



Mt Lebanon School District

Elementary Curriculum

Grade 4

English Language Arts

Fourth Grade students further develop their skills by reading and analyzing authentic literature. This includes novel studies and informational texts which include science and social studies curricular materials. They compare multiple texts on the same topic to identify varying points of view as well as different purposes for writing. Specific skill work includes identifying theme, inferences, and summarizing informational text. Students begin to understand the research process and develop note taking skills. Word analysis is utilized to develop vocabulary and an understanding of word origins. Materials include the Houghton Mifflin Harcourt Journeys anthology, shorter guided reading books to revisit vocabulary and comprehension skills, novels, and a science/social studies library with connections to their curriculum in these areas.

Students participate in Writer's Workshop as well. Writing exercises include informational text, narratives, procedural directions, argumentative essays, and response to literature. Teachers model effective writing strategies from authentic literature and incorporate grammar skills instruction to strengthen sentence structure. They also guide students through the process of drafting, revising, editing, and publishing their pieces. This culminates in opportunities to practice their speaking skills by sharing their works in the "Author's Chair" to receive feedback from peers.

Mathematics

Fourth grade students explore the operations of multiplication and division. Students understand and work with an array model of multiplication, and they reason about numbers, their factors, and review multiplication combinations up to 12×12 . They solve multiplication problems with up to 4-digit numbers, while understanding and using the relationship between multiplication and division to solve division problems. They extend their knowledge of the number system to 1,000,000 and apply it to different strategies to add and subtract accurately and efficiently. Students understand the meaning of fractions and decimal fractions, compare the value of fractions and decimal fraction, and use representations to add rational numbers. Graphs and tables are used to represent and describe constant rate of change. Data is described, summarized, compared and interpreted through a data investigation. Measurement with standard units is used

to describe and classify planar shapes, and used to compute area and perimeter of a given space. Students use protractors and attributes of a figure to describe and measure angles.

Science

The science program enhances students' attitudes toward science and encourages their natural curiosity. It provides students with a substantial knowledge base of facts, concepts, and principles. It also teaches students to use and apply science-related thinking and process skills (e.g. observation, questioning, data gathering, note taking, analysis, and hypothesizing). During each curriculum unit in science, students learn to work cooperatively in small groups with an emphasis on learning essential content and developing science process skills. The science curriculum provides lessons and curriculum units in life science, physical science, earth science, and engineering.

In the Life Science unit students learn that organisms need energy and matter to live and grow, and that living organisms depend on one another and on their environment for their survival and the survival of populations. They also understand that humans can change environments.

In the Physical Science unit students expand their understanding of electricity through investigations with wires, batteries, bulbs, and switches.

In the Earth Science unit students investigate the interactions between land and water. Using a stream table as a model, they create hills, build dams, and grow vegetation. Miniature valleys, waterfalls, and canyons form in the stream table as water flows over and through the soil. Students discover how water changes the shape of land and how features in the land, in turn, affect the flow of water.

In the engineering unit students explore and discuss the connections between the science of electricity and the field of electrical engineering. Science concepts concerning electricity, energy, and circuits are reinforced in a series of guided hands-on activities, readings, and discussions.

Social Studies

The five regions of the United States are explored through the lens of four social sciences: economics, geography, political science, and history. Social Studies Alive!, our core resource program, enables students to experience concepts through an active, student-centered approach to teaching social studies. Fourth graders explore the Regions of the United States through five "tours." Along the way, they stop at three places in each region for a closer look. Students create notebooks that are used to document their travels and record important information.

Students continue learning about and practicing map and geography skills, and study how to be a good citizen.

Art

In fourth grade, students explore the works of many famous artists including Andy Warhol and Henri Matisse. Students use a variety of materials to create Art that explores the ideas and imagery of the masters. Fourth grade students have the opportunity to create drawings, paintings, ceramic pieces, sculptures, and printmaking, while focusing on Color as an Element of Design.

Vocal Music

Fourth grade students continue to develop the concepts and skills learned in third grade. Through singing, moving, and playing classroom instruments, students reinforce rhythms and develop the ability to create and improvise repeated rhythm patterns (ostinato) within a song. Students recognize and sing low and high voices (including descants) and sing songs in major and minor keys. Students sing the major scale using solfege singing syllables (do, re, mi, fa, so, la, ti, do) and refine their singing skills using partner songs and canons. Students explore the orchestra, strengthen their understanding of conducting patterns, review various eras of musical styles, and attend a free concert at Heinz Hall performed by the Pittsburgh Symphony Orchestra.

Physical Education

The curriculum for physical education provides equal opportunity for students to create, learn, enjoy and participate in skill development through a variety of physical activities that have life-long value. These activities are designed to contribute to good physical, mental, social and emotional health. The activities are divided into six areas, team games, self testing, rhythmic, low organization, lifetime sports and fitness. In team games, students demonstrate the fundamental skills and apply learned knowledge. Self-testing activities help students analyze and evaluate their own performance and set realistic goals. Rhythmic activities use a variety of patterns and directions while low organization activities use fundamental movements and skills. Lifetime sports demonstrate the value of recreational activity and the fundamental skills of the game. Finally, fitness develops strength and endurance in the major muscle groups. Students also participate in fitness testing.

Health

The Elementary Health Program in the Mt. Lebanon Schools will enable every student to know wellness involves the growth, development, and maintenance of a person's physical, intellectual, social, and emotional health. They understand that individuals can prevent health problems and

diseases by following positive health practices. Students know that individuals need accurate information for attitudes and behaviors that lead to wellness. Ways to acquire health information, decision-making skills, and coping strategies that are necessary for physical, intellectual, social, and emotional well-being are learned. Finally, students appreciate that total health is a right and a responsibility of every individual, family and community.

Library

In fourth grade, students visit the library once a week (rotation) for a book exchange and a lesson. Lessons focus on literature appreciation, library search skills and research foundations using the Big 6 model. The online library catalog (Destiny) is utilized and effective search strategies are revisited (keyword, title, Boolean logic). By the end of fourth grade, students have an understanding of library organization and are able to locate any book in the library using the Destiny catalog, effective search methods and a fiction or non-fiction call number. In addition, students continue to learn about internet safety, security, fair use and etiquette through Common Sense Media's digital citizenship curriculum. Students will understand the importance of granting creative credit and how to write a MLA-style bibliographic citation.

Spanish

In fourth grade, students study the countries of Central America, with a focus on Guatemala. After a brief review of the previous years, students will be introduced to the countries of Central America, which include Belize, Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica and Panama. In addition, a focus on the art of weaving and the formation of the traditional Hispanic name are studied by the example of a real loom from Guatemala.

Other units of study include a written personal narrative called "Soy Yo" (That's me), numbers up to 100, food groups and meals, Mayan numbers, ordinal numbers, planets and sports. In addition, students have the opportunity to research one of the six Spanish speaking countries of Central America in an online research project with a presentation to follow, which includes facts about the flag, denomination, history, and culture such as music, dance, food and daily life.

Technology Assured Experiences

Students continue to build upon their prior technology experiences and move into higher level research tasks such as selection of appropriate internet resources, academic integrity as it relates to using sources and considering audience in presentations. Their word processing skills advance to creating templates, headers and footers. They begin to use devices to capture audio and visual media. Additional topics include cyberbullying and internet safety.

Guidance

Our fourth grade students continue to participate in the school counseling program through regular classroom guidance lessons. This curriculum consists of structured lessons, facilitated by the school counselor within the classroom, designed to help students attain the academic, career and social/emotional competencies and to provide all students with the knowledge, attitudes and skills appropriate for their developmental level. The fourth grade classroom lessons focus on bullying prevention behaviors, advocacy skills, diversity and inclusion, test-taking skills and career awareness. Units are flexible and may vary in order based on student needs and schedules.

Orchestra

For students who elect to play a stringed instrument, the fourth grade year continues skills and concepts taught in our third grade program and blends the development of music reading skills with playing techniques specific to each instrument. Small group instruction is a key point of emphasis featuring lessons that are taught in like-instrument groups. Each child will receive one 30 minute lesson per week. Building based rehearsals provide the opportunity to play in a larger group, which helps to develop ensemble technique. The year culminates in a performance which combines several elementary schools into a large performing ensemble.

Band

The elementary band program provides students who are interested with opportunity to learn to play woodwind brass and percussion instruments. The fourth grade years blends the development of music reading skills with playing techniques specific to each instrument. Small group instruction is a key point of emphasis featuring lessons that are taught in like-instrument groups. Each child will receive one 30 minute lesson per week. Building based rehearsals provide the opportunity to play in a larger group, which helps to develop ensemble technique. The year culminates in a performance which combines several elementary schools into a large performing ensemble.