

Curriculum Quick-View: Grade Four

Grade
4

A Coherent Curriculum Emphasizing Teaching for Student Understanding

The Hilliard City School District curriculum is developed with the belief that the focus of all teaching and learning is on the student. To empower our students to be informed problem solvers, critical thinkers and communicators in the context of a changing, global society, we believe it is crucial to provide our students with quality learning experiences through a rich curriculum.

We accomplish our mission by:

- Aligning our curriculum in all content areas with National and State Academic Content Standards;
- Setting and enforcing high measurable standards of performance;
- Providing instruction that is based upon researched best practice that supports the social, emotional and cognitive development of children in grades K-5;
- Providing quality learning experiences that focus on knowledge, skills and the application of knowledge to new situations and problems.



Several ideas create the foundation for guiding all of our teaching and learning activities:

Constructivist Theory of Learning

It is our belief that students *construct* or produce knowledge or meaning, rather than merely reproducing the knowledge of others. They do so by learning content and skills while:

- Interpreting
- Evaluating
- Analyzing
- Synthesizing
- Organizing

Constructivist teaching is focused on posing problems relevant to learners, structuring learning around “big ideas” and concepts, valuing the student’s point of view and assessing student learning in the context of teaching.

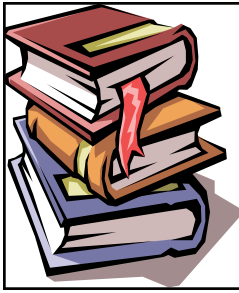
Backward Design Model for Teaching for Understanding and Inquiry-Based Learning

Backward Design is a curriculum framework in which teaching and learning take place around enduring understanding and essential questions in each content area. Teachers ask three questions of themselves as they design instructional units:

- What should students be able to know and/or do?
- How will students demonstrate their understanding of new knowledge?
- What experiences will students engage in to achieve the desired results?

Rather than simply “covering” content, students are supported in the “uncoverage” of knowledge through sustained inquiry that involves exploring old questions, asking new questions and problem solving using a variety of information sources and media.

WHAT YOUR CHILD WILL BE TAUGHT IN FOURTH GRADE



This guide provides parents with an overview of the concepts and skills that students will be taught in Literacy, Mathematics, Science, Social Studies, and Wellness during the coming school year. Our Elementary Program provides students with a variety of opportunities to learn and grow in a developmentally appropriate learning environment. Our teachers use instructional strategies to excite, motivate, and challenge all students. Throughout the elementary grades, students learn to identify various sources of information and how to gather, organize, and use it. They work with technology tools across subject areas. They write often and for various purposes. Students are assessed through a variety of methods to determine each student's instructional needs, as well as his/her understanding of concepts and skills. Your child's progress report will reflect his or her learning. **All information printed below is from the graded course of study, is abbreviated for information purposes, and appears in no particular sequence or order.**

LITERACY

The development of literacy (reading, writing, and oral communication) is facilitated through the Literacy Collaborative Framework which centers on the following eight elements of reading and writing:

<i>Read Aloud</i>	<i>Shared Writing</i>
<i>Shared Reading</i>	<i>Interactive Writing</i>
<i>Guided Reading</i>	<i>Writer's Workshop</i>
<i>Independent Reading</i>	<i>Independent Writing</i>

The curriculum is aligned to State Academic Content Standards, and supported through abundant, high-quality children's literature..

In reading, the learner will:

- Determine the meaning of synonyms, antonyms, homophones, homonyms and homographs.
- Identify word origins to figure out the meaning of unknown words.
- Understand what prefixes (e.g., **replay**) and suffixes (e.g., **nicer**) are.
- Develop an understanding of new uses of words and their concepts such as similes and metaphors.
- Establish a purpose for reading (e.g., to find out, to interpret, to enjoy).
- Compare (what is alike) and contrast (what is different) information.
- Answer **literal** (directly stated), **inferential** (indirectly stated and requires more information) and **evaluative** (requires the reader to come up with a response based on the reader's opinion) questions to show understanding about what has been read or watched.
- Make inferences about the reading material based on the title page, table of contents and chapter headings.
- Locate important details about a topic using sources such as books, magazines, newspapers and the Internet.
- Draw distinctions between fact and opinion.
- Understand the meaning of main ideas and supporting details.
- Identify how the setting (time, location) influences the reading selection.
- Identify the major events of a plot sequence (order in which

events occur), identify the conflict (problem) and how it was resolved.

- Examine meaning as readers and understand the point of view of others (e.g., characters, authors, narrators).
- Identify the speaker and recognize the difference between first- and third-person narration.

In writing, the learner will:

- Learn to organize thoughts for the purpose of writing (e.g., lists, brainstorming, diagrams).
- Use simple, compound and complex sentences.
- Use resources such as dictionaries or thesauruses to choose more effective vocabulary.
- Proofread writing and edit it for grammar and spelling.
- Polish a writing piece for publishing (e.g., to display or share with others).
- Use narrative writing (writing that tells what happens) to put events in order, to include descriptive words and vivid language, and to develop characters, setting (time, location) and plot.
- Write letters such as thank you notes that include all the proper parts: date, proper salutation, body, closing and signature.
- Produce informal writings such as messages, journals or notes.
- Use commas, end marks, apostrophes and quotation marks correctly.
- Use conjunctions (e.g., or, and, but) and interjections (e.g., Wow!).
- Use prepositions and prepositional phrases (e.g., in front of, beneath, behind, on top of).
- Use subjects and verbs that are in agreement.

In listening and communication, the learner will:

- Demonstrate active listening skills such as asking questions or making visual contact.
- Know the difference between fact and opinion when information is presented.
- Give presentations that present ideas/events in sequential order and have a clear focus; show an understanding of the topic; include a clear introduction, body and conclusion, use visuals; and name sources.
- Develop skills in delivery, speaking clearly, using proper pace and volume, and displaying appropriate body language.

MATHEMATICS

The fourth grade math curriculum is provided through the *Everyday Mathematics* series published by the University of Chicago. Students learn concepts in mathematics through six standards: Number Sense and Operations; Measurement; Geometry and Spatial Sense; Patterns, Functions and Algebra; Data Analysis and Probability; and Mathematical Processes.

In Mathematics, the learner will:

- Recognize and write numbers in both fraction and decimal forms, such as $5/10 = 0.5 =$ “five tenths.”
- Round numbers to a given place value such as to the nearest 100 or 1,000.
- Use mental math strategies to make estimates and to check the accuracy of computations.
- Add and subtract decimals and fractions with like denominators (e.g., $2/4 + 1/4$).
- Solve problems that involve counting money and making change using coins and dollar bills.
- Solve addition, subtraction, multiplication and division problems that have more than one step.
- Relate the number of units to the size of units used to measure an object.
- Describe perimeter as surrounding, area as filling a two dimensional shape (such as a circle or a square), and volume as filling a three-dimensional object (such as a cylinder or cube).
- Convert measurement units such as inches to feet, kilograms to grams or quarts to gallons.
- Identify intersecting, parallel and perpendicular lines.
- Describe similarities and differences of two-dimensional shapes (e.g., squares, rectangles, parallelograms).
- Compare the characteristics of three-dimensional objects (e.g., cones, cubes, cylinders).
- Find examples or models of points, lines and planes in everyday objects and in the environment.
- Use words, tables and graphs to describe and answer questions involving patterns and other mathematical relationships.
- Use numbers and symbols to represent problem situations.
- Describe how a change in one number or variable affects a related value (e.g., as one value increases, the other decreases).
- Use tables, bar graphs, line plots and line graphs to display and compare data.
- Answer questions using information in tables, charts and graphs.
- Use range, median and mode to make comparisons among sets of data.
- Describe the likelihood of simple events and chance situations.
- Use a variety of problem-solving strategies.
- Use reasoning to match solutions to problem situations (e.g., 6 cars are needed for 26 students if each car can hold 5 students).
- Use everyday and mathematical language to explain mathematical ideas and solutions.

SCIENCE

Science curriculum is facilitated through a combination of factual knowledge acquisition, ongoing inquiry, and hands-on explorations and experiences. Through science, fourth grade students focus on conducting investigations and experiments that deal with the physical properties and chemical changes in matter, the functions of characteristics and growth in the life cycle, and how weather impacts the Earth’s surface, air, and water. Student learning centers around LIFE SCIENCE, PHYSICAL SCIENCE, and EARTH & SPACE SCIENCE. An overarching study of the forest habitat connects learning in all three areas.

In Science, the learner will:

- Explain that air surrounds us, takes up space, moves around us as wind and may be measured using barometric pressure.
- Identify how water exists in the air in different forms (e.g., clouds, fog, rain, snow, hail) and explore how water changes from one state to another (e.g., freezing, melting, condensation, evaporation).
- Describe the weather which accompanies cumulus, cumulonimbus, cirrus and stratus clouds.
- Describe how wind, water and ice shape and reshape the Earth’s land surface by eroding (wearing away) rock and soil in some areas, and depositing them in other areas (e.g., dunes, deltas).
- Describe how freezing, thawing and plant growth reshape the land surface by causing the weathering of rock.
- Describe evidence of changes on Earth’s surface in terms of slow processes (e.g., weathering, mountain building, deposition) and fast processes (e.g., volcanic eruptions, earthquakes, landslides).
- Compare the life cycles of different plants including germination, maturity, reproduction and death.
- Relate plant structures to their specific functions such as growth, survival and reproduction.
- Group common plants according to their traits (e.g., tree leaves, flowers, seeds, roots).
- Explore that fossils provide evidence about plants that lived long ago and the nature of the environment at that time.
- Identify the characteristics of simple physical and chemical changes.
- Explain that matter has different states (e.g., solid, liquid, gas) and that each state has specific physical properties.
- Compare ways the temperature of an object can be changed (e.g., rubbing and heating of metal).
- Explore how technology and inventions change to meet people’s needs and wants.
- Develop, design and conduct safe, simple investigations or experiments to answer questions and describe how comparisons may not be fair if the conditions are not kept the same between experiments.
- Tell the difference between fact and opinion and explain that scientists do not rely on claims or conclusions unless they are supported by observations that can be confirmed.
- Explain differences in an investigation using evidence or proof to support the findings.

SOCIAL STUDIES

Social Studies is facilitated through using a variety of information sources to assist students in learning about history, people in societies, geography, economics, citizenship and government. Fourth grade students focus study on the State of Ohio, its past, location and geography, and its government while developing research skills individually and in group activities. They also learn about other cultures in and beyond their classroom and community.

In Social Studies, the learner will:

- Make timelines to show the order of important events in Ohio history.
- Explain the causes and effects of the frontier wars on American Indians in Ohio and the United States.
- Explain how Ohio became a state, including the terms of the Northwest Ordinance.
- Explain how canals and railroads changed settlement patterns (where people lived) in Ohio and how they affected Ohio's economic and political status in the United States.
- Explain the importance of inventors such as the Wright brothers, Charles Kettering, Garrett Morgan, Granville Woods and Thomas Edison.
- Describe the way of life of various groups who have settled in Ohio over time, including: a) Prehistoric people; b) historic Indians of Ohio; c) European immigrants; d) Amish and Appalachian populations; e) African-Americans; f) recent immigrants from Africa, Asia and Latin America.
- Describe the impact of the expansion (growth) of European settlements on American Indians of Ohio.
- Explain the reasons people came to Ohio including opportunities in agriculture; mining and manufacturing; family ties; and religious and political freedom.
- Measure the distance between places on a map.
- Use cardinal (north, south, east, west) and intermediate (northeast, southwest, northwest, southeast) directions to describe the location of places.
- Describe the location of Ohio compared to other states and countries.
- Use maps to identify the location of places in Ohio including Lake Erie, rivers, plains, the Appalachian Plateau, bordering states, the capital city and other major cities.
- Explain how resources, transportation and location influenced the development of cities, as well as industries in Ohio such as oil, steel, rubber and gas.
- Explain how resources available in Ohio are used in producing goods and services which are traded for other goods and services.
- Explain how business people use natural resources, labor and equipment to produce goods and services, and that they attempt to make a profit by taking risks.
- Explain ways in which people and households obtain and use income.
- Explain why many jobs in Ohio create products that are sold in other countries and why products from other countries are sold in Ohio.
- Explain major responsibilities of each of the three branches of Ohio's government.
- Explain why elections are used to select leaders and decide issues.
- Explain the purpose of a democratic constitution: a) to provide a framework for government; b) to limit the power of government; c) to define the authority of elected officials.
- Explain that the Ohio Constitution tells how the state government should be organized and how it guarantees the rights of people.
- Describe ways in which citizens can promote the common good and influence their government through activities such as voting, communicating with officials, participating in organizations and doing volunteer work.
- Explain why personal and civic responsibilities are important.
- Get information about state issues from different sources such as atlases, encyclopedias, dictionaries, newspapers and computers.
- Locate information using a glossary and index.
- Distinguish between fact and opinion.
- Read and interpret pictographs, bar graphs, line graphs and tables.
- Use a problem-solving/decision-making process which includes: a) identifying a problem; b) gathering information; c) listing and considering options; d) considering advantages and disadvantages of options; e) choosing and applying a solution; f) developing criteria for judging its effectiveness.

WELLNESS

Wellness curriculum provides students with the knowledge, skills, and understandings that lead to lifelong positive attitudes and behaviors related to healthy living.

In Wellness, the learner will:

- Accept personal responsibility for lifelong wellness.
- Respect and promote the wellness of others.
- Understand the process of growth and development.
- Select and use wellness-related information, products and services.

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Or visit our website:
www.hilliardschools.org



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LEARNING THROUGH THE RELATED ARTS

In educating the “whole child,” the Hilliard City Schools are committed to integrating the related arts — art, music, and physical education — into the elementary curriculum. Students receive regular instruction in the related arts by qualified and specially trained teachers in each area.

In Art and Music, the learner will:

- Explore the work of master artists including Vincent van Gogh and Claude Monet.
- Identify the time period and style of works by van Gogh and Monet.
- Use a variety of media to create work that expresses his/her personal response to the aesthetic.
- Incorporate the elements of design into his/her own works of art.
- Critique works of art in terms of meaning, theme, mood, and express an opinion about the work with reason (s) for the opinion.
- Identify, listen to and perform music of the past and present with an emphasis on American folk music.
- Identify orchestral instrument.
- Identify the components of music elements heard (dynamics, tone color, tempo, etc.).

In Physical Education, the learner will:

- Explore basic dance and movement skills.
- Develop gymnastic skills including mounts, vaults, beam work, and bar work.
- Develop skills in leisure and organized sport activities such as soccer, volleyball, floor hockey, and softball.
- Build muscular strength, agility and endurance for fitness.
- Explore knowledge for making choices for lifelong health and physical fitness.

Testing and Assessment in Grade Four

In the spring of Fourth Grade students participate in State of Ohio Achievement Tests in math and reading.

In addition, classroom teachers engage students in ongoing diagnostic assessments in literacy, math, science, and social studies. These assessments are used to plan instruction.