing jazz techniques such as ensemble playing, style, feel and improvisation. This band has a number of performances throughout the year. Jazz II rehearses Mondays and Thursdays from 7:00am to 8:00am (auditions are held at the beginning of the year).

CONCERT CHOIR - For Soprano and Alto voices, mostly 7th grade. Students will learn and improve vocal skills by performing challenging literature from many genres including American, sacred, jazz and contemporary. Students will perform in night concerts and travel to festivals. Students are graded on participation in class and 4-5 required performances per year. This is not an audition based choir.

SELECT CHOIR - For Soprano and Alto voices, mostly 8th grade. Students will learn and improve vocal skills by performing challenging literature from many genres including American, sacred, jazz, and contemporary. Students will perform in night concerts and travel to festivals. Students are graded on participation in class and 4-5 required performances per year. This is an audition based choir.

SYMPHONIC CHOIR - For all voices including Soprano, Alto, Tenor and Baritone, mostly 8th grade. Students will learn and improve vocal skills by performing challenging literature from many genres including American, sacred, jazz, and contemporary. Students will perform in night concerts and travel to festivals. Students are graded on participation in class and 4-5 required performances per year. This is an audition based choir.

ORCHESTRA - This program is designed for the intermediate strings student who has had two or more years of playing experience. Students will receive further instruction on the music fundamentals, scales, rhythm, sight-reading and advanced playing techniques. Grade is based on performance, preparation, and participation in class, contests and concerts. Students must provide their own instrument and accessories.

GENERAL ELECTIVE COURSES (Year Long)

SPANISH 1 - Students will acquire the tools to communicate in Spanish at a beginning level through listening, speaking, reading and writing. A variety of interactive learning methods will be used in this foundation course. Students must earn a “C” or better grade in order to advance to Spanish II at the high school.

GENERAL ELECTIVE COURSES (Semester Long)

VIDEO GAME DESIGN/INTRO TO PROGRAMMING - This course teaches students the basics of computer programming and how to develop 2D games using the Zero Engine. Students will be challenged to create their own games, which will give them important practice and life applications to enhance their 21st century skills. During the course, students will be utilizing Zero Engine DigiPen to learn to code, design, and play! Students will work individually and in groups to create many features of gaming.

ART 8 – Students will be introduced to the Elements and Principles of Art, using a variety of mediums for both two-dimensional and three-dimensional work. There is a \$20.00 supply fee per class (Semester).

ROBOTICS 8 - This course will explore mechanisms, machine automation, and computer control systems using VEX Robotics and Robot-C. This course is considered challenging and is a preparatory class for the HS Engineering Program.

DESIGN FAB LAB 8 – Design Fab Lab is a continuation of the Design and Modeling class offered in the 7th grade with a focus on design and innovation of new products, utilizing Google SketchUp and physical models. Students will also be introduced to 3D printing and how to pitch a product as well as their application in the real world. Career exploration as applied to Engineering and Design vocations will be a focus.

APP CREATORS – An introduction class to block coding and code reasoning where students build games, animations, and mobile apps using MIT coding language. Students learn the basics of how to code, what they can do with code, and where it can take them later in life.

CULTURAL AWARENESS - This course is designed to give students an introduction to the language, culture, and location of countries that speak German, French, and Spanish. At the end of the course you should be able to make an informed decision about which language you would prefer to study at the high school level. Foreign language is an academic elective and requires some studying, yet we have fun in class while practicing new words and phrases.

LEADERSHIP – Leadership class focuses on the way students can help improve Mountainside Middle School. Students enrolled in this class will be responsible for taking part in Mountainside’s school-wide activities. This course will be “hands on” and provide an excellent opportunity to gain leadership skills.

SUPPORT CLASSES

READING SUPPORT - This 9-week course focuses on reading comprehension and vocabulary. Students learn 1-2 different reading strategies each week that can immediately be implemented in their core classes to help build reading comprehension. Weekly attention is also given to reading fluency and reading rate, as necessary. However, the focus is on reading strategies and vocabulary development to improve understanding of all different types of texts. Students are assigned to this course.

SPECIAL SERVICES PROGRAMS

Students must be qualified through the District Special Services Department.

*Each student's Individual Education Plan services will be determined on a case by case basis. We will provide a continuum of services for each individual student need.

RESOURCE ROOM - The purpose of the Resource Room is to provide specially designed curriculum and individual instruction in the basic skills of reading, written expression, mathematics, and other areas as determined by the IEP team. Services may include in-class support on academic core teams by Special Education teachers and para educators.

LIFE SKILLS - The course goal is to teach the functional skills that a student needs to become a productive and independent family member, citizen, employee, and a participant in a variety of avocational and leisure time activities. Consequently, they will be taught to develop healthy self-concepts, attitudes, and behaviors necessary to become productive citizens.

DEVELOPMENTAL LEARNING CENTER (DLC) - This program is a District program for middle school students who qualify for special education services and who have an Individualized Educational Program (IEP). The curriculum is highly individualized and based on each student's IEP. The program focus is on functional academics, communication skills, and the development of social and adaptive skills. This is a non-graded program for middle school students.