

Carlisle Public Schools
FOURTH GRADE CURRICULUM OVERVIEW

Mission and Vision of the Carlisle Public Schools

Carlisle Public Schools cultivate balanced learners who can stand confidently with one foot in the field and the other in the future.

We create a nurturing and individualized experience for our students and highly value personal relationships. We prioritize social-emotional and physical health. We include a project-based approach to help students develop their knowledge, skills, and interests. We provide multiple ways for students to demonstrate understanding and mastery, de-emphasizing state standardized assessments. Students engage in the classroom and in the community, with educators, local experts, and Carlisle's natural resources to understand how their studies can be applied to civic life to help solve local and global problems. We break down barriers between traditional subjects and create opportunities for students to develop their understanding of the world and extend their perspective and thinking beyond our town borders.

A CPS GRADUATE IS:

- A resilient and adaptable **lifelong learner** who is empowered to pursue their interests.
- A self-aware and **reflective individual** who takes responsibility for their actions, outcomes and learning.
- A caring, kind and engaged **global citizen** who works to forward identified goals.*
- An **advocate for social justice** who acts with skill and courage against prejudice and towards equity.
- A creative and competent **problem solver**, appreciative of diverse thinking.
- An **independent thinker**, willing to question the status quo and weigh the evidence.
- An **effective communicator & collaborator** who can work with diverse teams, listen and articulate thoughts and ideas persuasively.

*Current goals are aligned with UN Sustainable Development goals.

Core Values:

Academic Excellence

Creativity

Respect

Responsibility

A fuller expression of these values would include . . .

We always look beyond what we now know.

We constantly work to know more.

We are respectful toward all in our community.

We use what we know to help others.

We take responsibility for ourselves and for others.

Goals of Carlisle Public Schools

Goal 1: *Provide A Rich Curriculum In Order To Maximize Student Learning*

The District will assess the curriculum through review cycles and will foster vertical and horizontal articulation and implementation in curriculum, assessment, and instructional practices. The District will continue to work toward aligning the Carlisle and Concord curricula. Our staff development plan, grounded in a professional learning community based on best practices, will lead to ongoing student assessment and differentiated instruction to meet the needs of all Carlisle students and prepare them for high school and for a global community.

1. Continue the process of curriculum review, alignment, and improvement
2. Support the implementation of our selected anti-bullying curriculum Olweus, and identify and implement a more formal social-emotional curriculum.
3. Continue to enhance the instructional practices of professionals to meet the needs of all learners.
4. Investigate and identify opportunities for our students to develop their ‘global perspective.’

Goal 2: *Build a Community of Respect in a Safe and Healthy Learning Environment*

The district will promote and maintain an inclusive, safe, and respectful environment that fosters leadership and healthy living. The administration, staff, and students will engage in honest and open dialogues to further encourage the development of a culture of trust and respect.

1. Develop a strong and effective district leadership team.
2. Use data to inform our work in identifying and implementing additional strategies to enhance the social and emotional environment of our school.
3. Evaluate best practices for the delivery of social-emotional and academic support services.
4. Continue to work collaboratively with our community partners to enhance and strengthen relationships and communication.

Goal 3: *Integrate Technology*

The district will integrate technology into the curriculum. Staff development opportunities will be provided to encourage the integration of technology into units of study to support student achievement and proficiency.

1. Use data to evaluate how our current instructional integration of technology aligns with the SAMR (Substitution, Augmentation, Modification, and Redefinition) model and identify necessary supports to encourage movement along the continuum.
2. Develop a 3-year plan for instructional technology support and integration.
3. Create and support further opportunities for technology integration professional development for all faculty and staff.

Goal 4: *Meet Space Needs and Manage the Resources of the Carlisle Public Schools*

The district will work closely with the town to meet the space needs of the staff and students at Carlisle Public Schools. The district will promote efficient management of CPS resources.

1. Develop a fiscally responsible FY18 Budget that continues to provide the resources needed for an excellent education for Carlisle students, while successfully maintaining the town approved 2017-2018 budget.
2. Assess the future impact of projected declining enrollments and design options to address findings.
3. Assess the current and future facility needs of the district, and develop a plan to address those needs.
4. Explore use of social media to communicate with parents and staff.

Fourth-Grade Curriculum

In fourth grade, we seek to support and extend each child's individual skills and abilities. Through a variety of academic experiences, students are guided toward an appreciation of the learning process. Frequent opportunities for working in groups promote cooperative skills and respect for individual differences. Classroom meetings provide a forum for developing social competency.

Fourth-Grade Language Arts Curriculum

The goal of the language arts program is to enhance the growth of communication skills in an environment that encourages students to read, write, listen, and speak. Students are expected to think, to experiment, and to learn from their experiences. A concerted effort is made to help students understand that reading and writing are integrally connected. Efforts are consistently made to utilize and enhance these skills as part of the teaching/learning process in all content areas.

The Writing Process instructional approach provides the foundation for our writing program. Students are taught that writing involves planning, drafting, revising, editing, and publishing. The flexibility of the Writing Process allows different stages to be emphasized in different types of writing. Writers are provided with regular blocks of time, choices of topics that connect to their experiences, positive and constructive responses to their ideas, and a literary environment in which to develop their writing. Students share their writing in conferences with peers and/or teachers who listen and respond in an effort to help writers focus, develop, and improve their pieces.

In writing workshops, mini-lessons are presented to address concepts, skills, mechanics, spelling, or elements of writing that a whole class is ready to grasp. Much in-class instruction is in the form of individual or small group writing conferences. These may be tailored to address topic selection, content or organization of a particular piece, style, or editing for technical accuracy. Focus areas of instruction in mechanical skills (sentence construction, grammar, usage, capitalization, punctuation) are addressed systematically according to the Massachusetts Curriculum Frameworks.

The Writing Process-Stages

Pre-Writing includes all the activities such as brainstorming, discussions, reading, story-telling, listening, research, field trips, and other first-hand activities that provide ideas and inspiration for writing.

Planning involves selecting and narrowing the topic, and choosing from, refining, and organizing the material gathered in the pre-writing phase. Teachers help students focus on the particular purpose for this writing and the audience for whom they are writing. Decisions are made regarding voice and form. The resulting product of this stage is a visible plan to help guide (but not confine) drafting.

Drafting is the first attempt to put organized ideas or information on paper (or into a word processor) as a means of communication. Attention is paid to content and organization, rather than correct form and mechanics. The draft is a working document that will later be revised and edited.

Revising involves re-seeing, re-thinking, re-organizing, expanding, or clarifying the content. The first focus is on the writer's original purpose. Attention might be paid to needed information, redundancies, ordering, sentence variety, specific word choice, opening and closing sections, etc. (Insertions, deletions, and changes are made with the knowledge that only the writer needs to be able to read them. Cut-and-paste, writing in the margins, arrows, cross outs, abbreviations, and scribbles are acceptable.) In addition to assessing one's own writing, teacher and/or peer input is obtained by sharing drafts in writing conferences.

Editing is the process of reviewing the revised draft for form and conventions. With teacher and/or peer assistance, writers address "focus correction areas" in sentence structure, spelling, grammar, usage, punctuation, capitalization, spacing, and paragraphing.

Publishing involves the preparation of the revised and edited piece in a form that can be presented to the intended audience. This sharing might entail inclusion in a portfolio or writing folder, publication in an anthology, mounting for a wall display, oral reading, mailing to a friend or relative, or submission to a teacher for evaluation.

Common writing activities include:

- Content-area writing
- Opinion Writing
- Non-fiction writing
- Realistic fiction writing
- On-demand writing

READING

The language arts program enables students to explore a variety of literary forms by focusing on two types of reading experiences: independent (self-selected) reading and structured reading and discussion. Skill building is an important element of both types of experiences.

Structured literature lessons encourage students to expand their reading experiences by exposing them to a wide variety of literature. Certain "core literature" titles have been selected for use in reading instruction. Activities are designed to help students understand the specific literary work they have been assigned and to explicitly teach them strategies to use in future reading endeavors. These activities take place in small groups or with a whole class. Students also meet in book groups and work with a variety of novels that focus on specific skills. Flexible groupings and a tremendous assortment of teacher-created materials allow students of different learning styles to be challenged and to succeed.

Teachers encourage students to explore elements of fiction such as story arcs, character development, setting, theme and conflict. Working through pre-reading activities, increasing vocabulary, using context clues to ascertain word meaning, drawing conclusions, making inferences, and recognizing and understanding figurative language, help students read.

Students also will be analyzing poetry, drama, and Greek myths by accessing different materials. Reading non-fiction is an important part of fourth grade work. Themes in social studies, science, and math are integrated frequently, so both fiction and non-fiction texts are needed to fully develop the goals. Non-fiction information is presented with lots of text support in the form of tables, charts, graphs, indexes, and glossaries. Students are taught to locate, evaluate, and use the needed information effectively. They learn to find the differences between the topic and main idea of a given text. They also learn to tap into prior knowledge, develop critical thinking, and become more active in the processing of information.

4th Grade Core Literature

All 4th Grade students will read the following core **novels**:

Rules, Cynthia Lord

The Tiger Rising, Kate DiCamillo

Materials used in Language Arts include:

- Words Their Way (Bear, Invernizzi, Templeton & Johnston)

Fourth-Grade Mathematics Curriculum

The math curriculum in grades four and five provides a transition from the lower elementary grades to the middle school math curriculum. It reflects the recommendations of the National Council of Teachers of Mathematics (NCTM).

In terms of content and process, the curriculum is moving in the direction of the NCTM standards. The curriculum should provide opportunities to participate actively in problem solving, to develop mathematical concepts and to communicate mathematical ideas, using the precise language and notation of mathematics. Activities are designed to promote the exploration of ideas in concrete settings, prior to generalization.

The goal of the fourth-grade program is to provide children with practice leading to proficiency in computation, problem solving, estimation, geometry, probability and measurement. Reflecting the NCTM standards, we emphasize communication, reasoning, and connections. Children learn through a hands-on approach utilizing manipulatives, calculators and other concrete materials.

Operations and Algebraic Thinking

- Use the four operations with whole numbers to solve problems.
- Gain familiarity with factors and multiples.
- Generate and analyze patterns.

Number and Operations in Base Ten

- Generalize place value understanding for multi-digit whole numbers less than or equal to 1,000,000.
- Use place value understanding and properties of operations to perform multi-digit arithmetic on whole numbers less than or equal to 1,000,000.

Number and Operations—Fractions

- Extend understanding of fraction equivalence and ordering for fractions ordering for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.
- Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers for fractions with denominators 2, 3, 4, 5, 6, 8, 10, 12, and 100.
- Understand decimal notation for fractions, and compare decimal fractions.

Measurement and Data

- Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.
- Represent and interpret data.
- Geometric measurement: Understand concepts of angle and measure angles.

Geometry

- Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

Materials

- Everyday Mathematics, Everyday Learning Corp., Evanston, Ill, 1995

Fourth-Grade Science Curriculum

The KnowAtom Fourth Grade STEM system guides students toward mastery of the scientific method and the engineering design process. Students receive laboratory notebooks to record their scientific reasoning from question to conclusion. Students learn about physical, earth and life science through nonfiction readers, experimentation, engineering design, demonstration, discussion, and audio-visual media.

Content- Topics may include:

Physical Science

- Measuring
- Matter Energy Transfers
- Types of Electricity
- Magnetic Fields

- Sound Waves
- Light Waves

Earth Science

- Sedimentary Rock
- Digging Into Soil
- Weathering and Erosion

Life Science

- Plant and Animal Life Cycles
- Adapting to Change
- Food Web
- Plant transpiration

Engineering

- Electric Cars
- Simple Machines- Trebuchets
- Semi-permeable concrete

Fourth-Grade Social Studies Curriculum

In grade 4 students engage in a yearlong study of geography, with an emphasis on the geography and people of the United States. A major focus of the Social Studies curriculum is providing students with specific skills to enable them to access information through a variety of resources including an atlas, maps, non-fiction texts, and online sources.

The year begins with map skills including longitude, latitude, scale, key and the compass rose. Students also learn to describe the major physical features, climate, landmarks, natural resources and cultures of each United States region. Each student will also conduct a research project on a state in the United States.

Fourth-Grade Special Events

- Field Day