



Hudson School District

Curriculum Overview - GRADE EIGHT

Throughout the Eighth Grade school year, students will develop skills and demonstrate competency through their learning of the following content:

English Language Arts

English Language Arts (ELA) focuses on four key skill sets: reading, writing, language, and speaking & listening.

Reading

- Read challenging literary texts, analyzing how the author uses words and writing style to entertain or persuade the reader
- Analyze multiple points of view on the same topic (fact, interpretation, or opinion)
- Read critically, making connections between text and history, society, self (personal experience), and other texts
- Cite evidence from the text, or multiple texts, to support analysis of the story or topic

Writing

- Build extended writing pieces around a central idea or theme
- Cite evidence using proper techniques
- Write strong narratives with precise word choice and smooth transitions
- Complete research projects that include several sources and a focused question
- Use technology to produce writing pieces and presentations

Mathematics

Students will expand their mathematics vocabulary, strengthen their problem-solving strategies, and practice the art of mathematical communication (orally and in writing) in either Pre-Algebra or Algebra I.

Pre-Algebra

- Think flexibly and reasonably to expand an understanding of **Number Systems** using rational and irrational numbers
- Represent relationships and interpret **Expressions & Equations** to determine an unknown value
- Using properties of 2- and 3- dimensional shapes to analyze and represent relationships, and solve theoretical and authentic problems in **Geometry**
- Design investigations, gather **Statistics**, and conduct **Probability** experiments
- Describe and compare situations that involve proportionality, change, or patterns and use the information to justify predictions, conclusions, and solutions with **Functions**

Algebra I

- Use **Linear Functions** to interpret, compare, analyze and make conclusions about pure and applied situations
- Solve equations involving **Radicals**
- Explain and justify reasoning when solving

Social Studies

Sixth Grade Social Studies focuses on US History from the 1600s to the late 1800s. Students will create compelling questions, determine appropriate sources, and research information, focusing on the following:

- US Constitution
- Political philosophies in US democracy
- Effects of the development of industry and technology on the nation
- Impact of geography and natural resources on the development of the US

Students will explore the interconnection of economic, political, and social development throughout US History. Discussions and connections will focus on the facts of history, the causes and effects of events and time periods, and the impact of history on people and government today.

Unified Arts

Students have the opportunity to engage in the following Integrated Arts (IA) courses to enhance their educational experience:

- Art
- Band, Chorus, & General Music
- Wellness (Health & Physical Education)

Language

- Rely on context and background knowledge to determine the meaning of unknown words
- Use common prefixes, roots, and suffixes to define the meaning of a word
- Interpret and use figures of speech (irony, puns) in writing, speaking, and listening

Speaking & Listening

- Actively participate in classroom discussions by being prepared and engaging with the topic being covered
- Present well-supported claims through formal presentations, using multimedia to support the presentation

Equations & Inequalities and systems of equations

- Interpret, analyze, and build **Exponential & Quadratic Functions** that are applied to and model real-world situations
- Solve problems when applying concepts of **Polynomial Expressions**

Science

Science is divided into three primary areas: life, Earth and space, and physical sciences. The primary area of study in Eighth Grade is Physical Science.

- Identify substances using the **Structure and Properties of Matter**
- Explore and make conclusions about how **Chemical Reactions** change the properties of substances
- Predict the characteristics and behaviors of **Waves & Electromagnetic Radiation** when traveling through empty space and interacting with matter
- Understand how and why the motion of an object is determined by **Forces & Interactions**
- Analyze the impact of **Energy** when it is transferred from one object/system to another
- Ask questions, research the work of others, conduct safe controlled experiments, and draw conclusions about the **Nature of Science**

- Total Fitness (Physical Education)
- Foreign Languages
 - Spanish
- Computer Skills
- Technology Education
- Media Literacy and Digital Citizenship
- Computer Science Discoveries
- Project Lead The Way
 - Design & Modeling
 - Automation & Robotics
 - App Creator
 - Innovators & Makers