

Transition Math Overview

- Know the difference between sets of numbers; irrational, rational, integers, whole, prime, odd and evens.
- Add, subtract, multiply, and divide rational numbers (positive and negative fractions and decimals.)
- Work with square roots and scientific notation.
- Understand the connections between proportional relationships, lines, and linear equations.
- Analyze, graph and solve linear equations.
- Understand the relationships with lines, parallel lines and the angles they create.
- Understand and apply the Pythagorean Theorem.
- Solve real-world and mathematical problems involving volume of cylinders, cones and spheres.
- Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.
- Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability
- Find probabilities of compound events using organized lists, tables, tree diagrams, and simulation.

Science

- Understand and apply knowledge of the basic components and functions of cells, tissues, organs and organ systems.
- Understand and apply knowledge of how different organisms pass on traits (heredity)
- Understand and apply knowledge of the complementary nature of structure and function and the commonalities among organisms.
- Understand and apply knowledge of: interdependency of organisms, changes in environmental conditions, survival of individuals and species and the cycling of matter and energy in ecosystems.
- Understands and demonstrate knowledge of the social and personal implications of environmental issues.
- Understand and apply knowledge of the functions and interconnections of the major human body systems including the breakdown in structure or function that disease causes.

Social Studies

- **What are Essential Skills and Concepts?**
- Improving reading, critical thinking and communication skills
- Vocabulary enhancement (see list)
- Use maps, charts and graphs to get information
- Understand earth-sun relationships, the cause of seasons and why climate matters
- Understand how humans affect earth's land, water and atmosphere and how to minimize harmful effects
- Knows how culture, government, geography and history are affected by religion, the names of six main world religions
- Improved knowledge of the location and importance of our local area, other countries and regions, with a focus on Africa and Asia
- Knows and uses basic population data: the town, state, and world



Dike-New
Hartford CSD
7th Grade

Dike-New Hartford CSD

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Literacy

Reading

-Analyze pieces of literature and give evidence to support inferences drawn.

-Identify a theme, a central idea, or two or more central ideas of a reading and provide a summary for it.

-Identify how literary elements help provide greater understanding of a story or drama.

-Analyze the interactions between characters, events, and ideas in an informational reading.

-Analyze how a drama's or poem's form, words and phrases, structure, or technical meanings contributes to its meaning.

-Analyze how an author develops and contrasts the points of view of different characters, narrators, or author's position in a reading.

Compare and contrast all genres

By the end of the year read and comprehend different genres at grade level appropriateness.

Trace and evaluate the validity of the argument and claims in a reading.

Analyze how two or more authors writing about the same topic have different viewpoints.

Writing

Compare/ Contrast

Persuasive Paragraph

Research Paper or Informative Writing

Personal Narrative

Production, Distribution, and Presentation of Writing

-Student effectively uses the writing process

-Student is able to produce a piece of writing that is appropriate to task and audience.

-Students will effectively use technology and various resources to produce effective pieces of writing.

Speaking and Listening

-Engage in and be prepared for collaborative discussions with various partners on seventh grade topics.

-Analyze the main ideas and supporting details presented in different formats and be able to evaluate the reasoning, relevance, and sufficiency of the evidence.

-Students will prepare a speech using multi media and proper speech etiquette.

Language

-Demonstrate a proficiency in standard English capitalization, punctuation, spelling, and grammar usage in writing and speaking.

Vocabulary

-Determine or understand the meanings of unknown and multiple-meaning words and phrases based on seventh grade curriculum.

-Demonstrate understanding of figurative language, word relationships, and unique word meanings.

-Acquire and accurately use seventh grade vocabulary

Mathematical Practices in all classes

- Explains thinking and understands the reasoning of others.
- Makes sense of problems and persevere in solving them.
- Works accurately using appropriate tools.
- Looks for and makes use of patterns.

7th Grade Math Overview

- Apply and extend previous understandings of operations with fractions to add, subtract, multiply, and divide rational numbers (positive and negative fractions and decimals.)
Analyze proportional relationships and use them to solve real-world and mathematical problems.
Examples: unit rates, simple interest, tax, markups and markdowns, gratuities and commissions, fees, percent increase and decrease, percent error.
- Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
- Draw, construct and describe geometrical figures and describe the relationships between them.
- Solve problems involving scale drawings of geometric figures, including computing actual lengths and areas from a scale drawing and reproducing a scale drawing at a different scale.
- Draw geometric shapes with given conditions, focusing on constructing and classifying triangles and quadrilaterals.
- Solve real-life and mathematical problems involving angle measure, area, surface area, and volume.
- Draw informal comparative inferences about two populations using scatterplots, stem/leaf diagrams, line plots, box and whisker diagrams.