

Nipher Middle School
Seventh Grade Course Descriptions
2022-2023

MATHEMATICS 7

Seventh grade math is a year-long journey where students will:

- develop understanding of and apply proportional relationships
- develop understanding of operations with rational numbers and working with expressions and linear equations
solve problems involving scale drawings and informal geometric constructions including two and three dimensional shapes to solve problems involving area, surface area, and volume
- draw inferences about populations based on samples
Together our learning community will strive to become problem solvers ready to take on real-world problems with accuracy and success.

ENGLISH LANGUAGE ARTS 7

Seventh Grade English Language Arts balances the practical elements of reading and writing with continued enjoyment of those two things. To maintain this enjoyment, students need reading material they choose and enjoy, regular writing practice about topics that interest them, and opportunities to work with others on meaningful tasks.

To progress in the practical elements, students must develop academic vocabulary, find and correct mistakes in the conventions of standard English, increase reading stamina, and develop their ideas by writing. Maintaining this balance helps all students grow as readers and writers.

There are four main topics:

1. Poetry
2. Mythology/Short Stories
3. Dystopian fiction
4. Propaganda/Persuasion

Students are expected to read at least one new book from the following list in the summer before 7th grade:

- [The Lightning Thief](#)
- [Esperanza Rising](#)
- [Hatchet](#)
- [The Hunger Games](#)
- [Coraline](#)
- [Tristan Strong Punches a Hole in the Sky](#)

SCIENCE 7

Seventh Grade Life Science investigates the diversity, complexity, and interconnectedness of life on Earth. In this course, students will first discuss the basic needs and characteristics of all organisms including cellular structures and functions. Students will compare similar processes between unicellular and multicellular organisms including reproduction, the release of chemical energy, and the maintenance of homeostasis. Finally, students will investigate relationships between organisms as they interact in their ecosystems and compete for finite resources. The study of these ecosystems will also include the transfer of energy and recycling of matter. Throughout the course, students will be challenged to develop their scientific process skills including reasoning and critical thinking.

SOCIAL STUDIES 7

Seventh grade social studies focuses on the period following the American Revolution and ending with Reconstruction. Included in this focus will be the geographic, economic, political and social elements that influenced the period. In each unit, students will continue the development of the critical reading and thinking skills that are essential to the study of any historical period.

WELLNESS 7

Wellness is a three-year comprehensive program in which students will participate in each grade level year they are at Nipher. Students will focus on healthful living practices, strong self-esteem and personal awareness, and building and maintaining a strong, healthy body through both class work and active participation in conditioning classes.

FULL YEAR ELECTIVES

BAND

7th Grade Band members must successfully complete 2 years of instrumental music study or meet director approval based on musical aptitude prior to enrollment. Students will develop skills that lead to intermediate levels of proficiency in technique on their instrument. Students will gain an understanding of music theory as it pertains to their instrument and continue to experience a variety of literature for the modern band. Members of the ensemble will have opportunities to perform solos and small ensemble literature as well as large ensemble selections to be performed at required concerts and festivals.

ORCHESTRA (min. 2-year experience)

Students must have at least one year of prior experience in the 6th-grade class with the completion of Essential Elements Book 2. Students will work on orchestral pieces two performances for 6th-8th grade, Festival of Strings at Kirkwood High School and Large Group Festival. Emphasis will be placed on advanced techniques such as shifting, theory, two-octave scales/arpeggios/thirds, music theory, and composer history. Students will have the opportunity to participate in the annual solo and small ensemble festival and receive feedback from a judge.

SOAR

This year-long course is offered to students who meet district criteria for the state gifted program. Students will complete activities and projects involving creativity, critical thinking, research, presentation skills, and problem solving. Once in the middle school program, students need not requalify each year.

SEMESTER EXPLORATORY COURSES

ART

Students in the seventh grade Art program will continue to expand and deepen their knowledge and understanding of the art elements and principles of design in light of art history and studio activities. Studio activities will include both two-dimensional and three-dimensional formats and will introduce students to a range of media. Students will embrace artistic practices such as keeping a sketchbook and building a digital portfolio of their artwork.

CHOIR

In 7th Grade Choir, students will reinforce and further develop their singing skills and techniques. They will learn the process of sight-singing using Solfege, further develop their vocal range, adjust to their changing/changed voice and work on proper singing posture and breathing. The students will have opportunities to sing as a group on a regular basis and will have one or two formal evening performances per semester. This class can be taken all year if desired.

ENGINEERING TECH I: Design Modeling and Manufacturing

This course offers an in depth look at engineering careers, engineering design process and manufacturing techniques. Students will use a CAD modeling system to create three-dimensional (3D) models. Students will describe the design process and how it works, along with demonstrating the ability to measure accurately to solve engineering problems. Students will understand the purpose and importance of working in a team and evaluating criteria and constraints to solve technical problems through drawings and other forms of communication. After gaining knowledge of orthographic and isometric drawings, students will use various tools and materials to manufacture items from technical working drawings.

*This is a prerequisite course to Engineering Tech II: Advanced Design and Architecture. Engineering Tech I will also be available to 8th grade students first semester who did not take Engineering Technology Design Modeling in 7th grade.

JOURNALISM

In this semester-long course, students build on their introductory knowledge of the world of journalism. Students will both learn and create in this class. Topics include journalism ethics, interviewing, photography, graphic design, and the basics of print and broadcast journalism. By the end of this class, students will have the necessary skills to jump right into the 8th grade Knightly News and yearbook courses.

MAKERSPACE

This course provides hands-on, creative ways for students to design, experiment, build, and invent, as they deeply engage in science, engineering, technology, and mathematics activities (STEM), but in a non-traditional class environment. Possible activities include cardboard construction, prototyping, electronics, robotics, digital fabrication, and building self-powered vehicles and kinetic machines.

ROBOTICS

This semester course is designed to develop and strengthen student skills in STEM (science, technology, engineering, and mathematics). Utilizing the principles of the FLL (First Lego League Robotics) Program, students will produce an extensive research project which fully explores a specified topic. Students will also construct a programmable robot and robotics playing field. The playing field will consist of various obstacles and challenges for each robot to perform with high levels of precision. Specialized computer programs are used to guide robots on the playing field. Students will plan detailed presentations of their research, robot programming, teamwork, and robot construction.

SPEECH & DRAMA

This course builds upon and advances skills learned in the sixth grade. Dramatic literature is introduced, and more emphasis is placed on effective rehearsal techniques and character development. This class introduces students to a more intense study of movement, vocalization, acting areas and body positioning and helps students become more confident with stronger acting choices. Students develop higher-level thinking and performance skills while analyzing characters and text in scripted scene work as well as in improvisational exercises and games. Students are encouraged to help with a Nipher Players production.

WOODWORKING I

This semester course allows students to explore the area of woodworking and the processes used to transform raw materials into a finished project. Students will design and construct at least two woodworking projects throughout the course of the semester. An emphasis will be placed on how to safely use hand and power tools.

WORLD LANGUAGES

In the seventh grade, students will select one of the following languages: French, German, or Spanish. Students study basic sound system, simple communicative functions (for example, expressing likes and dislikes) and simple grammatical structures. In addition, students explore cultural similarities and differences. Emphasis is on speaking skills, so daily participation is required. In 8th grade, students will be able to continue that language for an entire year and will serve as the equivalent of Level 1 World Language at Kirkwood High School.