

Eighth Grade Curriculum Overview

New Ulm Public Schools



A leader in education through engaging and innovative programs and support structures

NEW ULM MIDDLE SCHOOL



New Ulm Middle School serves students in grades 5-8, providing a developmentally responsive program designed to meet both the academic and social-emotional needs of all students. NUMS is committed to the middle school philosophy and the delivery of a comprehensive education that supports the growth of the whole child. Students at NUMS are organized into small groups or “families,” reflecting the house concept, designed to provide students with a better sense of community and a more personalized learning environment.

Each day, students at NUMS participate in an advisory program in which they will have an opportunity to develop a positive advisor-advisee relationship and build peer relationships in a small group environment. NUMS offers a variety of exploratory courses for grades 5-7 and electives for grade 8 (Agriculture and Industrial Technology, Art, Family, and Consumer Science and General Music). Beyond the exploratory and elective options, NUMS students will also be engaged in a Positive Intervention and Enrichment (P.I.E.) program, which will provide instruction based on student's individual academic needs.

SCIENCE

In eighth grade, students receive daily Earth instruction. Skills that students will acquire by the end of the year include, but is not limited to:

- Describe the structure and composition of the Earth's Atmosphere and explain how the atmosphere affects heat transfer and climate.
- Differentiate between the primary water reservoirs on Earth and use a model to describe the cycling of water through Earth's system.
- Use satellite maps and collect to provide evidence for how the motions and interactions of air masses and fronts results in changes in weather patterns.
- Identify and classify minerals and rocks according to physical properties and explain the processes that are involved in the formation of minerals and rocks
- Develop and use models to explain the evidence scientists use to understand phenomena such as Earth's interior, seismic waves, plate movement, motions of the planets and moon, weather patterns, and groundwater resources.
- Explain the role of constructive and destructive processes (i.e., weathering, erosion, deposition, glacial activity) in the sculpting of the Earth, especially regions in Minnesota
- Compare and contrast the main components of our solar system and galaxy and use models to describe the role of gravity and inertia in the motions within our solar system.

New Ulm Middle School

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ART

In 8th grade, students to continue to explore a variety of media, techniques, and methods through a choice of three class offerings: Drawing/Painting, Ceramics/Sculpture, and Digital Art.

Drawing and painting are designed for more exploration in the two-dimensional area of art. Students will have opportunities to work with charcoal, pencil, pastels, watercolor, and acrylics. Ceramics and sculpture are meant for exploration on the three-dimensional area of art while using a variety of media. Understanding and appreciation of self and others through art history, culture, and heritage is emphasized.

Digital art is designed for more exploration in the area of art. Students will explore a variety of ways to use a computer and Google Chromebooks to create still and moving works of art.

ENGLISH/LANGUAGE ARTS

Eighth grade students take part in yearlong English/Language Arts classes. At the completion of 8th grade, the students are expected to demonstrate the following:

- Be able to communicate clearly and effectively through writing, speeches, multimedia, and collaborative work.
- Read and comprehend literature and informational texts independently and proficiently.
- Speak for a variety of purposes and occasions
- Listen for a variety of purposes and occasions.
- Write for a variety of purposes and audiences.
- Relate literature to one's self and explore other perspective.
- Use technology for accessing, processing, and critically evaluating different types of print, digital, and multimodal media.

HEALTH

In eighth grade, students will be exposed to several units, including Mental Health, Decision Making, Nutrition, Alcohol, Tobacco, Illegal Drugs, and Human Sexuality.

By the end of eighth grade, the students are expected to demonstrate:

- Be able to communicate clearly and effectively, through writing, speeches, multimedia, and collaborative work
- Analyze the influence of others, culture, media and technology, and other factors on health behaviors.
- Demonstrate the ability to access valid information and products and services to enhance health
- Be able to use

SOCIAL STUDIES

In eighth grade features geography and contemporary world history with focuses on citizenship and government, economics, geography, and history. Students will explore the regions of the world and essential trends in the modern world, such as demographic change, shifting trade patterns, and cultural interactions. They will analyze connections between revolutions, independence movements, and social transformations. They learn that governments are based on different political philosophies and serve various purposes. Students will learn the economic principles of trades and factors that affect economic growth.

PHYSICAL EDUCATION

In 7th grade Physical Education, students will be participating in and working on skills in the following units: flag football, soccer/speedball, volleyball, basketball, cucumber, floor hockey, bowling, team handball, tennis, softball, fitness testing, and a variety of other activities throughout the year.

Students will be able to demonstrate

- Competency in motor skills and movement patterns
- An understanding of movements concepts, principles, strategies and tactics
- Participate regularly in physical activity
- Achieve and maintain a health-enhancing level of fitness
- Exhibit responsible personal and social behaviors in physical activity settings

MATHEMATICS

In seventh grade, students will investigate and explore basic concepts of pre-algebra, percents, proportions, probability, applications of fractions and decimals, and three-dimensional geometry and measurement, including surface area and volume of prisms and cylinders. At the conclusion of 7th grade, students are expected to:

- Calculate with positive and negative rational numbers and rational numbers with whole number exponents, to solve real world mathematical problems
- Understand the concept of proportionality
- Represent proportional and other relationships using tables, verbal descriptions, symbols, and graphs
- Understand the order of operations and algebraic properties to show equivalent numerical and algebraic
- Use reasoning with proportions and ratios to determine measurements, justify formulas to solve problems involving circles and geometric figures
- Analyze the effect of change of scale, translations, and reflections on the attributes of two-dimensional figures.
- Use mean, median and range to draw conclusions about data and make predictions
- Display and interpret data in a variety of ways, including circle graphs and histograms.
- Calculate probabilities and reasoning behind probability calculations

MUSIC

At this grade level, students have three-course options: Band, Choir, or General Music.



General music is comprised of a balanced and sequential course of singing, playing instruments, listening to music, improvising or composing music, and moving to music. The

students will also experience learning designed to develop the ability to read music, use notation, and terminology of music. Analyze and describe music, make informed assessments concerning music, and understand music and music practices.

Band students will focus on fundamental skills of playing an instrument throughout a yearlong commitment. Students will explore large group rehearsals and performances as well as receive small group and individual lesson time. Members will also have opportunities to participate in additional activities such as Jazz band, small ensembles, and solo/recital work.

The curriculum for choir will have students exposed to many different styles and periods of music through singing and listening. Students will develop sight-reading skills through rhythm reading and unison and two-part music reading. They will start the process of understanding good tonal techniques as well as proper performance techniques.

MEDIA & TECHNOLOGY

The curriculum for media and technology is not seen as an individual subject area. Instead, the lessons are integrated within other curriculum areas.

Expected outcomes of the learner will include, but is not limited to:

- Demonstrate an understanding of technology concepts, systems, and operations
- Apply digital codes to gather, evaluate and use information
- Use critical thinking skills to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources
- Use digital media and environments to communicate and work collaboratively, including at a distance, to support individual learning and contribute to the education of others
- Demonstrate creative thinking, knowledge and develop innovative products and process using technology
- Understand human, cultural, and social issues related to technology and practice legal and ethical behavior



COUNSELING

Upon completion of the counseling curriculum, seventh grade students are expected to demonstrate knowledge in the area of academic development, career development, and personal/social skills. Lessons will include acquiring skills for improved learning, including but not limited to: displaying a positive attitude, accepting mistakes as part of the learning process, taking responsibility for their actions, balancing school, studies, life, extracurricular activities, family and leisure time and understanding the correlation between academics to the world of work and everyday life. Career development skills to be acquired include setting goals; learn employability skills such as time management, working as a team, problem-solving, and organizational skills. Students will also interpret test scores and interest inventories to help in career planning. Social and personal skills will also be incorporated into the curriculum. They will assist students in understanding life changes, recognize their boundaries, rights, and privacy, identifying strengths and assets, recognize, accept, and appreciate ethnic and cultural diversity. Use of practical communication skills involving speaking, listening, and nonverbal behavior and learn how to make and keep friends. Students will also cover safety and survival skills, coping with peer pressure, and managing stress and conflict.

AGRICULTURE/INDUSTRIAL TECHNOLOGY (AGIT)

Eighth graders have three class options in this curriculum area; Aglt Shop Adventures, Aglt Live! and Aglt Techno Fab Lab.

Aglt Shop Adventures is a shop/lab-based course centered on improving shop skills through guided personal projects. Students will utilize project planning skills, measurement, hands tools, hand, and amp; stationery power tools and finishing methods keeping safety in mind. Resources of the FabLab will also be available to put finishing touches on projects.

Aglt Live is a course focused on animals, plants, and the student themselves. Students will explore the effects animals and plants have on human life. Students will make use of the lab, greenhouse, shop, and outside facilities for hands-on experiences.

The Aglt Techno FabLab technology sheds light on the industries of Agriculture, manufacturing, natural

resources, food science, and other fields. Applying Engineering and design principles will be involved in projects using technological devices such as the laser engraver, 3D printer, and the vinyl print/cut machine. All of these learning opportunities will allow students to discover career opportunities.

FAMILY AND CONSUMER SCIENCE (FACS)

Students have several options within the FACS area: STEM Sewing, Food Science, and Food and Fitness. Students in STEM Sewing will discover how fabric is made, how a sewing machine works, and how to design a creative project. STEM Sewing is a hands-on course.

Food Science allows students to eat their experiments. In this class, students are introduced to technical, scientific, and creative aspects of food science technology. Students will have opportunities for food labs to make and eat, research, demonstrations, and presentations. Food and Fitness is a class where students will learn how nutritious eating choices and physical activity go hand in hand. Food labs will consist of demonstrating basic cooking skills, food safety, and sanitation and learn how to make wise consumer decisions. A middle school "Master Chef" competition and producing a cooking show are popular topics within this class.

ADVISORY AND POSITIVE INTERVENTION AND ENRICHMENT (P.I.E.)

All students in the Middle School, including eighth grade, will have a daily advisory period focused on academic guidance and support. As well as everyday administrative details, recognition, and activities to promote citizenship.

Positive Intervention and Enrichment (P.I.E.) is a designated period during the school day that provides students with the necessary interventions or enrichments to support individual student growth.