

Curriculum and Instruction Department
Secondary Education/Middle Schools
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The Kettering City School District has two middle schools: **Kettering Middle School** and **Van Buren Middle School**.

In order to best meet the unique needs of all learners, students at both schools are assigned to a specific **teaching team, or “pod.”** Each of these interdisciplinary teams consists of five to six teachers in *English, Language Arts, Science, Social Studies* and *Math*. An *Intervention Specialist*, certified to work with all students including those with special needs, rounds out the middle school teaching team. Teaming provides young adolescents with “small communities” for learning within the larger school buildings.

The core course curriculum for the middle schools is based on the Ohio Academic Content Standards, as approved by the Ohio Board of Education and the Kettering Board of Education.

Teachers within each team or pod share the same students and a common planning time for the entire school year. This promotes a **nurturing atmosphere** for middle school students as they transition from self-contained classrooms in the elementary grades to middle school and on to the more departmentalized structure of the high school.

Middle School teachers are attuned to the **needs and traits of early adolescence**, an age known for challenges and change in a young person’s life. It is the goal of our middle school staff to meet the needs of the *whole child* at this level. To this end, each team hosts regularly scheduled parent/teacher conferences; promotes communication among teachers, students and parents; and encourages close cooperation between the school and home.

For further information on Kettering's two middle schools, please contact Dave DeLon, Secondary Curriculum Leader, at 937-499-1454 or at dave.delon@kettering.k12.oh.us.

English/Language Arts

The **English/Language Arts Curriculum** for middle school students in the Kettering City Schools is based on the Ohio K-12 English/Language Arts *Academic Content Standards* as established by the Ohio Board of Education. Ten standards build on what was covered and taught the previous year. Five of the 10 standards relate to reading, three to writing, one to research, and one to oral and visual communication.

Reading

One of the important goals of reading is to gain information for purposes of learning new information, researching a project, making decisions or accomplishing a task. The standards also reflect the philosophy that by reading literary texts, which represent a variety of authors, cultures and eras, students come to understand the human story.

Writing

The writing standards require students to become proficient in writing for different purposes and to recognize that writing is a process that includes the phases of prewriting, drafting, revising, editing and publication. Attention is paid to writing conventions such as spelling, punctuation, parts of speech, etc. and is assessed through written and/or oral contexts as appropriate. In turn, students learn to use the grammatical structures of English to effectively communicate ideas in writing to express themselves.

Communicating:

In addition to mastering skills in reading and writing, students are expected to become effective communicators by speaking, listening and viewing. They learn to apply communication skills in increasingly sophisticated ways to deliver presentations and to respond to oral and visual presentations.



Eighth grade students have a **foreign language** component interwoven into their Language Arts class. Students are exposed to selected languages and learn conversational skills, geographically related topics and cultural enrichments pertinent to the foreign language they are learning, while continuing to advance in the areas related to the English language.

Mathematics

The **Mathematics Curriculum** for middle school students in the Kettering City Schools is based directly on the Ohio K-12 Mathematics Academic Content Standards as approved by the Ohio Board of Education. These standards represent a connected body of mathematical understandings and competencies, rather than a menu of discrete topics from which to choose. Each standard builds on what was covered and taught the previous year. The Mathematics Standards include six areas, which are covered at each grade level of middle school.

Number, Number Sense and Operations Standard

Students demonstrate number sense, including an understanding of number systems and operations and how they relate to one another. Students compute fluently and make reasonable estimates using paper and pencil, technology-supported and mental methods.

Measurement Standard

Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies.

Geometry and Spatial Sense Standard

Students identify, classify, compare and analyze characteristics, properties and relationships of one-, two- and three-dimensional geometric figures and objects. Students use spatial reasoning, properties of geometric objects, and transformations to analyze mathematical situations and solve problems.

Patterns, Functions and Algebra Standard

Students use patterns, relations and functions to model, represent and analyze problem situations that involve variable quantities. Students analyze, model and solve problems using various representations such as tables, graphs and equations.

Data Analysis and Probability Standard

Students pose questions and collect, organize, represent, interpret and analyze data to answer those questions. Students develop and evaluate inferences, predictions and arguments that are based on data.

Mathematical Processes Standard

Students use mathematical processes and knowledge to solve problems. Students apply problem-solving and decision-making techniques, and communicate mathematical ideas. These processes are used in all content areas and are incorporated within instruction and assessment of the content-specific standards.

Honors Math Courses

Grade 6 Honors

Students are tested for entry to this course and must demonstrate a high degree of mathematical aptitude and computational skill. The course, for the student who likes a challenge, moves at a fast pace and covers material from both the sixth and seventh grade math curriculum.

Grade 7 Honors (Pre-Algebra)

Students are tested for entry to this course and must demonstrate a high degree of mathematical aptitude and computational skill. The class moves at a fast past and covers in one year both the Grade 7 and Grade 8 curriculum.

Grade 8 Honors (Algebra)

Students are tested for entry to this course and must possess advanced math skills and a high degree of math aptitude. The curriculum is the same as the high school Algebra I course, and students may earn **one high school math credit** for this class.

Science

The **Science Curriculum** for middle school students in the Kettering City Schools is based on the Ohio K-12 Science Academic Content Standards as established by the Ohio Board of Education. Each of the six science standards builds on what was covered and taught the previous year. These standards are: *Earth and Space Science, Life Sciences, Physical Sciences, Science and Technology, Scientific Inquiry, and Scientific Ways of Knowing.*

Grade Six

Students in grade six conduct investigations and begin to apply mathematical skills in evaluating and analyzing variables of data. They identify basic skills of the scientific inquiry process, such as how thinking scientifically is helpful in daily life and how technological advances affect the quality of life. Students research how people of other countries and cultures contribute to science. They identify rocks, their distinct properties and formation and characteristic properties of the minerals that form them.

They learn to recognize that a cell continually divides to create new cells, reproduction of cells occur, similar cells have special functions, and characteristics of an organism are a result of inherited traits. Students acquire knowledge of the uses, properties and chemical processes of the small particles that compose matter, and the renewable and nonrenewable sources of energy.

Grade Seven

Seventh-grade students learn to describe interactions of matter and energy throughout the lithosphere, hydrosphere and atmosphere. They continue to develop skills of scientific inquiry, explain how matter can change forms and describe how energy is potential or kinetic and takes many forms.

Students apply math skills to evaluate and analyze variables and data from investigations as they draw conclusions from scientific evidence. They are able to recognize that technology can create environmental and economic conflicts, affect the quality of life, and that science and technology cannot answer all questions and cannot solve all human problems. Students access knowledge to explain how energy entering the ecosystem -- such as sunlight -- supports the life of organisms through photosynthesis and the transfer of energy through the interactions of organisms and the environment.

Grade Eight

Two science courses are offered to eighth graders: **General Science** and **Integrated (Honors) Science**. All eighth-grade students, regardless of placement, will explore space and plate tectonics as they draw conclusions from evidence that support theories related to the change of Earth's surface. They describe how positions and motions of objects in the universe cause predictable and cyclic events.

Students explain that the universe is composed of vast amounts of matter and that it is held together by gravitational force. Motions of objects, effects of forces on objects, and how waves (sound, water and earthquake) transfer energy are explored. Students explain how extinction of a species occurs when the environment changes and its adaptive characteristics are insufficient to allow survival.

Students with advanced science and math skills who pass a qualification test are eligible for the **Integrated (Honors) Science** class, which moves quickly and allows students to **earn one high school science credit**. Students in Integrated Science also cover the curriculum for the ninth grade Integrated Science course.

Social Studies

The **Social Studies Curriculum** for middle school students in the Kettering City Schools is based directly on the Ohio K-12 Social Studies Academic Content Standards as approved by the Ohio Board of Education. There are seven standards which define a balanced program of knowledge and skills necessary for active citizenship, and these are: History, People in Societies, Geography, Economics, Government, Citizenship Rights and Responsibilities, and Social Studies Skills and Methods. Students will learn knowledge and skills from each of the seven standards at every grade, but the content emphasis will vary from grade-to-grade. At middle school, the emphasis on geography is greater in grade six, and the emphasis on history is greatest in grades seven and eight.

Grade Six - Regions and People of the World

The sixth-grade year focuses on the study of world regions. The concentration is geographic rather than historic. Students study some of the earliest people who lived in each region in order to understand how humans interacted with the environmental conditions at that time. Connections are made to present-day world regions including characteristics of governments and economic interactions.

Grade Seven - World Studies from 1000 B.C. to 1750: Ancient Civilizations Through the First Global Age

In the seventh grade, students begin the four-year historical sequence with a study of the ancient world. This study incorporates each of the seven standards into the chronology. Students learn that each historic event is shaped by its geographic setting, culture of the people, economic conditions, governmental decisions and citizen action. Students also expand their command of social studies skills and methods.

Grade Eight - U.S. Studies from 1607 to 1877: Colonization Through Reconstruction

The historical sequence continues in the eighth grade, with an in-depth study of the early years of our country. This study incorporates each of the seven standards into the chronology. While students are studying a particular historic event in the United States, they also look at its geographic settings, economic implications, developments in government and the role of citizens.

