

**Worthington Schools
Graded Course of Study
Grades 3–8 and High School**

**English Language Arts
Mathematics
Science
Social Studies**

2013



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Introduction

The Worthington School District's Grade 3–High School Graded Course of Study for English Language Arts, Mathematics, Science, and Social Studies communicates with staff, students, parents, and community the overall learning targets and performance expectations of the program. This Graded Course of Study incorporates Worthington Schools' Mission and Vision, the Common Core National Curriculum (ELA and Math), and the Ohio 2010 State Standards (Science and Social Studies). This document is intended to outline learning expectations and provide a tool for documenting and tracking an individual's development, progress, and achievement over the course of the student's school career.

This revision places a greater emphasis on College and Career Readiness as well as the development of 21st century skills of collaboration, creativity, critical thinking, and communication.

The Grade 3–High School Graded Course of Study reflects the contributions of the Worthington faculty as well as representatives from the community and administration. A special appreciation goes to the following individuals who served as the Grade 3–High School Writing Team through the 2011-12 and 2012-13 school years as well as the summer to produce the 2013 Revised Worthington Graded Course of Study.

English Language Arts

- **Jamie Lusher, Coordinator of English Language Arts and English Language Learners**
- **Cynthia Westover, Coordinator of English Language Arts and English Language Learners (Retired)**

Grade Three:	Nichole Hosty, Nicole Moritz, Gina Piero, Barb Saffell
Grade Four:	Susan Drake, Kathy Mikkelsen, Bev Matson, Rachel Patt
Grade Five:	Meghann Moore, Kristi Patrick, Lisa Rogers, Karen Smucker, Laura Swabb
Grade Six:	Carmen Cordova, Kate Kenndy, Tana Koos, Emily McMullen, Gina Piero
Grade Seven:	Jen Baker, Suzanne Ezell, Tricia Palko, Stephanie Records
Grade Eight:	Tami Hinz, Scott Miller, Robin Troth
Grade Nine:	Brooke Hess, Megan Scheetz
Grade Ten:	Amie Freed, Jamie Macklin
Grade Eleven:	Dave Miller, Paul Pfeiger
Grade Twelve:	Carla Saunders

Math

- **Nancy Massman, Math Curriculum Leader**

Grade Three:	Toni Gardner, Michelle McCort, Amber Scholl
Grade Four:	Holly Antonelli, Krista Bucholz, Sarah Chizmar, Megan Connell, Dana Coughlin, Josi Davis, Rick Fuller, Terri Goldring, Carmie Hazlett, Susan Hilbert, Karen Lanier, Bev Matson, Fran Middaugh, Kathy Mikkelson, Kelsey Rankin, Jacquie Schmittauer, Ashley Sharpless, Pauline Siegel, Todd Smith, Vicky Watkins, Kristen Watson, Carrie Weller, Nancy Wharton
Grade Five:	Johannah Benedict, Rosemary Sartor, David Signet
Grade Six:	Brittany Baugh, Libbi Craig, Colleen Snyder
Grade Seven:	Staci Coyle, Michelle Gilley, Micah Hudson, Stacy Lenczowski, Laura Marks, Erin McKinney, Casey Schrieber, Kim Stark
Grade Eight:	Jenny Adesso, Kevin Hall, Shannon Keeler, Jenny Keep, Nicki Meyer, Ed Repko, Brian Scott
Math I:	Amy Abbott, Amy Bowman, Greg Garris, Rodney Hopkins, Tom Kaczmarek, Denny Lyberger, Tracy Roman, Theresa Wallace
Math II:	Doug Dosky, Sean Kaiser, Matt Lynd, Chuck Monfort, Nancy Smith, Mike Zelch
Math III:	Lynn Apple, Laurie Barr, Angie Gussler, John Kovick, Glynda Rice, Nancy Smith, Nancy Stohs

Science

- **Brian Geniusz, Science/Health Curriculum Leader**

Grade Three:	Lynne Knapp, Rebecca Newman
Grade Four:	Carmie Hazlett, Bev Matson, Nancy Wharton
Grade Five:	Cristy Brinegar, Jill Mann, Natalie Pardi
Grade Six:	Ty Hollinger, Chris Leonard, Bill Wolford
Grades Seven & Eight:	Jake Bennet, Sarah Federanko, Brian Lord, David Murphy, Amanda Pettigrew, Mary Spencer, Kevin Swabb, Trudy Tuttle
Physical Science:	Dana Allen, Kelley Chase, Susan Hrenko, Ron Pilatowski
Biology:	Courtney Irwin, Karen Kochheiser, Brian Luthy, Sara Quart, Lily Yap
Chemistry:	Amy Beckstedt, Thom Green, Jamie Haddow, Dan Sparks, Mary Wahba, Tom Wisard
NSS:	Cindy Fushimi, Lily Yap
AP Biology:	Jamie Haddow, Courtney Irwin
AP Chemistry:	Mary Wahba, Tom Wisard
AP Physics 1:	Erik Thompson, Doug Troutner
AP Environmental Science:	Courtney Irwin, Jerry Obney

Social Studies

- **Nancy Charlton, Social Studies Curriculum Leader**

Grade Three:	Sandy Downey, Pauline Siegel, Jennifer Young
Grade Four:	Henry Hale, Pauline Siegel, Vicky Watkins
Grade Five:	Greg Ross, Bev Serozynski, Ruth Zook
Grade Six:	Julaine Bierl, Joy Nieto, Emily Norris
Grade Seven:	Kelly Cox, Donna Newman
Grade Eight:	Kelly Cox, Jenny Lynch, Allison Talbot
Modern World History:	Bob Galasso, Laura Haverkamp, John Jordan, Jeff Matracia, Rosanne Nagel
American History:	Paul Chidester, Ed Chism, Lindsey Fencil, Bob Galasso, John Jordan, Jeff Vincent
American Government:	Scott DiMauro, Lauren Glaros, Jeff Vincent
AP U. S. History:	Paul Chidester, Mark McCort
AP U. S. Government:	Lindsey Fencil, Lauren Glaros
AP European History:	Tim Cave, John Jordan
IB Geography SL:	John Jordan
IB Economics SL:	Jeff Vincent
IB History SL/HL:	John Jordan
American Political Thought and Radicalism:	Judi Galasso, David Strausbaugh
Classical Humanities:	Steve Buck, John Jordan
Global Cultures:	Ed Chism, Ralph King
Introduction to Behavioral Sciences:	Judi Galasso, Jon Sprunger
Native American Cultures:	Andy Cox
Personal Financial Literacy:	Lindsey Fencil, Jeff Vincent
World Geography:	Andy Cox

Philosophy and Goals of the Worthington Board of Education

Instructional Philosophy and Goals

A. Generally

The state and the nation need a well-educated and competent citizenry capable of fulfilling the American ideals of opportunity and achievement. It is the responsibility of the Board of Education to articulate the wishes of the community so that the children under its jurisdiction mature to become knowledgeable, active, and concerned citizens capable of dealing with the challenges of a changing technological world.

The Board of Education of the Worthington Schools believes that the instructional program of the district is its first priority and that every effort be made to carefully plan, organize, implement, evaluate, and communicate this program to the community.

Furthermore, the Board believes the general public should be given ample opportunity to participate in the setting of goals for the instructional program and its evaluation. The professional staff is responsible for the implementation of the goals, and the Board has the responsibility of seeking from the community the resources necessary to accomplish the mutually agreed upon goals.

B. Philosophical Bases for Instructional Program

The Board believes that the instructional program is an essential ingredient of the school system and, therefore, matters relating to instruction should be carefully planned, organized, and communicated to the community. In its role as the representative policy-making body for the school district, the Board establishes the philosophical bases upon which the school district's programs are built.

They are as follows:

- The instructional program will emphasize the development of fundamental skills and a command of basic knowledge while preparing young persons for the rapidly changing and highly technical world in which they live.
- Students will learn how to make critical judgments and to use their inherent creativity to become effective problem solvers.
- Students will learn self-directed study skills which will serve them during and beyond their years of formal schooling.
- The instructional program will foster positive student attitudes toward change and develop in students the capacities necessary for dealing successfully with a changing world.
- Students will be given varied opportunities to develop their appreciation for the aesthetic aspects of human existence and to develop their talents for artistic self-expression.

- The instructional program will provide varied educational experiences in recognition of the diversity of student abilities, talents, and interests.
- The instructional program will provide for the physical and emotional well-being of students.
- Students will be made aware of the interdependence of all peoples and will be encouraged to accept their responsibilities as members of the human family for the survival and welfare of all.
- The instructional program will foster a sense of self-worth and a sense of worth in others along with a sense of responsibility for one's personal development.
- The instructional program will recognize the need for lifelong learning and provide educational opportunities for citizens of all ages.

C. Personnel

The Board recognizes that the successful implementation of the instructional program requires the employment of quality personnel. Furthermore, the Board believes opportunities for continuous personal and professional development are essential for ensuring the vitality of the educational program.

D. Evaluation

The curriculum shall be periodically and systematically reviewed by staff as determined by the superintendent but at a minimum as required by state law.

Mission Statement and Beliefs

Mission

The Worthington Schools Inspires Learning for All.

Vision

We develop life-long learning through visionary leadership, effective teaching and learning practices, wise resource management, and information-based accountability in a safe, positive, and supportive environment.

Beliefs

- Provide a culture of safety and respect for each member of the school community.
- Enhance learning and self-worth by meeting individual needs.
- Effectively utilize human, technological, and financial resources.
- Recruit, select, and retain quality staff.
- Expect personal and professional growth of each member of the school community.
- Involve community through engagement, partnership, and collaboration.

Overview

In 2010 the Ohio Department of Education adopted new standards in English Language Arts, Math, Science, and Social Studies as the culmination of an extended, broad-based effort to fulfill the charge issued to the states by the Council of Chief State School Officers and the National Governors Association to create the next generation of K-12 standards to ensure that all students are college and career ready no later than the end of high school.

These new standards are (1) research and evidence based, (2) aligned with college and work expectations, (3) rigorous, and (4) internationally benchmarked. The Math and English Language Arts Standards are referred to as The Common Core Standards as they have been adopted by 46 of the states at this point in time.

In addition to defining college and career readiness, the standards also lay out a vision of what it means to be a literate person in the 21st century. The skills and understandings students are expected to demonstrate have wide applicability outside the classroom or workplace.

Worthington is revising its Graded Courses of Study in English Language Arts, Math, Science, and Social Studies to be in alignment with the Ohio Revised Standards in these areas. The standards will be adopted in three phases: K-2, 3-10, 11-12. The grades K-2 revised Worthington standards will be implemented in 2012-13, the grades 3-10 revised Worthington standards will be implemented in 2013-14, and the grades 11-12 (electives) will be implemented in 2014-15.

The revised Worthington standards will be posted on the Worthington website upon their adoption by the Worthington Board of Education.

The Common Core State Standards (CCSS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects

These standards set requirements for not only English Language Arts (ELA) but also for literacy in history/social studies, science, and technical subjects. Students must learn to read, write, speak and listen, and use language effectively in all content areas to the level required for college and career readiness in multiple disciplines.

Students who meet the ELA Standards readily undertake the close, attentive reading that is at the heart of understanding and appreciating complex works of literature. They habitually perform the critical reading necessary to pick carefully through the massive amount of information available to them both in print and digitally. They seek the wide, deep, and thoughtful engagement with high-quality literary and informational texts that enhances their knowledge and experience and broadens their global views. They also demonstrate strong reasoning and the use of evidence essential to the marshaling of arguments and positions that is crucial in becoming a responsible citizen in a democratic republic.

The **primary shifts** occurring in the new ELA Standards include:

1. **Make close reading of texts central to the lesson** – Readers must interrogate the text by reading like detectives: gathering evidence from the text. This idea is taken to a whole new level with the CCSS. Students should have more opportunities to read shorter texts and spend more time with them. This is about depth vs. breadth.
2. **Structure majority of instruction so all students read grade-level complex texts** – Students need more exposure to complex texts. Research shows that when students test at a certain level of reading, teachers often keep them there throughout. In CCSS they must be exposed to the levels of text complexity that demonstrate where they should be. They must know the target; otherwise they will be content to remain where they are.
3. **Emphasize information texts beginning with the early grades** – Research shows that K-5 students are being exposed to only 7% of informational text. CCSS call for 50% informational text at the elementary level, 55% at the middle school level, and 70% at the high school level. (Note: These percentages reflect the reading done by a student across all content areas.)
4. **Provide scaffolding that does not preempt or replace text** – With the CCSS students will be guided in the process of inquiry of assigned text to enable them to discover what the text has to reveal. No longer will teachers limit their scaffolding to the frontloading of information within the text, replacing text with a video, or giving them a summary of what they are to read.
5. **Responses to questions regarding their reading will be text dependent** – CCSS and the New Generation Assessments will require students to closely read multiple selections of text, synthesize this information, and respond to text-dependent questions/prompts. This type of reading and responding is more rigorous than that of a reflection, summary, or unsupported opinion.
6. **Provide extensive research and writing opportunities (claims and evidence)** – Research and writing will be a larger component of not only the ELA CCSS but also Social Studies, Science and Technical Subjects. Students will collaborate and develop an increased ownership in the reading and writing processes.
7. **Students will be provided frequent opportunities to share ideas, evidence, and research** – Research shows that unless students have the opportunity to read, write, AND talk about something, they will not reach as deep an understanding. The use of debates,

presentations, Socratic Seminar, etc., will become a more standard practice in all content areas.

8. **Vocabulary will be developed through systematic instruction** – The development of vocabulary will be intentional and will address all three Tiers.
 - **Tier One – Basic vocabulary**
These are words of everyday language; e.g., *clock, happy, baby, walk*
 - **Tier Two – Academic vocabulary**
Words that are more precise; e.g., *relative, itemize, faltered*
 - **Tier Three – Content Specific vocabulary**
Low frequency words that are specific to the content; e.g., *tectonic, evaporation, referendum, mean*
9. **Provide explicit instruction in grammar and convention** – Grammar and conventions are taught both explicitly and within the context of reading and writing.
10. **Students take more responsibility for their learning** – Practices such as formative assessment in which students are clear about what they are to learn, how they are to demonstrate that learning, and have responsibility for that learning cultivate greater independence and responsibility on the part of the learner.

Reading the English Language Arts Standards Curriculum

The following areas are fixed and will be the focus of learning in all classrooms in Worthington. They are adopted by our Board of Education.

Strand: This is the major area or discipline of study.

Topic: The topic is the main focus for the content for each strand at this particular grade level. The topic is the foundation for the specific content statements.

Pacing: This provides an estimate of the amount of instructional time that should be scheduled to sufficiently teach this content. This time will vary depending on the learning needs of the students in each group.

Standard Statement: These state what the student should know and be able to do within the topic and strand for this grade level.

Learning Targets: This restates the Standard Statement in more student friendly language. Through formative assessment and student goal setting students will use the learning targets to ensure that they are on-track for proficiency in both the content and processes. The Learning Targets may be adjusted and further broken down depending on the learning needs of the students.

Content Elaboration: This provides anticipated depth of content knowledge for this grade level and examples of science process skills that should be integrated with the content. This section also helps to identify prior knowledge needed and future content to be learned.

Content Vocabulary: This is vocabulary that is specific to the content and is necessary for students to understand in order to access what is to be learned.

Academic Vocabulary: This is vocabulary that is critical for the students to know what they are to do either in their learning tasks or their assessment tasks. Although they are typically verbs this vocabulary may sometimes be specific to the content.

The following areas are fluid and will be continuously adjusted by the district and individual teachers as indicated by student learning needs.

Formative Assessments: These are tasks that enable the teacher, student, and parent to know where the student is in regard to being competent in the content being taught. These tasks are typically not included in a student's grade but provide specific and descriptive feedback to the student in regard to their learning. These tasks vary depending on the needs of the learners and are always aligned with the Learning Targets.

Summative Assessments: These are formal assessments which take place at the completion of the instruction of the theme. These are formal assessments which are aligned with the learning targets and are used to determine a student's overall grade in regard to their proficiency in the content.

Resources: These are the resources that are adopted by the district and should be utilized in every classroom teaching this content. Each teacher, however, will use additional resources specific to the needs of their students to assist in teaching the content.

Enrichment Strategies: These are suggested strategies for students who are already showing proficiency in the grade level content and need to stretch their learning. Teachers will employ many strategies within their classrooms.

Intervention Strategies: These are suggested strategies for students who still need to develop prior knowledge in order to access the grade level.

To learn more about the Common Core Standards in ELA [click here](#).

The [Worthington English Language Arts Standards](#) can be found on the District website.

The Common Core State Standards (CCSS) for Math

The organization of this course of study identifies the focus and sequence of what students should understand and be able to do. Below is a chart which describes which standards will be focused on at each grade level. By focusing on fewer standards students are expected to go deeper into the concept, meaning they can justify in a way appropriate to the student's mathematical maturity WHY a particular mathematical statement is true or where a mathematical rule comes from.

Common Core State Standards – Mathematics

Standards Progressions

Kindergarten	1	2	3	4	5	6	7	8	HS
Counting and Cardinality									Number and Quantity
Number and Operations in Base Ten					Ratios and Proportional Relationships				
			Number and Operations - Fractions			The Number System			
Operations and Algebraic Thinking					Expressions and Equations			Algebra	
								Functions	Functions
Geometry					Geometry			Geometry	
Measurement and Data					Statistics and Probability			Statistics and Probability	

In addition to the standards this course of study is based upon the eight **Standards for Mathematical Practice** which describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. These 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, and (8) look for and express regularity in repeated reasoning.

The **primary shifts** occurring in the new Common Core Math Standards are:

1. **Greater focus on fewer topics** – In K-8 the focus areas are:
 - **K-2** - concepts, skills, and problem solving related to addition and subtraction
 - **3-5** – concepts, skills and problem solving related to multiplication and division of whole numbers and fractions
 - **6** – ratios and proportional relationships and early algebraic expressions and equations
 - **7** – ratios and proportional relationships and early algebraic expressions and equations
 - **8** – linear algebra
2. **Linking topics and thinking across grade levels** -
 - Mathematics is NOT a list of disconnected topics, tricks, or mnemonics. It IS a coherent body of study made up of interconnected topics.

- The standards progression develops over time.
3. **Rigorous mathematics refers to a deep, authentic command of mathematical concepts which include:**
- **Conceptual understanding** – This enables student to build on prior knowledge and create new knowledge to carry into future grades.
 - **Procedural skill and fluency** – This goes beyond simply memorization and involves deep practice which is built upon conceptual understanding.
 - **Application** - This is dependent on solid conceptual knowledge and procedural fluency which then prepare students to practice applying mathematical ways of thinking to real world issues and challenges. This involves mathematical modeling which links classroom mathematics and statistics to everyday life, work, and decision-making.

Secondary Mathematics – Common Core Math

The successful implementation of the CCSS Math Standards requires instructional shifts inside each of our secondary courses in order to achieve the goal of ALL students reaching the standard of college and career readiness.

In Worthington we have chosen the pathway which allows for the integration of algebra, geometry, and statistics in our middle school and high school courses. While this approach may not be the typical approach in American high schools, it IS the standard way of organizing secondary math curriculum in all other countries. We believe that for Worthington students to compete globally they must be provided mathematics curriculum which matches the global standard. Please note that an integrated course sequence for the Common Core Math Standards will complete the same mathematics content in the same amount of time as a sequence of traditionally-named courses.

Below is a summary of what the Integrated Pathway for CCSS Math in Worthington will provide:

- Connections will be made between geometry, algebra, and statistics that will provide support for more rigorous and relevant learning for all three standards.
- Each year these standards will build upon what was learned the previous year in all three areas. In the traditional pathway students take a year off of learning Algebra to take Geometry thus creating gaps or learning time lost to re-teaching.
- The integrated approach provides more natural opportunities for integration in Science and Technology thus supporting and enhancing our STEM pathway.
- Students are more likely to reach mastery of the advanced standards in the first three years of high school.
- Greater opportunity for the practice of Mathematical Modeling throughout the secondary curriculum which deepens students understanding of math through real-world application and problem-solving.

To see the sequence of math courses for the 2013-14 school year please refer to Appendix A. Further alignment and course revision will occur with the math electives for grades 11 and 12 in the coming school year.

Reading the Math Standards Curriculum

The following areas are fixed and will be the focus of learning in all classrooms in Worthington. They are adopted by our Board of Education.

Domain: This describes a larger group of related standards (e.g., Number and Operations in Base Ten).

Cluster: This is a group of related standards within a Domain (e.g., use place value understanding and properties of operations to perform multi-digit arithmetic).

Standard: These state the math content to be learned within each Domain and Cluster. These are the “what” of math that should be accessible to students at this grade level and what will be used to prepare them to learn about and use scientific knowledge, principles, and processes with increasing complexity in the following grades.

Learning Targets: This restates the Content Statements in more student friendly language. Through formative assessment and student goal setting students will use the learning targets to ensure that they are on-track for proficiency in both the content and processes. The Learning Targets may be adjusted and further broken down depending on the learning needs of the students.

Pacing: This provides an estimate of the amount of instructional time that should be scheduled to sufficiently teach this content. This time will vary depending on the learning needs of the students in each group.

Content Elaboration: This provides anticipated depth of content knowledge for this grade level and examples of science process skills that should be integrated with the content. This section also helps to identify prior knowledge needed and future content to be learned.

Content Vocabulary: This is vocabulary that is specific to the content and is necessary for students to understand in order to access what is to be learned.

Academic Vocabulary: This is vocabulary that is critical for the students to know what they are to do either in their learning tasks or their assessment tasks. Although they are typically verbs this vocabulary may sometimes be specific to the content

The following areas are fluid and will be continuously adjusted by the district and individual teachers as indicated by student learning needs.

Formative Assessments: These are tasks that enable the teacher, student, and parent to know where the student is in regard to being competent in the content being taught. These tasks are typically not included in a student’s grade but provide specific and descriptive feedback to the student in regard to their learning. These tasks vary depending on the needs of the learners and are always aligned with the Learning Targets.

Summative Assessments: These are formal assessments which take place at the completion of the instruction of the theme. These are formal assessments which are aligned with the learning targets and are used to determine a student’s overall grade in regard to their proficiency in the content.

Resources: These are the resources that are adopted by the district and should be utilized in every classroom teaching this content. Each teacher, however, will use additional resources specific to the needs of their students to assist in teaching the content.

Enrichment Strategies: These are suggested strategies for students who are already showing proficiency in the grade level content and need to stretch their learning. Teachers will employ many strategies within their classrooms.

Intervention Strategies: These are suggested strategies for students who still need to develop prior knowledge in order to access the grade level content. Teachers will typically employ researched best practices in order to accelerate a student's learning and enable them to access the curriculum.

To see the Common Core Math Standards in more detail [click here](#) for Ohio's adopted Standards as well as other documents and information.

The [Worthington Math Standards](#) can be found on the District website.

Science Education Standards

These standards serve as a basis for what all students should know and be able to do in order to become scientifically literate citizens equipped with knowledge and skills for the 21st century workforce and higher education. By the end of high school, students should graduate with proficiency in the following:

- Know, use, and interpret scientific explanations of the natural world;
- Generate and evaluate scientific evidence and explanations, distinguishing science from pseudoscience;
- Understand the nature and development of scientific knowledge;
- Participate productively in scientific practices and discourse.

PreK-8 Standards continues to teach a general science curriculum in which earth, life, and physical science are integrated. The revised standards, however, also accomplish the following:

- Curriculum is connected by grade level themes.
- There is greater focus on gaining a deeper understanding, application, and connection of science to the real world.
- Inquiry is a focus throughout the curriculum.

High School Standards are more focused on physical science and biology and gaining a deeper understanding of these through practical application and making connections with the other content areas as well as real world situations.

The process of **scientific inquiry** is the common focus and the strand which runs throughout the PreK-12 standards. It incorporates 21st century skills such as collaboration, critical thinking and problem solving, communication, research and meta-cognition (thinking deeply). Teaching by inquiry allows students to learn and demonstrate both scientific skills and technological/engineering design skills which address the broader goal of career and college readiness.

Scientific Inquiry/Learning Cycle takes the science content based on evidence in the natural world and takes the students through the following steps:

1. Identify, ask valid and testable questions;
2. Research books, other sources to gather known information;
3. Plan and investigate;
4. Use appropriate mathematics, technology tools to gather, interpret data;
5. Organize, evaluate, interpret observations, measurements, other data;
6. Use evidence, scientific knowledge to develop explanations;
7. Communicate results with graphics, charts, and tables.

Reading the Science Standards Curriculum

The following areas are fixed and will be the focus of learning in all classrooms in Worthington. They are adopted by our Board of Education.

Grade Band Themes: These are the overarching ideas that connect the strands and the topics within the grades. Themes illustrate a progression of increasing complexity from grade to grade that is applicable to all strands.

Strand Connection: These are the overarching ideas that connect the strands and the topics within the grades. Themes will increase in complexity from grade to grade.

Science Inquiry and Applications: These are the skills and knowledge related to scientific inquiry that must be developed within the theme and standard connection for this grade level.

Topic: The topic is the main focus for the content for each strand at this particular grade level. The topic is the foundation for the specific content statements.

Pacing: This provides an estimate of the amount of instructional time that should be scheduled to sufficiently teach this content. This time will vary depending on the learning needs of the students in each group.

Content Statement: These state the science content to be learned. These are the “what” of science that should be accessible to students at this grade level and what will be used to prepare them to learn about and use scientific knowledge, principles, and processes with increasing complexity in the following grades.

Learning Targets: This restates the Content Statements in more student friendly language. Through formative assessment and student goal setting students will use the learning targets to ensure that they are on-track for proficiency in both the content and processes. The learning targets may be adjusted and further broken down depending on the learning needs of the students.

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To learn more about the new Ohio Science Standards [click here](#).

The [Worthington Science Standards](#) can be found on the District website.

Social Studies Standards

These revised Social Studies Standards serve as a basis for what all students should know and be able to do in social studies by the time they graduate from high school. These standards are intended to provide Ohio educators a set of common expectations upon which to base social studies curricula.

The revision focused on five primary goals.

- To identify the essential concepts and skills students need to know and be able to do.
- To make the standards more manageable for teachers to teach and students to learn, thus allowing students to gain a greater depth of understanding.
- To create a clear progression from grade to grade.

In **grades K-8** the content is organized around strands and is taught in an integrated manner.

- To create course syllabi for high school courses as stipulated in Amended Substitute Bill 165. Those course topics are:
 - American History-Required
 - Modern World History-Required
 - Economics and Financial Literacy-Required
 - American Government

In **High School** the syllabi are organized around topics rather than strands. Only American History and American Government are specified as graduation requirements, and each district is free to organize the standards into courses that best suit their community, interests, and vision.

- To have the standards meet the needs of students in the 21st century. The revised standards include skills that are aligned to the *Framework for 21st Century Learning* from [The Partnership for 21st Century Skills](#). These skills include:
 - Historical Thinking and Skills
 - Spatial Thinking and Skills
 - Civic Participation and Skills
 - Economic Decision Making and Skills
 - Financial Literacy

Worthington's Social Studies standards incorporate history, geography, government, and economics in order to prepare students to be participating citizens. The overarching goals of the standards are to:

- Develop each students' ability to make informed and reasoned decisions for themselves and for the common good;
- Prepare students for their role as citizens and decision makers in a diverse, democratic society;
- Enable students to learn about significant people, places, events, and issues in the past in order to understand the present; and
- Foster students' ability to act responsibly and become successful problem solvers in an interdependent world of limited resources.

Reading the Social Studies Standards Curriculum

The following areas are fixed and will be the focus of learning in all classrooms in Worthington. They are adopted by our Board of Education.

Theme: The focus for a particular grade level of the descriptive narrative of a high school course syllabus.

Strand: The discipline within the Social Studies curriculum: History, Geography, Government, and Economics.

Topic: The topic is the main focus for the content for each strand at this particular grade level. The topic is the foundation for the specific content statements.

Pacing: This provides an estimate of the amount of instructional time that should be scheduled to sufficiently teach this content. This time will vary depending on the learning needs of the students in each group.

Content Statement: These state the essential knowledge to be learned. These are the “what” of social studies that should be accessible to students at this grade level and what will be used to prepare them to learn about and use scientific knowledge, principles, and processes with increasing complexity in the following grades.

Learning Targets: This restates the content statements in more student friendly language. Through formative assessment and student goal setting students will use the learning targets to ensure that they are on-track for proficiency in both the content and processes. The learning targets may be adjusted and further broken down depending on the learning needs of the students.

Content Elaboration: This provides anticipated depth of content knowledge for this grade level and examples of science process skills that should be integrated with the content. This section also helps to identify prior knowledge needed and future content to be learned.

Content Vocabulary: This is vocabulary that is specific to the content and is necessary for students to understand in order to access what is to be learned.

Academic Vocabulary: This is vocabulary that is critical for the students to know what they are to do either in their learning tasks or their assessment tasks. Although they are typically verbs this vocabulary may sometimes be specific to the content

The following areas are fluid and will be continuously adjusted by the district and individual teachers as indicated by student learning needs.

Formative Assessments: These are tasks that enable the teacher, student, and parent to know where the student is in regard to being competent in the content being taught. These tasks are typically not included in a student’s grade but provide specific and descriptive feedback to the student in regard to their learning. These tasks vary depending on the needs of the learners and are always aligned with the learning targets.

Summative Assessments: These are formal assessments which take place at the completion of the instruction of the theme. These are formal assessments which are aligned with the learning targets and are used to determine a student's overall grade in regard to their proficiency in the content.

Resources: These are the resources that are adopted by the district and should be utilized in every classroom teaching this content. Each teacher, however, will use additional resources specific to the needs of their students to assist in teaching the content.

Enrichment Strategies: These are suggested strategies for students who are already showing proficiency in the grade level content and need to stretch their learning. Teachers will employ many strategies within their classrooms.

Intervention Strategies: These are suggested strategies for students who still need to develop prior knowledge in order to access the grade level content. Teachers will typically employ researched best practices in order to accelerate a student's learning and enable them to access the curriculum.

To learn more about Ohio's new Social Studies Standards [click here](#).

The [Worthington Social Studies Standards](#) can be found on the District website.

Resources

Board Adopted Resources – These resources will be purchased to provide support to the teacher and students in mastery of the identified standards for their grade level. Resources that are Board Adopted are expected to be used with fidelity in every classroom for which they were purchased. The district will adopt these resources based on the following criteria:

- They are aligned with and support the implementation of the Board adopted curriculum.
- They provide support for both intervention and enrichment.
- Technology is an integral component, and the digital resources are compatible with our school hardware and software.
- Digital resources are available for use at home.
- The materials and activities are designed around researched best practices.
- Teachers provided input into the selection.
- Professional Development is provided.

Supplementary Resources – These resources are in addition to the Board Adopted Resources which teachers purchase through building funds to further support the implementation of the curriculum and in meeting the individual needs of their learners. These materials may be unique to each classroom and building; however, they should support the district instructional priorities and practices so that students are well prepared in both content and learning scripts to move through the grade levels.

Title One Resources – These resources are purchased with federal dollars which flow through the Ohio Department of Education to the buildings in Ohio with the highest poverty level within their district. These funds and resources have to be provided to the students with the greatest academic need and administrated in accordance with the Title One guidelines. They may not be used to supplant district resources but must supplement what is provided by the district. Questions about these funds and buildings receiving these funds should be directed to the Title One District Coordinator, 614-450-6000.

Assessment

The Worthington School District endeavors to motivate all students to be college and career ready by engaging students in their learning. All teachers practice formative instruction which encapsulates the following in regard to assessment practices:

- All assessment, formative and summative, is aligned to learning targets.
- Quality assessment is an ongoing component of the instructional process and is not separate from it.
- Assessment improves student learning by providing feedback to the learner on what is yet needed to learn.
- Quality assessment enhances the process of learning as well as the product of learning.
- Assessment will include a wide variety of processes which will provide multiple measures across time as well as varied opportunities to demonstrate mastery of the learning targets.
- Assessment processes will provide the criteria by which quality student performance is judged. These criteria are understood in advance, explicit, and appropriate to the task and the learner.

- Assessment provides opportunities for students to gain feedback about their progress towards the learning target through self-assessment as well as peer and teacher feedback.
- Quality assessment engages students with their learning and is worthy of their time.

Assessments fall into two general categories. Whether a learning task is formative or summative depends on its use by the teacher. While both are used to provide evidence of learning, the primary function of **formative assessment** is to provide feedback to the learner and enable them to focus their learning on what is needed to reach the target. The primary purpose of **summative assessment** is to designate (grade) the degree and quality of learning at the end of an instructional unit or time period. Both are fully aligned with the stated learning targets.

- **Formative Assessment** – learning tasks which provide feedback in regard to where the student is in reaching their learning targets. The feedback is used by both the teacher and the student to adapt instruction and instructional activities to enable the student to reach their target.
- **Summative Assessment** – learning tasks that are comprehensive and generally occur at the end of a unit of instruction. These are used to determine to what degree the student has accomplished their learning targets as well as the quality of their learning.

Formative and Summative tasks include:

- Teacher observation and checklists
- Rubrics
- Tests and quizzes
- Portfolio
- Student interview
- Self-assessment
- Written reports
- Presentations
- Peer feedback
- Collaborative projects
- Journals

Response to Intervention (RtI)

Teachers are continually monitoring the progress of their students through the use of both formal (MAP, DRA, state tests) assessments that are administered at least annually as well as through formative and summative classroom assessments which monitor a student's progression in reaching grade level benchmarks.

Students who are at risk in learning grade level content will be provided support through either classroom interventions and/or additional services. These interventions will be research based and are intended to accelerate learning to enable the student to "catch-up." If the student's achievement does not respond to the interventions after an appropriate amount of time then additional assessment and services may be necessary as determined by the building's **Intervention Assistance Team**.

For more information about RtI please visit the District website.