

HUDSON MEMORIAL SCHOOL 8TH GRADE COMPETENCIES



8th Grade Competencies

Literature/ Reading

***Foundational Reading**—Students will read to make meaning while flexibly using a variety of morphology strategies, to apply and extend literacy skills with fluency and independence at grade-level complexity. (Not identified beyond 5/6 span, but continue to develop them with students who may need additional support.)

- Word study skills, fluency, read with purpose, infer, predict, self-monitor

Reading Literature—Students will comprehend and draw conclusions about the author's intent when reading a variety of increasingly complex print and non-print literary texts, citing a range of relevant and compelling textual evidence to support their analyses.

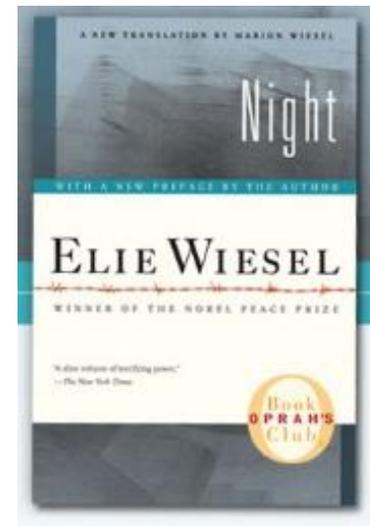
- Text structures, character dialogue and interactions, literary elements, analyze two or more authors' treatment of theme, historical/cultural contexts, flashback, foreshadowing, imagery

Reading Informational Text—Students will comprehend and draw conclusions about the author's intent in a variety of increasingly complex print and non-print informational texts, citing a range of relevant and compelling textual evidence to support their analyses.

- Central idea, accuracy of content, theme, conclusions, two or more authors' point of view/tone/interpretation of topic, compare information, message, text types

Speaking, Listening, and Language—Students will initiate and participate effectively in speaking-listening for a variety of purposes and audiences (e.g. informal discussions, formal presentations), responding respectfully and appropriately to diverse perspectives and expressing ideas clearly and purposefully.

- Use grade-appropriate grammar/mechanics when speaking, respond/elaborate with relevant ideas, oral presentations addressing audience/purpose, use visual/graphic/digital/audio enhancements to clarify message/intent, analyze/interpret/evaluate information delivered orally or visually.



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8th Grade Mathematics

Number Systems - Students will expand their understanding of number systems thinking flexibly and attending to precision and reasonableness when solving problems using rational and irrational numbers.

Expressions & Equations - Students will reason abstractly and manipulate symbolic expressions to represent relationships and interpret expressions and equations in terms of a given context for determining an unknown value.

Geometry - Students will solve problems involving reasoning using properties of 2- and 3- dimensional shapes to analyze, represent, and model geometric relationships in pure/theoretical and authentic applied contexts.

Probability & Statistics - Students will design investigations and conduct probability experiments involving populations.

Functions - Students will make use of structure to describe and compare situations that involve proportionality, change, or patterns and use the information to make conjectures and justify conclusions/solutions.

8th Grade Algebra

Linear Functions - Students will make use of patterns, relations, and functions to interpret, compare, and analyze pure and applied situations, using the information to make conjectures and support conclusions.

Radicals - Students will demonstrate the ability to use and extend properties of complex number systems.

Equations & Inequalities - Students will demonstrate the ability to explain and justify reasoning when solving equations, inequalities, and systems of equations.

Exponential & Quadratic Functions - Students will be able to interpret, analyze, and build linear, quadratic, and exponential functions that are applied to and model real-world phenomena and distinguish the different situations that would utilize each type of function.

Polynomial Expressions - Students will be able to demonstrate the ability to solve problems when applying concepts of polynomials and rational expressions.

Science

Structure and Properties of Matter - A pure substance has characteristic physical and chemical properties that can be used to identify it.

Chemical Reactions - In a chemical process, the atoms that make up the original substances are regrouped into different molecules, and these new substances have different properties from those of the reactants.

Waves & Electromagnetic Radiation - Waves have predictable characteristics and behaviors when traveling through empty space and when the waves interact with matter.

Forces and Interactions - The motion of an object is determined by the sum of the forces acting on it.

Energy - Interactions of objects can be explained and predicted using the concept of transfer of energy from one object or system of objects to another, and the total change of energy in any system is always equal to the total energy transferred into or out of the system.

Nature of Science - Scientific advances are made through asking questions, researching the work of others, conducting safe controlled experiments, and drawing conclusions based on accurately measured and observed data.