

Carlisle Public Schools
GRADE FIVE 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.

5th Grade Language Arts Curriculum

The 5th grade team uses the *Teachers College Reading & Writing Units for Grade 5* as their day-to-day guide when teaching skills and strategies in reading and writing. They also use a variety of mentor texts with students. Teachers work to integrate the language arts curriculum with the Colonial American history curriculum in social studies.

Reading

The fifth-grade reading program is designed to encourage a love of reading, to develop students' vocabulary, comprehension, and analytical skills, and to expose readers to a wide variety of literature. Students develop deeper comprehension of literature by noticing what the author does and how it impacts meaning. Students explore theme in and across fiction. They conduct research to write reports and to prepare to debate issues. They develop an ability to respond to what they have read when speaking and writing. Materials include novels, thematically aligned picture books, poetry, and informational texts. Teachers read aloud to students to demonstrate skills and strategies. Students then apply those skills as they read both teacher-assigned and student-chosen independent readings books.

Writing

Students in fifth grade use writing to achieve many purposes. They grow as writers through the year as they compose with greater independence. Fifth graders write in a variety of genres, including personal narrative, informational, opinion and argument. They connect writing to the purpose: tell stories, express feelings, explain ideas, persuade and inform readers. Writers deepen their experience with the writing processes of developing and organizing ideas, drafting and revising, and sharing their work. Fifth grade writers learn how conventions apply to the writer's craft. Mentor texts are used as models for various writing genres and styles as students produce independent and individual pieces. Students develop self-evaluation strategies for revisions and practice a variety of writing strategies in the revision process.

Speaking and Listening

Students continue to develop speaking and listening skills with the goal of enabling them to communicate effectively and confidently in different situations. To that end, students have opportunities to work on their speaking and listening skills while delivering oral presentations, sharing book reviews and writing pieces, discussing literature, debating topics, and exhibiting their research.

Language

Students develop a rich academic vocabulary and broad background knowledge. Students have the opportunity to practice and ultimately demonstrate command of the conventions of standard English grammar and usage when writing, speaking, reading, or listening.

Mathematics Curriculum

We believe that the most productive classrooms are those in which students are working on complex problems, taking risks, embracing struggles, and feeling productive about their problem-solving skills. Students grow in mathematical maturity and expertise throughout the middle school years to become powerful thinkers who make connections, think logically, and use space, data, and numbers creatively.

Students explore and investigate new concepts by using concrete objects, visual models, drawings, and/or representations to build their understanding. They are asked to solve a diverse set of real-world and other mathematical problems using multiple methods both in collaboration with their peers and independently. Students are given frequent opportunities to discuss and write about various approaches to solving problems.

The middle school mathematics curriculum is based on the 2017 Massachusetts Curriculum Frameworks along with the Standards for Mathematical Practice. The Standards for Mathematical Practice describe expertise that students should seek to develop as well as ways in which to engage with the subject matter as they grow in mathematical maturity.

The standards include:

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

The following components are used as further guidelines:

- Conceptual understanding – make sense, and reason, and understand math concepts and ideas
- Procedural fluency – know mathematical facts, compute and perform the math
- Capacity – solve a wide range of problems in various contexts by reasoning, thinking, and applying the mathematics they have learned

While students master these underlying components and their relationships, they lay a foundation for higher-level mathematics, strengthen their capacity for thinking logically and rigorously, and develop an appreciation for the beauty of math.

Five Focus Areas:

Operations and Algebraic Thinking

- A. Write and interpret numerical expressions.
- B. Analyze patterns and relationships

Number and Operations in Base Ten

- A. Understand the place value system.
- B. Perform operations with multi-digit whole numbers and with decimals to hundredths.

Number and Operations—Fractions

- A. Use equivalent fractions as a strategy to add and subtract fractions.
- B. Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

Measurement and Data

- A. Convert like measurement units within a given measurement system.
- B. Represent and interpret data.
- C. Geometric measurement: Understand concepts of volume and relate volume to multiplication and to addition.

Geometry

- A. Graph points on the coordinate plane to solve real-world and mathematical problems.
- B. Classify two-dimensional figures into categories based on their properties.

Materials: Everyday Mathematics 4 Continental Math League problems (CMLs)
Weekday Workouts

Grade Five Performing Arts Curriculum

Fifth grade students have general music class one time per week during which they develop the following skills:

Performing: Students will develop skills in singing, reading music, and playing instruments.

Reading and Notating: Students will learn to interpret and apply visual representations for the sounds they hear (musical notation).

Listening and Appreciation: Students will learn to critically respond with understanding when they describe, analyze and interpret music. Students will study music from different periods and locations.

Creating: Students will improvise and compose original works of music.

Connecting: Students will develop understanding of artistic heritage through investigation of the historical and cultural contexts of music.

Fifth graders are required to take one or both of the following ensemble classes:

5th Grade Chorus: In 5th Grade Chorus, students develop their ability to sing with healthy vocal technique, read rhythms, pitches and musical markings, sing multiple part harmony, and to express themselves through singing. Students develop their abilities as individual singers and as a group. There are at least two evening concerts per year.

In addition, students may join the 5th-8th Grade Middle School Chorus which meets during the school day. Two auditioned after school ensembles, Advanced Choir and Pop Choir, allow students to perform music of other genres and difficulty levels.

Band: 5th-8th Grade Band offers students who play wind and percussion instruments the chance to further develop their instrumental and musical skills both individually and in a larger ensemble with more sophisticated and longer works. Students prepare music in a wide variety of styles to be performed at least two times in evening performances. Students have the ability to audition for a more advanced concert band and/or jazz band. Additional events may include festival performances and overnight field trips when appropriate.

Grade 5 Physical Education Curriculum

5th grade students begin to apply tactics and strategies to modified game play, demonstrate movement skills in a variety of contexts, understand how to take part in a health-enhancing fitness program, participate in various physical fitness activities, cooperate with and encourage classmates, accept and include all students, regardless of their differences, and engage in physical activity for enjoyment and self-expression.

All of the skills and tactics that students take part in help them to learn lifetime skills. Using “fun” as a catalyst, we try to develop in all children, the desire to maintain a healthy and active lifestyle.

The grades 5-8 Physical Education Curriculum was developed with the National Standards in mind, so students can understand what the physically literate individual is capable of knowing and doing. These standards can be found at

<https://www.shapeamerica.org/standards/pe/>.

During the grade 5-8 years, students will work on the skill progressions within each of the following areas:

Motor Skills and Movement Patterns: Develop skills in dance and rhythms, games and sports, and individual performance activities.

Physical Activities and Fitness: Demonstrate the knowledge and skills to achieve and maintain a health enhancing level of physical activity and fitness. Students increase knowledge of physical activity, engage in physical activity, and take part in a biannual physical fitness assessment.

Personal and Social Behavior: Demonstrate respect for self and others, including personal responsibility, accepting feedback, working with others, learning rules and etiquette, and maintaining safety. Students also create and work towards achieving personal health-related goals.

Value of Physical Activity and Social Interaction: Recognize the value of physical activity for health, enjoyment, challenge, self-expression and social interaction.

5th Grade Science Curriculum

Program: Know Atom Interactive Science Curriculum: 5th Grade

Earth Science

Matter in Motion

Students discuss how all matter in the universe is made up of different combinations of atoms formed from chemical reactions. They use scale models to compare properties of the sun, moon, and Earth. They then use that knowledge to analyze how patterns are formed by the relative positions and movements of the sun, moon, and Earth.

Earth Materials

Students apply what they learned in the previous unit to evaluate how different geologic processes cause Earth's surface to change over time in predictable patterns and how the matter that makes up rock is constantly being transformed through heat and pressure.

Water on Earth (includes an engineering component)

Students analyze Earth's interacting systems, focusing on how the hydrosphere interacts with and is influenced by other systems. They start with how water is distributed on Earth, analyzing how salt water becomes salty as water weathers and erodes rock. They then describe how interactions between the hydrosphere and atmosphere can result in hurricanes. They apply that scientific knowledge to engineer water filtration devices.

Life Science

Matter & Energy Cycles

Students focus on the biosphere, analyzing how living things interact with one another and their environment for survival. They start with an introduction to cells, the internal structures that keep organisms functioning. They evaluate how plants gather energy and nutrients. They use that knowledge to trace how energy and matter move through a food web. They then focus on the role of decomposition in the food web.

Ecosystems Interactions

Students focus on how environmental changes impact the ability of organisms to survive, grow, reproduce, and pass their traits on to future generations.

Physical Science

Energy and Forces on Earth (includes an engineering component)

Students explore non-living energy systems. They use sleds to see how friction transfers energy out of systems and then apply what they know about forces and motion to engineer roller coasters.

Matter and Electricity

Students continue to explore forces and energy, focusing on how electrical energy can be transferred from one place to another to do work. Students build circuits and then design electromagnetic motors.

Matter and Sound (includes an engineering component)

Students focus on how sound energy is transferred from one place to another in waves. Students model sound waves and then explore how different materials absorb and transmit sound differently. Students apply what they have learned to design sound-absorbing walls.

Light Energy and Matter (includes an engineering component)

Students focus on light energy, investigating how light moves when it interacts with different kinds of matter. Students use scientific knowledge about light to engineer devices that use mirrors to redirect light.

Earth Materials

Students apply what they learned in the previous unit to evaluate how different geologic processes cause Earth's surface to change over time in predictable patterns and how the matter that makes up rock is constantly being transformed through heat and pressure.

Water on Earth (includes an engineering component)

Students analyze Earth's interacting systems, focusing on how the hydrosphere interacts with and is influenced by other systems. They start with how water is distributed on Earth, analyzing how salt water becomes salty as water weathers and erodes rock. They then describe how interactions between the hydrosphere and atmosphere can result in hurricanes. They apply that scientific knowledge to engineer water filtration devices.

Grade 5 Social Studies Curriculum

Students begin the year learning about using an atlas and the early European colonies in North America. Then students learn about the 13 British Colonies in more depth. The students end the year with the events leading up to the American Revolution and the early battles of the war.

Concepts & Skills

***Identify** primary and secondary sources.

***Explain** the difference between the two.

***Analyze** sources – *Who’s telling the story? What does it tell us about life at the time?*

***Interpret** different types of maps, timelines, and other text features.

Unit 1 - The Age of Exploration

***Explain** what caused Europeans to begin exploring in the 15th century (*such as close of land route to Asia, trade & profit, & territorial expansion.*)

***Name** specific resources and **identify** trade routes explorers searched for and found.

***Describe** how the discoveries changed Europeans’ views of the world (maps & ideas).

Unit 2 - The European Settlement of North America & the Colonial Roadshow

Project ***Identify and locate** British, Dutch, French, and Spanish settlements in North America. ***Explain** what motivated settlement and what the key industries/products/resources were. ***Explain** the causes of the establishment of slavery in North America.

***Describe** the conditions of the Middle Passage and slavery, and the responses of enslaved people to them.

***Research** an aspect of daily life in Colonial America for the Colonial Roadshow project. Students write an informational piece, make a poster with text features, and create an artifact that is connected to the topic.

Unit 3 - The Road to Independence

***Explain** the reasons for the French and Indian War.

***Identify** who won the war and how the map of North America changed.

***Trace** the new laws and policies that Britain put in place after the war.

***Describe** the colonial response to these policies, up to the Battle of Bunker Hill.

Along with *From Colonies to Country: 1710-1791* by Joy Hakim and other nonfiction texts, students read historical novels together in book clubs. Titles include *My Brother Sam is Dead*, *Phoebe the Spy*, *Toliver’s Secret*, *The Fighting Ground*, and *Give Me Liberty*.

Grade 5 Visual Arts Curriculum

The visual arts curriculum helps to build relationships of trust and respect among peers. Through rigorous and meaningful projects students will be encouraged to better understand

their capacity to be aware of, control, and express their emotions.

Projects highlight the connections between science, math, history and art and encourage problem-solving, perseverance and critical thinking skills. Art history, art appreciation, growth mindset and the design cycle are integrated into lessons in all grades. 5th grade students explore a variety of media as they expand their knowledge and implementation of the elements of design including value, color, shape, line, space and texture. Projects include, but are not limited to; black and white value study, complex color wheels, 3D tree houses incorporating LED circuits for lighting, clay and glazing and colonial inspired tin tooling

Grade 5 World Language Overview

By the beginning of Middle School, students have selected the language of their choice, either Spanish, Chinese or French. Students are exposed to fundamental language structures in a variety of modalities: listening, speaking, reading and writing. Students work towards proficiency through vocabulary, grammar, and cultural themes presented in context.

Students are introduced to useful vocabulary and practice applying it either in written or oral form. Language is presented by native speakers through authentic materials which allow students to learn how to communicate in real-life situations. Role plays, skits, songs, games and classroom drills provide students with opportunities to practice their communication and pronunciation skills.

Social Emotional Learning and Bullying Prevention /Intervention

The Carlisle Schools have designed a comprehensive social emotional learning and bullying prevention and intervention program committed to the nurturing of a positive school culture that supports our teaching and learning environment. It is our vision that our schools reflect a warm, safe, respectful and nurturing school climate that supports our children from grades PreK to 8.

Our program is characterized by the inclusion of the following elements:

Social Emotional Learning Bullying Prevention and Intervention

Challenge Success (K-8)

Friendship Groups (K-4) Olweus (K-12)

Class Meetings (1-8) Incredible Flexible You (K-1) Responsive Classroom (3-5)

Advisory (6-8)