

## Social Studies

Social Studies is divided into four strands; civics and government, economics, geography, and history. In Eighth Grade these strands are studied through the study of US History 1607-1877.

Through the study of US History students will gain content knowledge as well as an understanding of concepts, skills, and processes such as:

- Understand that the U.S. Constitution represents a collection of compromises.
- Understand the spectrum of political philosophy in our democracy.
- Understand the impact of technological developments on the evolution of the U.S.
- Understand the development of industry in the U.S. and how it affects our nation today.
- Be aware of the evolution of the free enterprise system based on capital and labor.
- Review the geography of the United States.
- Understand the impact of U.S. geography and natural resources on the development of the nation.
- Understand the interconnection of economic, political, and social development in U.S. history.
- Understand that the facts of history, the causes and effects, and its impact on people and government today.

## Science

Science is divided into three primary areas: life, earth & space, and physical. In Grade 8 the primary area of study is Physical Science:

Through the study of Physical Science students will gain content knowledge as well as an understanding of the following concepts, skills, and processes including:

- The force of nature and the relationship to each other.
- That matter is composed of particles and all properties and changes can be explained by interactions of these particles.
- Energy concepts
- Motion, Forces, and Simple Machines
- Explain motion, speed, velocity, and acceleration.
- Newton's three Laws.
- How machines are derived from simple machines.
- All matter is made up of atoms.
- Solutes, solvent, solution, and solubility.
- Writing of chemical symbols, formulas, and simple equations.
- Conduction, convection, and radiation
- Electrical circuits.
- Kinetic/Potential Energy.

*Our mission is to be a continuously improving, learning community, providing quality services to enable all children to master the knowledge and competencies necessary to function skillfully throughout life.*

**WINDHAM**



**MIDDLE SCHOOL**

*Home of the Wildcats*

## **Curriculum Brochure**

### **Eighth Grade**

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# English Language Arts

English Language Arts (ELA) comprises four areas; reading, writing, language, and speaking & listening. Within these four areas there are many categories, which when all brought together encompass student literacy.

Within these four areas are many categories. In Eighth Grade, these are the skills and understandings we focus on in each area:

## **Reading:**

- Read closely from complex literature and informational texts.
- Cite the textual evidence that most strongly supports an analysis of what the texts says explicitly as well as inferences that can be drawn from the text.
- Determine the theme or central idea of a text and analyze its development over the course of the text; provide a summary of the text.
- Analyze text structure and the author's point of view.
- Determine the meaning of words and phrases in the text., including figurative language.

## **Writing:**

- Write extended argumentative, informational, and narrative pieces with details and proper grammar, spelling and punctuation which are several pages in length.
- Complete research projects that include several sources and a tightly focused question.
- Cite evidence and sources following a standard format.
- Use technology to produce writing pieces and presentations.

## **Language:**

- Use context, background knowledge and strategies to determine the meaning of unknown words and multiple-meaning words.
- Use academic and content-specific vocabulary.

## **Speaking and Listening:**

- Integrate multimedia and visual displays into presentations to clarify information, strengthen claims and evidence and add interest.
- Actively participate in collaborative discussions by being prepared and thoughtful about the topic being covered.
- Evaluate a speaker's argument and present claims and information using relevant evidence, sound valid reasoning, and well-chosen details.

# Mathematics

Students in Eighth Grade are placed into one of two math classes: 8th Grade Math or 8th Grade Algebra I.

## **8th Grade Math:**

Students continue to refine their problem solving skills and mathematical reasoning while making connections to the real world. Students also practice the art of mathematical communication, both orally and in writing. Mastery topics in 8th Grade Math include: scientific notation, solutions of multi-step equations, graphs of linear relationships, transformations, the Pythagorean Theorem, volume and scatterplots.

## **8th Grade Algebra I:**

Students will progress to more abstract concepts such as linear functions, algebraic expressions, rules of exponents, and equations. A central theme of this course, and algebraic thinking in general, is the study of patterns which in turn leads to an understanding of relations and functions. Students will recognize, describe, and generalize patterns and build mathematical models to describe, interpret, and predict the behavior of real-world phenomena. Students will also come to understand that algebraic processes are important tools that students can use throughout their lives.

**Digital Literacy:** offers students an introduction to foundational concepts by integrating basic digital literacy skills with ideas about computational thinking. Through the exploration of computing devices and digital tools, students begin to understand if, when, and how they should use technology.

**Technology Education:** offers students an introduction to engineering, elements of design, machines in action, transformation of energy, computing systems and computational thinking, 3D design, robotics, including technology career exploration.

**Family Consumer Science:** offers students an introduction to managing the challenges of living and working by focusing on foods and nutrition, child care and development, textiles and design, as well as consumerism.

**Health:** Both 7<sup>th</sup> & 8<sup>th</sup> grade students are provided with current information to develop decision making skills to achieve a physically, emotionally, and socially healthy lifestyle within a dynamically changing society.