

Egg Harbor City Public Schools

Math Curriculum Overview

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New Jersey Student Learning Standards
for
Mathematics
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Introduction

The purpose of the Egg Harbor City School District Math Curriculum Guide is to provide parents, staff members and community members with information that describes the Math instructional program in our school district. This curriculum guide was developed to assist students to achieve success with the New Jersey Student Learning Standards and to prepare them with a knowledge of Math that can be applied to their everyday life. Additionally, students should be able to use this knowledge to make informed decisions about careers in Math and related fields of endeavor. The foregoing curriculum serves as a true curriculum resource guide to assist Math teachers with implementing the Standards and District goals.

The Math Curriculum will be an ever-evolving curriculum, keeping up-to-date with the latest content knowledge, utilizing the best instructional practices, incorporating effective multiple assessments, and discarding materials and practices that are ineffective or detrimental to student achievement. An evolving curriculum allows for flexibility to adapt to students' academic needs and interests, while maintaining focus on student achievement of the Standards and District goals.

Acknowledgement

The development of the District Math Curriculum Guide was an arduous task that required dedicated professionals with a sincere interest in their craft. Many hours of preparation, discussion, articulation and refinement went into this curriculum guide. The Egg Harbor City School District gratefully acknowledges the thoughtful contributions and outstanding efforts of the members of the Math Curriculum Development Team.

Instructional Practices

The aim of our instructional practice is to maximize each student's growth by meeting each student where he or she is and helping the student to progress. In practice, it involves offering several different learning experiences in response to students' varied needs. Learning activities and materials may be varied by challenging students at different readiness levels, responding to students' interests, and by providing students with multiple ways of learning or expressing themselves. Through well-developed unit plans, instructional staff has the opportunity to remain consistent with the implementation of the curriculum. In addition, formatted lesson plans that coincide with the unit plans will afford the instructional staff a template that can be easily completed and address the necessary components of the unit plan.

Our teachers use numerous strategies and tools to differentiate instruction. There are several key characteristics or elements that form the foundation of our instructional practices:

- Teachers and students accept and respect one another's similarities and differences.
- All students participate in respectful work -- work that is challenging, meaningful, interesting, and engaging.
- The teacher is primarily a coordinator of time, space, and activities rather than a provider of information. The aim is to help students become self-reliant learners.
- Students and teachers collaborate in setting class and individual goals.
- Students work in a variety of group configurations, as well as independently. Flexible grouping is evident.

- Time is used flexibly. Pacing is varied based on student needs.
- Students often have choices about topics they wish to study, ways they want to work, and how they want to demonstrate their learning.

Curriculum Design

Highlighted within each Unit Plan:

- NJSLA Standards
- State the Rationale (Goal)
- Describe the Context (Objective)
- Address a Timeframe
- Identify Instructional Strategies
- Present an Overview
- Devise Essential and Guiding Questions
- Determine Exit Outcomes and Indicators
- Devise Learning Opportunities
- Develop Assessment Opportunities
- Use Data to Drive Instruction
- Provide appropriate Accommodations/Modifications
- Address Cross-Curricular Connections
- Integrate Technology and Career Readiness Skills
- Reflect on Teaching Practices

Accommodations / Modifications

Accommodations indicate changes to how content is taught, made accessible, and assessed. Accommodations do not change what the student is expected to master.

Modifications indicate what content being taught is modified. The student is expected to learn something different than the general education standard.

Special Education Students (IEP - Individualized Educational Plan)

Implemented By:

- Special Education Self-Contained Teachers
- Special Education In-Class Resource (ICR) Teachers
- General Education Teachers (Supplemental Instruction)
- Implemented by Special Area Teacher (as per discipline area)

504 Plan Students

Implemented By:

- General Education Teachers (Supplemental Instruction)
- Implemented by Special Area Teacher (as per discipline area)

English Language Learners (ELL)		
Implemented By:	<ul style="list-style-type: none"> ● ELL Teacher ● General Education Teachers (Supplemental Instruction) ● Implemented by Special Area Teacher (as per discipline area) 	
Basic Skills Instruction Students or Students at Risk of School Failure (IPP - Individualized Program Plan)		
Implemented By:	<ul style="list-style-type: none"> ● Special Education In-Class Resource (ICR) Teachers ● General Education Teachers (Supplemental Instruction) ● Implemented by Special Area Teacher (as per discipline area) 	
IEP / 504 / ELL / IPP Accommodations / Modifications		
Repeat Instructions	Review Directions	Visual Cues / Reminders
Modified Tests	Oral Testing	Scribe
Computer-Based Tasks	Preferential Seating	Study Carrel
Avoid Pressures of Time or Completion	Post Assignments	Use of Assignment Pad / Agenda Book
Reduced Multiple Choice Options	Prior Notice of Assessment	Small-Group Assessment
Check Work in Progress	Provide Immediate Feedback	Have Student Restate / Rephrase Information
Support Auditory Presentations with Visuals	Repeat Directions Quietly	Provide Extra Assignment Time
Highlight Key Words	Have Student Repeat / Rephrase Directions	Modified Homework
Provide Clean Work Area	Modify Test Scheduling - Provide Additional Time & Provide Frequent Breaks	Assessment Study Guides
Provide Concrete Examples	Provide Extra Response Time	Monitor Long-Term Assignments
Provide Models	Opportunities for Extra Drill / Practice	Post Routines
Recognize and Praise Oral Participation	No Penalties for Handwriting	Mindfulness Activities
Provide Extra Time for Written Work	Positive Reinforcement	
Gifted and Talented (GATE) Students		

Implemented By:	<ul style="list-style-type: none"> ● Special Education In-Class Resource (ICR) Teachers ● General Education Teachers (Supplemental Instruction) ● Implemented by Special Area Teacher (as per discipline area) 	
GATE Accommodations / Modifications		
Encourage students to explore concepts in-depth and encourage independent studies or investigations	Use thematic instruction to connect learning across the curriculum	Encourage creative expression and thinking by allowing students to choose how to approach a problem or assignment
Expand students' time for free reading	Invite students to explore different points of view on a topic of study and compare the two	Provide learning centers where students are in charge of their learning
Brainstorm with gifted children on what types of projects they would like to explore to extend what they're learning in the classroom	Determine where students' interests lie and capitalize on their inquisitiveness	Refrain from having students complete more work in the same manner
Employ differentiated curriculum to keep interest high	Avoid drill and practice activities	Ask students' higher level questions that require students to look into causes, experiences, and facts to draw a conclusion or make connections to other areas of learning
If possible, compact curriculum to allow gifted students to move more quickly through the material	Encourage students to make transformations; use a common task or item in a different way	Allow for choice

Assessments	
Formative	<ul style="list-style-type: none"> ● Analyzing Student Work (Homework, Classwork, Tests, Quizzes, Stations) ● Observation ● Round Robin Charts ● Strategic Questioning ● Think-Pair-Share ● Classroom Polls ● Exit Slips ● Admit Slips ● One-Minute Papers ● Thumbs Up / Thumbs Down ● Extended Projects ● Self-Assessment ● Peer-Assessment ● Portfolio Check

	<ul style="list-style-type: none"> ● Choral Response ● Quizlet ● Student Polling Devices / Websites ● LinkIt Standards-Based Assessment ● Data Conferencing ● STEM Activities ● Let's Go Learn ● EdPuzzle ● Math XL ● Prodigy ● Pear Deck ● Nearpod ● Gizmos ● Desmos
Summative	<ul style="list-style-type: none"> ● End of Unit Assessments ● End of Chapter Tests ● LinkIt Benchmark Assessments ● LinkIt PMI Assessments ● Let's Go Learn ADAM Assessment ● New Jersey Student Learning Assessment - Math
Benchmark	<ul style="list-style-type: none"> ● Grades K-8 / Alg I LinkIt Fall Benchmark - Form A ● Grades K-8 / Alg I LinkIt Winter Benchmark - Form B ● Grades K-8 / Alg I LinkIt Spring Benchmark - Form C ● LGL ADAM
Alternative Assessments	<ul style="list-style-type: none"> ● Projects ● Contests ● Student-Centered Assessments ● Peer Assessments ● Presentations ● Mini Quizzes ● Performance Tasks ● Google Forms

Core Instructional Materials	
NJ Center for Teaching and Learning - Progressive Math Initiative	NJCTL Website
Let's Go Learn	LGL Website
LinkIt	LinkIt - Teacher Website
	LinkIt - Student Portal

Supplementary Instructional Materials
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Nearpod	<u>Nearpod Website</u>
Flocabulary	<u>Flocabulary Website</u>
BrainPOP	<u>BrainPOP Website</u>
	<u>BrainPOP Jr Website</u>
Gizmos	<u>Gizmos Website</u>
Banzai Financial Literacy	<u>Banzai Website</u>
Desmos	<u>Desmos Website</u>
Tynker - Coding for Kids	<u>Tynker Website</u>

Interdisciplinary Connections

Interdisciplinary learning develops real-world, multi-faceted knowledge. Integration identifies logical connections between and among the content and learning experiences in all areas of the curriculum. Integrating and connecting various content areas improves learning outcomes and provides more authentic and relevant experiences for students. Interdisciplinary connections both enrich and extend learning. Interdisciplinary connections are studies that cross the boundaries of two or more district disciplines such as mathematics and art or literature and science. By purposefully looking for “essential concepts” and “big ideas,” we purposefully design deliberate integration of the various content areas whenever appropriate. This includes, but is not limited to, examining how curriculum themes, project based learning, understanding by design essential questions, inquiry approaches, curriculum mapping, and the standards merge, while always keeping student best interests at the heart of this work.

Reading

Standard	Evidence
CCSS.ELA-LITERACY.CCRA.R.1 - Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.	<ul style="list-style-type: none"> ● Word Problems ● STEM Activities
CCSS.ELA-LITERACY.CCRA.R.3 - Analyze how and why individuals, events, or ideas develop and interact over the course of a text.	<ul style="list-style-type: none"> ● Word Problems ● STEM Activities
CCSS.ELA-LITERACY.CCRA.R.4 - Interpret words and phrases as they are used in a text, including determining technical, connotative, and figurative meanings, and analyze how specific word choices shape meaning or tone.	<ul style="list-style-type: none"> ● Word Problems ● Math-specific vocabulary
CCSS.ELA-LITERACY.CCRA.R.6 - Assess how point of view or purpose shapes the content and style of a text.	<ul style="list-style-type: none"> ● Word Problems ● STEM Activities
CCSS.ELA-LITERACY.CCRA.R.7 - Integrate and evaluate content presented in diverse media and formats, including visually and quantitatively, as well as in words.	<ul style="list-style-type: none"> ● STEM Activities ● Data Analysis (qualitative and quantitative)
CCSS.ELA-LITERACY.CCRA.R.8 - Delineate and evaluate the argument and specific claims in a text, including the validity of the reasoning as well as the relevance and sufficiency of the evidence.	<ul style="list-style-type: none"> ● Word Problems ● Constructed Responses ● Explaining and Defending Responses ● Classroom Discourse
CCSS.ELA-LITERACY.CCRA.R.9 - Analyze how two or more texts address similar themes or topics in order to build knowledge or to compare the approaches the authors take.	<ul style="list-style-type: none"> ● Multiple Approaches to Solving Problems ● Differentiated Instruction

<p>CCSS.ELA-LITERACY.CCRA.R.10 - Read and comprehend complex literary and informational texts independently and proficiently.</p>	<ul style="list-style-type: none"> ● Word Problems ● Math Read-Alouds ● Real-World Connections ● Mathematical Career Readiness ● STEM Activities
Writing	
Standard	Evidence
<p>CCSS.ELA-LITERACY.CCRA.W.1 - Write arguments to support claims in an analysis of substantive topics or texts using valid reasoning and relevant and sufficient evidence.</p>	<ul style="list-style-type: none"> ● Mathematical-Reasoning Word Problems ● Constructed Responses ● Identifying Errors in Mathematical Logic ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.W.2 - Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.</p>	<ul style="list-style-type: none"> ● Constructed Response ● Open-Ended Questions ● Peer Instruction ● Multiple Approaches to Solving Problems ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.W.3 - Write narratives to develop real or imagined experiences or events using effective technique, well-chosen details and well-structured event sequences.</p>	<ul style="list-style-type: none"> ● Creation of Word Problems ● Student-Led Instruction ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.W.4 - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.</p>	<ul style="list-style-type: none"> ● Constructed Responses ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.W.5 - Develop and strengthen writing as needed by planning, revising, editing, rewriting, or trying a new approach.</p>	<ul style="list-style-type: none"> ● Constructed Responses ● Multi-Step Problems ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.W.6 - Use technology, including the Internet, to produce and publish writing and to interact and collaborate with others.</p>	<ul style="list-style-type: none"> ● Performance-Based Assessments ● Constructed Responses ● Word Processing ● STEM Activities ● Data Conferencing
<p>CCSS.ELA-LITERACY.CCRA.W.7 - Conduct short as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.</p>	<ul style="list-style-type: none"> ● STEM Activities ● Data Analysis ● Math Career Readiness ● Problem Solving

<p>CCSS.ELA-LITERACY.CCRA.W.8 - Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.</p>	<ul style="list-style-type: none"> ● Data Analysis ● Problem Solving ● Research Projects ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.W.9 - Draw evidence from literary or informational texts to support analysis, reflection, and research.</p>	<ul style="list-style-type: none"> ● Data Analysis ● Math Career Readiness ● STEM Activities
<p>Speaking and Listening</p>	
<p>Standard</p>	<p>Evidence</p>
<p>CCSS.ELA-LITERACY.CCRA.SL.1 - Prepare for and participate effectively in a range of conversations and collaborations with diverse partners, building on others' ideas and expressing their own clearly and persuasively.</p>	<ul style="list-style-type: none"> ● Constructed Responses ● Peer Instruction ● Differentiated Instruction ● Math Stations ● STEM Activities ● Problem Solving
<p>CCSS.ELA-LITERACY.CCRA.SL.2 - Integrate and evaluate information presented in diverse media and formats, including visually, quantitatively, and orally.</p>	<ul style="list-style-type: none"> ● Constructed Responses ● Peer Instruction ● Differentiated Instruction ● Math Stations ● STEM Activities ● Problem Solving
<p>CCSS.ELA-LITERACY.CCRA.SL.3 - Evaluate a speaker's point of view, reasoning, and use of evidence and rhetoric.</p>	<ul style="list-style-type: none"> ● Word Problems ● Peer Instruction ● STEM Activities ● Problem Solving ● Problem Analysis
<p>CCSS.ELA-LITERACY.CCRA.SL.4 - Present information, findings, and supporting evidence such that listeners can follow the line of reasoning and the organization, development, and style are appropriate to task, purpose, and audience.</p>	<ul style="list-style-type: none"> ● Constructed Responses ● Peer Instruction ● Differentiated Instruction ● STEM Activities
<p>CCSS.ELA-LITERACY.CCRA.SL.5 - Make strategic use of digital media and visual displays of data to express information and enhance understanding of presentations.</p>	<ul style="list-style-type: none"> ● Data Analysis ● Differentiated Instruction ● STEM Activities ● Online Spreadsheet Tools ● Problem-Based Learning
<p>CCSS.ELA-LITERACY.CCRA.SL.6 - Adapt speech to a variety of contexts and communicative tasks, demonstrating command of formal English when indicated or appropriate.</p>	<ul style="list-style-type: none"> ● Math-Specific Vocabulary ● Peer Instruction ● Math Stations ● Constructed Responses ● STEM Activities

Language	
Standard	Evidence
CCSS.ELA-LITERACY.CCRA.L.1 - Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.	<ul style="list-style-type: none"> ● Constructed Responses ● Word Problems ● STEM Activities
CCSS.ELA-LITERACY.CCRA.L.2 - Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.	<ul style="list-style-type: none"> ● Constructed Responses ● Word Problems ● STEM Activities
CCSS.ELA-LITERACY.CCRA.L.3 - Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading or listening.	<ul style="list-style-type: none"> ● Constructed Responses ● Word Problems ● STEM Activities
CCSS.ELA-LITERACY.CCRA.L.4 - Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials, as appropriate.	<ul style="list-style-type: none"> ● Constructed Responses ● Word Problems ● STEM Activities ● Math-Specific Vocabulary ● Data Analysis
CCSS.ELA-LITERACY.CCRA.L.5 - Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.	<ul style="list-style-type: none"> ● Math-Specific Vocabulary Within Word Problems (ex. how much larger, no less than, etc)
CCSS.ELA-LITERACY.CCRA.L.6 - Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.	<ul style="list-style-type: none"> ● Math-Specific Vocabulary Within Word Problems (ex. how much larger, no less than, etc) ● Math Career Readiness
Science	
Disciplinary Core Idea (DCI)	Evidence
PS1 - Matter and Its Interactions (structures and properties of matter, chemical reactions, nuclear processes)	<ul style="list-style-type: none"> ● Mathematical Computation ● Balancing Equations ● Variables ● Measurements ● STEM Activities
PS2 - Motion and Stability: Forces and Interactions (forces and motion, types of interactions, stability and instability in physical systems)	<ul style="list-style-type: none"> ● Mathematical Computation ● Formulas and Literal Equations ● Vectors

	<ul style="list-style-type: none"> ● Conservation Principles ● Data Analysis ● Metric System ● STEM Activities
PS3 - Energy (definitions of energy, conservation of energy and energy transfers, relationship between energy and forces, energy in chemical processes, and everyday life)	<ul style="list-style-type: none"> ● Mathematical Computation ● Formulas and Literal Equations ● Vectors ● Conservation Principles ● Data Analysis ● Metric System ● STEM Activities
PS4 - Waves and their Applications in Technologies for Information Transfer (wave properties, electromagnetic radiation, information technologies and instrumentation)	<ul style="list-style-type: none"> ● Mathematical Computation ● Formulas and Literal Equations ● Measurement ● Data Analysis ● Metric System ● STEM Activities
LS1 - From Molecules to Organisms: Structures and Processes (structure and function, growth and development of organisms, organization for matter and energy flow in organisms, information processing)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Patterns ● STEM Activities
LS2 - Ecosystems: Interactions, Energy, and Dynamics (interdependent relationships in ecosystems, cycles of matter and energy transfers in ecosystems, ecosystem dynamics, functioning and resilience, social interactions and group behavior)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Patterns ● STEM Activities
LS3 - Heredity: Inheritance and Variation of Traits (inheritance of traits, variation of traits)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Patterns ● Statistical Analysis ● Data Analysis ● STEM Activities
LS4 - Biological Evolution: Unity and Diversity (evidence of common ancestry and diversity, natural selection, adaptation, biodiversity and humans)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Patterns ● Statistical Analysis ● Data Analysis ● STEM Activities
ESS1 - Earth's Place in the Universe (universe and its stars, Earth and the solar system, history of planet Earth)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables

	<ul style="list-style-type: none"> ● Measurement ● Patterns ● Data Analysis ● Conversions ● Metric System ● STEM Activities
ESS2 - Earth's Systems (Earth materials and systems, plate tectonics and large-scale system interactions, role of water in Earth's surface properties, weather and climate, biogeology)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Patterns ● Data Analysis ● Conversions ● Metric System ● STEM Activities
ESS3 - Earth and Human Activity (natural resources, natural hazards, human impacts on Earth's systems, global climate change)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Patterns ● Data Analysis ● Conversions ● Metric System ● STEM Activities
ETS1 - Engineering Design (engineering design, defining and delimiting an engineering problem, developing possible solutions, optimizing the design solution)	<ul style="list-style-type: none"> ● Mathematical Computation ● Charts and Tables ● Measurement ● Data Analysis ● STEM Activities
Cross-Curricular Science and Engineering Practices	
<ul style="list-style-type: none"> ● Asking questions and defining problems ● Developing and using models ● Planning and carrying out investigations ● Analyzing and interpreting data ● Using mathematics and computational thinking ● Construction explanations and designing solutions ● Engaging in argument from evidence ● Obtaining, evaluating, and communicating information 	
Computer Science & Design Thinking	
<p>New approaches necessary for solving the critical challenges that we face as a society will require harnessing the power of technology and computing. Rapidly changing technologies and the proliferation of digital information have permeated and radically transformed learning, working, and everyday life. To be well-educated, global-minded individuals in a computing-intensive world, students must have a clear understanding of the concepts and practices of computer science. As education</p>	

systems adapt to a vision of students who are not just computer users but also computationally literate creators who are proficient in the concepts and practices of computer science and design thinking, engaging students in computational thinking and human-centered approaches to design through the study of computer science and technology serves to prepare students to ethically produce and critically consume technology.

<p style="text-align: center;">Computing Systems</p>	<p>People interact with a wide variety of computing devices that collect, store, analyze, and act upon information in ways that can affect human capabilities both positively and negatively. The physical components (hardware) and instructions (software) that make up a computing system communicate and process information in digital form.</p>
<p style="text-align: center;">Networks and the Internet</p>	<p>Computing devices typically do not operate in isolation. Networks connect computing devices to share information and resources and are an increasingly integral part of computing. Networks and communication systems provide greater connectivity in the computing world.</p>
<p style="text-align: center;">Data & Analysis</p>	<p>Computing systems exist to process data. The amount of digital data generated in the world is rapidly expanding, so the need to process data effectively is increasingly important. Data is collected and stored so that it can be analyzed to better understand the world and make more accurate predictions.</p>
<p style="text-align: center;">Algorithms & Programming</p>	<p>An algorithm is a sequence of steps designed to accomplish a specific task. Algorithms are translated into programs, or code, to provide instructions for computing devices. Algorithms and programming control all computing systems, empowering people to communicate with the world in new ways and solve compelling problems.</p>
<p style="text-align: center;">Engineering Design</p>	<p>People design for enjoyment and to solve problems, extend human capabilities, satisfy needs and wants, and improve the human condition. Engineering Design, a systematic approach to creating solutions to technological problems and finding ways to meet people’s needs and desires, allows for the effective and efficient development of products and systems.</p>
<p style="text-align: center;">Interaction of Technology and Humans</p>	<p>Societies influence technological development. Societies are characterized by common elements such as shared values, differentiated roles, and</p>

	cultural norms, as well as by entities such as community institutions, organizations, and businesses. Interaction of Technology and Humans concerns the ways society drives the improvement and creation of new technologies, and how technologies both serve and change society.
Nature of Technology	Human population patterns and movement focus on the size, composition, distribution, and movement of human populations and how they are fundamental and active features on Earth’s surface. This includes understanding that the expansion and redistribution of the human population affects patterns of settlement, environmental changes, and resource use. Patterns and movements of population also relate to physical phenomena including climate variability, landforms, and locations of various natural hazards and their effects on population size, composition, and distribution.
Effects of Technology on the Natural World	Many of engineering and technology’s impacts on society and the environment are widely regarded as desirable. However, other impacts are regarded as less desirable. Effects of Technology on the Natural World concerns the positive and negative ways that technologies affect the natural world.
Ethics & Culture	Ethics and Culture concerns the profound effects that technologies have on people, how those effects can widen or narrow disparities, and the responsibility that people have for the societal consequences of their technological decisions.

Social Studies

Standard	Evidence
<u>Social Studies Standard 6.3 - Active Citizenship in the 21st Century</u> : All students will acquire the skills needed to be active, informed citizens who value diversity and promote cultural understanding by working collaboratively to address the challenges that are inherent in living in an interconnected world.	<ul style="list-style-type: none"> ● Word Problems ● STEM Activities ● Graphical and Statistical Analysis ● Financial Literacy ● Career-Readiness

Technology

Mission: Readiness in this century demands that students actively engage in critical thinking, communication, collaboration, and creativity. Technology empowers students with real-world data, tools, experts and global outreach to actively engage in solving meaningful problems in all areas of their lives. The power of technology discretely supports all curricular areas and multiple levels of mastery for all students.

Vision: The design process builds in our students the recognition that success is not merely identifying a problem but working through a process and that failure is not an end but rather a point for reevaluation. Whether applied as a skill in product development, in the learning environment, in daily life, in a local or more global arena, the design process supports students in their paths to becoming responsible, effective citizens in college, careers and life. Computational thinking provides an organizational means of approaching life and its tasks. It develops an understanding of technologies and their operations and provides students with the abilities to build and create knowledge and new technologies.

Standards	Evidence
<p><u>Technology Standard 8.1:</u> All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and create and communicate knowledge.</p>	<ul style="list-style-type: none"> ● Word Processing ● Online Spreadsheet Tools ● STEM Activities ● Math Career Readiness ● Use of Non-Fiction Media ● Math-Specific Vocabulary ● Data Analysis ● Lab Reports ● Research-Based Assignments
<p><u>Technology Standard 8.2:</u> All students will develop an understanding of the nature and impact of technology, engineering, technological design, computational thinking and the designed world as they relate to the individual, global society, and the environment.</p>	<ul style="list-style-type: none"> ● Word Processing ● Online Spreadsheet Tools ● STEM Activities ● Math Career Readiness ● Problem-Based Learning ● Use of Non-Fiction Media ● Solving Real-World Science-Based Issues ● Projects with Constraints

Implementation During Instruction:

- Webquests
- Desmos Activities
- Chromebooks
- Online Progress Monitoring Tools
- Online Assessments
- Online Word Processing
- Let's Go Learn
- LinkIt

Additional Content-Specific Information/Resources

National / International Technology Student Standards

8.1 Educational Technology

- [International Society for Technology in Education \(ISTE\) Standards for Student](#)
- [American Association of School Librarians \(AASL\) Student Standards for the 21st-Century Learner](#)
- [Common Sense Student Standards Alignment in the K-12 Digital Citizenship Curriculum](#)

8.2 Technology Education, Engineering, Design and Computational Thinking - Programming

- [K12 Computer Science Student Framework Statements by Grade Band](#)
- [International Technology and Engineering Educators Association Standards for Technological Literacy](#)

Visual & Performing Arts

	Evidence
<p>The NJ Visual & Performing Arts Standards emphasize the process-oriented nature of the arts and arts learning by:</p> <ul style="list-style-type: none"> ● Defining artistic literacy through a set of overarching philosophical foundations and lifelong goals that clarify long-term expectations for arts learning; ● Placing artistic processes and anchor standards at the forefront of the work; ● Identifying creative artistic practices as the bridge for the application of the artistic processes and anchor standards across all learning; and ● Specifying enduring understandings and essential questions that provide conceptual through lines and articulate value and meaning within and across the arts discipline. <p>The development of artistic literacy is dependent on creating an environment in which students are encouraged to independently and collaboratively imagine, investigate, construct, and reflect. These steps are much the same as those taken in the math classroom. The artistic processes: <i>creating, performing/presenting/producing, responding, and connecting</i>, are the foundation for developing artistic literacy and fluency in the arts and, subsequently, the sciences.</p>	<ul style="list-style-type: none"> ● Patterns ● Transformations ● Student-Led Instruction ● Presentation

Health & Physical Education

	Evidence

The NJ Comprehensive Health & Physical Education Standards highlight the expectation that all students participate in a high-quality, K–12 sequential health and physical education program that emphasizes 21st Century skills and interdisciplinary connections to empower students to live a healthy active lifestyle. The primary focus of the standards consists of the development of concepts and skills that promote and influence healthy behaviors. These concepts can be supported through math instruction can help students gain a deeper understanding of the material.

- Standard 2.1 - Personal & Mental Health
- Standard 2.2 - Physical Wellness
- Standard 2.3 - Safety

- Mathematical Computation
- Measurement
- Project-Based Learning
- STEM Activities

New Jersey's Standard 9 is composed of the Career Readiness, Life Literacies, and Key Skills

- Mission- Career readiness, life literacies, and key skills education provides students with the necessary skills to make informed career and financial decisions, engage as responsible community members in a digital society, and to successfully meet the challenges and opportunities in an interconnected global economy.
- This standard will be addressed via researching and presenting information, working collaboratively with partners or small groups, using technology like Google Suite on a regular basis, grounding reading, writing, and speaking in evidence from text, both literary and informational, building knowledge through content rich non-fiction, inferencing, identifying main idea and theme, sequence of events, cause and effect, vocabulary, problem and solution, point of view, and by evaluating various forms of media and formats.
- **Vision - An education in career readiness, life literacies, and key skills fosters a population that:**
Continually self-reflects and seeks to improve the essential life and career practices that lead to success;
Uses effective communication and collaboration skills and resources to interact with a global society; Possesses financial literacy and responsibility at home and in the broader community;
Plans, executes, and alters career goals in response to changing societal and economic conditions; and seeks to attain skill and content mastery to achieve success in a chosen career path.

9.1 Financial Literacy Themes

- Civic Financial Responsibility
- Financial Institutions
- Financial Psychology
- Planning and Budgeting
- Risk Management
- Economic and Government Influences
- Credit Profile

9.2 Career Awareness, Exploration, Preparation and Training Themes

- Career Awareness and Planning

9.4 Life Literacies and Key Skills Themes

- Creativity and Innovation
- Critical Thinking and Problem Solving
- Digital Citizenship
- Global and Cultural Awareness
- Information and Media Literacy
- Technology Literacy
- Career Readiness, Life Literacy, and Key Skills Practices

NJSLS Standard 9 is integrated across the K-8 curriculum in various subject areas, where appropriate. Lessons could include:

- Working collaboratively to solve problems
- Comparing and contrasting
- Classroom debates and negotiations
- Speaking and listening skills
- Networking
- Customizing resumes and references
- Questioning techniques
- Communicating clearly and effectively, with reason
- Employ valid and reliable research strategies
- Accept and integrating criticism and feedback
- Utilize critical thinking to make sense of problems and persevere in solving them
- Use technology to enhance productivity

The integration of 21st century skills will be identified on lesson plans.

Standard 9.1 - Personal Financial Literacy

- This standard outlines the important fiscal knowledge, habits, and skills that must be mastered in order for students to make informed decisions about personal finance.
- Financial literacy is an integral component of a student's college and career readiness, enabling students to achieve fulfilling, financially-secure, and successful careers.
- This standard would be addressed via read-aloud, STEAM and problem solving activities, a classroom economy, the use of school-wide currency, higher order thinking and questioning strategies, and by hosting a career fair each year.

Theme 1: Civic Financial Responsibility

This idea will be addressed via read aloud, researching various civic duties and responsibilities, delineating classroom jobs, project based learning activities on volunteering and giving back to the community

Theme 2: Financial Institutions

This standard will be addressed via read-aloud, researching the American banking and credit system, STEAM and problem solving activities, analysis of informational text (primary and secondary)

Theme 3: Financial Psychology

This standard will be addressed via STEAM and problem solving activities, having a classroom token economy, personal reflections on spending habits and emotional well-being

Theme 4: Planning and Budgeting	This standard will be addressed via STEAM and problem solving activities, by having a classroom economy, the use of school-wide currency, analysis of informational texts regarding savings accounts
Theme 5: Risk Management	This standard will be addressed via the use of read-aloud regarding insurance, higher order thinking and questioning techniques regarding when insurance is needed
Theme 6: Economic and Government Influences (Grades 5-8)	This standard will be addressed via read-aloud, research and debates on taxation, research on the history of taxation, defining trade practices throughout American history, determining state and federal financial laws
Theme 7: Credit Profile (Grades 5-8)	This standard will be addressed via read-aloud, analysis of informational texts, compare and contrasting product prices, classroom discussions on credit score
Standard 9.2 - Career Awareness, Exploration, and Preparation	
<ul style="list-style-type: none"> ● This standard outlines the importance of being knowledgeable about one's interests and talents, and being well informed about postsecondary and career options, career planning, and career requirements. ● This standard would be addressed via researching and presenting information, working collaboratively with partners or small groups, using technology like Google Suite on a regular basis, grounding reading, writing, and speaking in evidence from text, both literary and informational, building knowledge through content rich non-fiction, inferencing, identifying main idea and theme, sequence of events, cause and effect, vocabulary, problem and solution, point of view, and by evaluating various forms of media and formats. 	
Theme 1: Career Awareness and Planning	This standard will be addressed via the use of read-aloud regarding occupations, defining individual skills, training, and knowledge required for various occupations and higher education, determining incomes associated with various careers, compare and contrast of public, private and entrepreneurial occupations
Standard 9.4 - Life Literacies and Key Skills	

<ul style="list-style-type: none"> This standard outline key literacies and technical skills such as critical thinking, global and cultural awareness, and technology literacy* that are critical for students to develop to live and work in an interconnected global economy. 	
Theme 1: Creativity and Innovation	This standard will be addressed via the use of read-aloud regarding occupations, defining individual skills, training, and knowledge required for various occupations and higher education, determining incomes associated with various careers, compare and contrast of public, private and entrepreneurial occupations
Theme 2: Critical Thinking and Problem Solving	This standard will be addressed via read-aloud, project based learning assignments, research assignments, compare and contrast activities, multi-solution project based learning assignments, local, national, and global research projects based on current events
Theme 3: Digital Citizenship	This standard will be addressed via read-aloud, project based learning assignments, research assignments, primary and secondary resource analysis, citation assignments, online safety and research assignments, student presentations, collaborative activities, outcome based assignments regarding technology safety
Theme 4: Global and Cultural Awareness	This standard will be addressed via read-aloud, project based learning assignments, research assignments, classroom discussions, cultural awareness activities
Theme 5: Information and Media Literacy	This standard will be addressed via read-aloud, project based learning assignments, research assignments, classroom discussions, Google Scholar assignments, Google Suite activities, analysis of media bias assignments
Theme 6: Technology Literacy	This standard will be addressed via read-aloud, project based learning assignments, research assignments, classroom discussions, use of Google Docs and Microsoft Word assignments, Google Suite Slides and Microsoft Powerpoint assignments, Google Sheets and Microsoft Excel assignments, current events assignments

Standards in Action - Climate Change

The NJSLS-CLKS includes the skills, knowledge and practices necessary for success in an increasingly complex world and changing natural environment. Climate change is included in these standards. Collaborating to solve a problem, approaching a solution with innovation, and determining the validity of a source of information are all essential skills required in the standards and necessary for students to maintain awareness of and successfully address climate change. Climate change can be integrated into the teaching of these standards in a few ways. For example, middle school students could develop a plan for implementing an environmentally focused project in the local community such as protecting a wetland or developing an urban greenway along a stream. The plan would include goals, priorities and necessary resources. In a career and technical education program, as a part of a green building design integrated project, students could explore various sustainable and reclaimed products used for construction. After researching several sources, students would create a collage of information, share with their classmates and take notes on new products and ideas.

Career Ready Practices

Career Ready Practices describe the career-ready skills that all educators in all content areas should seek to develop in their students. They are practices that have been linked to increase college, career, and life success. Career Ready Practices should be taught and reinforced in all career exploration and preparation programs with increasingly higher levels of complexity and expectation as a student advances through a program of Study.

Integration and Focus -

- Our career programs are focused on STEAM based practices, meaning all lessons are hands-on and introduce students to high interest, STEM-based careers.
- With our career programs, students learn how the concepts and topics they learn in school are related to the real world. And, all lessons are experiential and use simple supplies, no text book or handout is used.
- The career programs will utilize videos, magazines, presenters, internet search engines, hands-on projects, and experiments that focus on topics that link student learning to various career options.

Amistad Law

N.J.S.A. 18A 52:16A-88 Every board of education shall incorporate the information regarding the contributions of African-Americans to our country in an appropriate place in the curriculum of elementary and secondary school students.

[Amistad Resources](#)

[EHC Google Slide Resources](#)

Holocaust Law

N.J.S.A. 18A:35-28 Every board of education shall include instruction on the Holocaust and genocides in an appropriate place in the curriculum of all elementary and secondary school pupils. The instruction shall further emphasize the personal responsibility that each citizen bears to fight racism and hatred whenever and wherever it happens.

[Holocaust Resources](#)

Integration of LGBTQ+ & Individuals with Disabilities

In each curricular area, the district will adopt inclusive instructional materials that portray the cultural and economic diversity of society including the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people. Specifically in Math students will be examining influential mathematicians who have made contributions that may include people who are a part of the LGBTQ+ community or individuals with disabilities.

Diversity, Equity, and Inclusion

All students deserve equitable access ([N.J.A.C. 6A:7](#)) to a high-quality education that is inclusive and reflective of the rich diversity of our state. This can be achieved through consideration of diverse histories, experiences and perspectives that promote the dignity and respect of all individuals. Throughout the course of this Math curriculum, it is our intent to present materials and activities that are respectful and inclusive of diversity, gender identity, sexuality, disability, age, socioeconomic status, ethnicity, race, nationality, religion, and culture. Students will be exposed to a multitude of different cultures including Asian American & Pacific Islanders and discussions about the Holocaust and Amistad when appropriate.

Asian American & Pacific Islander Contributions

Ensures that the contributions, history, and heritage of Asian Americans and Pacific Islanders (AAPI) are included in the New Jersey Student Learning Standards (NJSLS) for Social Studies in kindergarten through Grade 12 (P.L.2021, c.416).

[Kindergarten Guide](#)

[1st Grade Guide](#)

[2nd Grade Guide](#)

[3rd Grade Guide](#)

[4th Grade Guide](#)

[5th Grade Guide](#)

[6th Grade Guide](#)

[7th Grade Guide](#)

[8th Grade Guide](#)

[Algebra 1 Guide](#)