

## MATHEMATICS

---

Students will effectively communicate accurate mathematical reasoning in problem solving contexts integrated across diverse curriculum disciplines and everyday situations. They will apply skills from the following math sub-categories:

### Number Sense

Students will work towards proficiency in understanding and applying concepts of place value, prime factorization, decimals/fractions/percents, ratios and proportions, and positive and negative numbers. They will recognize and use the relationship between inverse operations: addition/subtraction and multiplication/division.

### Computation

Students will accurately and efficiently:

- Add, subtract, multiply, and divide whole numbers, fractions, and decimals,
- Use estimation to determine the reasonableness of an answer
- Apply the associative, commutative, and distributive properties to simplify computation

### Geometry

Students will explore, understand, and apply concepts in:

- Linear (perpendicular, parallel, horizontal, vertical), 2-D (perimeter, circumference, and area of polygons and circles), and 3-D (volume and surface area) contexts.
- Coordinate geometry, including congruency, symmetry, and transformations (translations, reflections, and rotations).

### Measurement

Students will explore and apply appropriate units in Metric and U.S. Standard systems in: linear, area, weight/mass, volume/capacity, temperature, time, and money contexts.

### Data Analysis

Students will confidently:

- Collect, organize, and present data using the appropriate graphic format (list, table, chart, calendar, timeline, bar/line/circle/picture graph).
- Analyze and interpret data with understanding of mean/average and range of a given set.
- Make predictions based on interpretation of probability within the data set.

### Algebra

Students will develop confidence exploring basic mathematical patterns and relationships and applying them in problem solving. They will:

- Recognize the rules for order of operations
- Use the commutative, associative, distributive, and identity properties.
- Discover and apply a rule in a set of ordered pairs (ie: the second number is the result of doubling the first)

### Mathematics of Change

Students will understand the connection between rates of change (time, speed, cost per unit, temperature, etc.) and representation (discrete and continuous change and relation to slope/straight line) on a coordinate graph.

## SOCIAL STUDIES

---

### *Westward Expansion*

#### *The Civil War*

#### *Meso-American Civilizations*

### *Renaissance*

### *Current Events*

*Geography* is explored throughout all units

*September, 2009*

## GRADE 5 CURRICULUM

### *A Message for the Parents:*

The outlines in this pamphlet are the products of several years of ongoing curriculum work by the administrators and teachers of the Lebanon School District. Using National Standards and the New Hampshire State Curriculum Frameworks as guides, the district staff has completed documents of content and skills for Language Arts, Mathematics, Social Studies and Science that have been adopted by the Lebanon School Board. This pamphlet includes the scope and sequence outlines from those documents.

The curriculum documents that have been completed will ensure the fulfillment of two district goals: (a) that the content and skills are taught in our classrooms are in alignment with the state frameworks, and (b) that the consistency and continuity of curriculum and instruction will be enhanced in schools across the district. The district's focus is on the refinement of the curricula as we meet the needs of diverse learners in the regular classrooms. Curricular accountability is ensured through the use of the New England Common Assessment Program (NECAP) tests and other district wide assessments.

This pamphlet is designed to help parents understand the classroom curriculum for a given grade. Your child's teacher can give you more detail about the presentation of topics and the expectations for students. We hope that this information will help you to support your child's learning and to contribute to the continued improvement of curriculum and instruction in the district. Public knowledge and input are critical to the ongoing curriculum review process. We invite parents and community members to participate in the process and to provide comments and recommendations.

Michael Harris, Ph.D., Superintendent

## LEBANON SCHOOL DISTRICT

## READING

---

### *Construct Meaning*

- Read fluently and accurately with understanding utilizing multiple sources of information
- Determine literal meanings, summarize materials, and develop informed inferences, judgments and interpretations from texts
- Compare and contrast authors' styles and themes
- Notice figurative language including analogies, personification, multiple meanings, and hyperbole

#### *Comprehension Skills & Strategies*

- Use strategies to think about meaning before, during and after reading
- Before reading, skim to get a general idea of content and to locate information
- After reading, discuss and summarize main ideas, supporting details, main and supporting characters, mood, internal and external conflicts, subplots, foreshadowing, suspense and climax

#### *Vocabulary & Reading New Words*

- Utilize the multiple sources of information available to read and understand words with sufficient fluency in context to focus on meaning
- Use increasing knowledge of letter clusters, suffixes, prefixes, roots and compound words

#### *Information Gathering*

- Understand how information is gathered, stored and retrieved by electronic means; principles of on-line ethics and meaning of plagiarism
- Collect, compare, and use information presented in written, spoken, audiovisual and graphic forms
- Use the thesaurus, almanac, periodicals, catalogs, and phone books in addition to basic reference tools
- Manage long-term research tasks and projects
- Organize, analyze and evaluate information using a variety of tools including thinking maps
- Distinguish facts from opinions and informative from persuasive messages
- Use skills of reading, writing, speaking and listening to produce effective presentations in the appropriate media

#### *Literature*

- Differentiate among a wide variety of genres: short stories, mysteries, poetry, drama, biographies, autobiographies, legends, historical fiction, science fiction, adventure, informational/ factual articles
- Demonstrate competence in understanding, appreciating, interpreting and critically analyzing recognized literature from a wide

variety of eras and cultures: stories, poetry, novels, speeches, and author studies

## WRITING

---

*Write for a variety of purposes and audiences including creative, expository, narrative, persuasive and practical writing*

- Use facts and logic to support a position
- Organize writing appropriately using chronological order, ordered examples, or compare and contrast
- Use paragraphing to show changes in central idea, examples, dialogue and other elements of topic development
- Write friendly letters, reports, news articles scripts, captions, interviews, fiction, poetry, biography, invitations, charts, songs and essays
- Include a formal bibliography with a report
- Use a tone, style and language appropriate to the content

*Use a variety of techniques before, during, and after to generate ideas, plan, draft, revise, edit and publish*

- Before writing, identify the topic, choose appropriate form and content, use knowledge and experiences to generate ideas, and use strategies such as planning, sketching, note-taking, mapping and brainstorming to organize ideas
- During writing, analyze their own writing independently and in collaboration with others
- Use revising and editing strategies to improve the writing: add more information, re-organize, delete, improve leads and endings, develop introductions and conclusions, choose vivid and effective words
- After writing, proofread for spelling based on personal and other spelling lists and for adherence to grammatical rules such as verb tense and subject-verb agreement
- Publish writing in a variety of forms including magazines and newsletters

*Maintain meaning through correct grammar, usage and mechanics*

- Use capitalization, punctuation, dialogue and abbreviations correctly
- Use quotation marks in names of poems, songs, short stories and articles; italicize book titles
- Recognize and use names for parts of speech, articles, interjections and prepositional phrases
- Use friendly letter format (date, salutation, body, closing, signature)
- Indent paragraphs & use colon before a list
- Follow grammatical conventions: double negatives, subject-verb agreement, using helping verbs to establish tense, and complete sentences
- Recognize complete and incomplete sentences; direct and indirect objects; and independent and dependent clauses

## SCIENCE

---

### *Physical Science*

- **Introduction to Physics (Force and Motion):** Study of Newton's Laws, potential/kinetic energy, concept of work, application of

simple machines, friction, gravitational force, and motion on land and in air.

- **Introduction to Chemistry (Matter):** Introduction to molecular structure, phases of matter, chemical and physical changes, energy transfer, and compounds/mixtures/solutions in everyday applications.

### *Life Science*

- **Introduction to the Human Body System:** Introduction to adolescent health, muscular/skeletal, respiratory/circulatory, digestive, nervous systems. Introduction to reproductive system with review of and comparison to plant processes.

### *Earth/Space Science*

- **Astronomy:** Study Stars (featuring our Sun and space weather's effect on Earth), galaxies, and universe. Historical and potential space exploration missions will be studied.