

Crosswalk of NJ Core Curriculum Content Standards and the NJCCCS for Technology Literacy Based on a crosswalk from Montclair School District

Technology skills for students are woven throughout NJCCCS for all subjects. The following Crosswalks indicate the areas of each core curriculum where technology is considered to be an integral component.

These crosswalks are designed to help create cross-curricular lesson plans and units to fulfill the NJCCCS for each subject area. The tables are intended to be informative, but not limiting.

Students must learn to use technology effectively to be prepared to live and work in our complex, information-rich world. It is our intent that technology be integrated throughout all curricula with appropriate grade level technology skills.

Crosswalk A *mapping from the elements of one namespace to the elements of another namespace*
(<http://www.schemas-forum.org/related/glossary.html>)

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STANDARD 1.2 (CREATION AND PERFORMANCE) ALL STUDENTS WILL UTILIZE THOSE SKILLS, MEDIA, METHODS, AND TECHNOLOGIES APPROPRIATE TO EACH ART FORM IN THE CREATION, PERFORMANCE, AND PRESENTATION OF DANCE, MUSIC, THEATER, AND VISUAL ART.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
4	A. Dance	4. Utilize arts media and technology in the creation and/or performance of short phrases and compositions.
4	D. Visual Art	2. Distinguish drawing, painting, ceramics, sculpture, printmaking, textiles, and computer imaging by physical properties.
8		2. Explore various media, technologies and processes in the production of two and three dimensional art.

STANDARD 1.5 (HISTORY/CULTURE) ALL STUDENTS WILL UNDERSTAND AND ANALYZE THE ROLE, DEVELOPMENT, AND CONTINUING INFLUENCE OF THE ARTS IN RELATION TO WORLD CULTURES, HISTORY, AND SOCIETY.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	A. Knowledge	1. Analyze how technological changes have influenced the development of the arts.

STANDARD 2.1 (WELLNESS) ALL STUDENTS WILL LEARN AND APPLY HEALTH PROMOTION CONCEPTS AND SKILLS TO SUPPORT A HEALTHY, ACTIVE LIFESTYLE.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
6	A. Personal Health	5. Discuss how technology impacts wellness.
8		4. Investigate how technology and medical advances impact wellness.

STANDARD 2.6 (FITNESS) ALL STUDENTS WILL APPLY HEALTH-RELATED AND SKILL-RELATED FITNESS CONCEPTS AND SKILLS TO DEVELOP AND MAINTAIN A HEALTHY, ACTIVE LIFESTYLE.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
4	A. Fitness and Physical Activity	5. Describe how technology has improved fitness activities.
	C. Achieving and Assessing Fitness	4. Develop a health-related fitness goal and use technology to track fitness status.
6	A. Fitness and Physical Activity	5. Investigate technological advances that impact physical activity and fitness.
	C. Achieving and Assessing Fitness	4. Assess personal fitness; develop a personal fitness plan based on the findings, and use technology to implement the plan.
8	A. Fitness and Physical Activity	4. Analyze the positive and negative impacts of technological advances on exercise, health, and fitness.
	C. Achieving and Assessing Fitness	4. Use health data and information from internal and external sources to develop a personal fitness plan, and use technology to evaluate the implementation and outcomes of the plan.

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STANDARD 3.1 (READING) ALL STUDENTS WILL UNDERSTAND AND APPLY THE KNOWLEDGE OF SOUNDS, LETTERS, AND WORDS IN WRITTEN ENGLISH TO BECOME INDEPENDENT AND FLUENT READERS, AND WILL READ A VARIETY OF MATERIALS AND TEXTS WITH FLUENCY AND COMPREHENSION.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
5	H. Inquiry and Research	6. Interpret and use graphic sources of information such as maps, graph, timelines, or tables to address research questions.
		8. Produce projects and reports, using visuals, media, and/or technology to show learning and support the learning of an audience.
6		6. Produce projects and reports, using visuals, media, and/or technology to show learning and support the learning of an audience.
7, 8	F. Vocabulary and Concept Development	3. Clarify pronunciations, meanings, alternate word choice, parts of speech, and etymology of words using the dictionary, thesaurus, glossary, and technology resources.

STANDARD 3.2 (WRITING) ALL STUDENTS WILL WRITE IN CLEAR, CONCISE, ORGANIZED LANGUAGE THAT VARIES IN CONTENT AND FORM FOR DIFFERENT AUDIENCES AND PURPOSES.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
2	D. Writing Forms, Audiences, and Purposes (exploring a variety of forms)	4. Use reading and technology to support writing.
7, 8	A. Writing as a Process (prewriting, drafting, revising, editing, post writing)	3. Generate and narrow topics by considering purpose, audience, and form with a variety of strategies (e.g., graphic organizers, brainstorming, or technology-assisted processes).
7, 8	D. Writing Forms, Audiences, and Purposes (exploring a variety of forms)	2. Apply knowledge and strategies for composing pieces in a variety of genres (e.g., narrative, expository, persuasive, poetic, and everyday/ workplace or technical writing).

STANDARD 3.3 (SPEAKING) ALL STUDENTS WILL SPEAK IN CLEAR, CONCISE, ORGANIZED LANGUAGE THAT VARIES IN CONTENT AND FORM FOR DIFFERENT AUDIENCES AND PURPOSES.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
7, 8	D. Oral Presentation	2. Use visual aids, media, and/or technology to support oral communication.

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STANDARD 3.5 (VIEWING AND MEDIA LITERACY) ALL STUDENTS WILL ACCESS, VIEW, EVALUATE, AND RESPOND TO PRINT, NONPRINT, AND ELECTRONIC TEXTS AND RESOURCES.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
1, 2,3, 4, 5, 6,	A. Constructive Meaning	3. Use graphs and charts to report data.
3		1. Begin to demonstrate an awareness of different media forms and how they contribute to communication.
4		1. Interpret information found in pictorial graphs, map keys, and icons on a computer screen.
3, 4,6		6/7. Demonstrate an awareness of different media forms and how they contribute to communication.
5		6. Demonstrate an awareness of different media forms (e.g. newspapers, internet, Magazines) and how they contribute to communication.
7,8		1. Analyze aspects of print and electronic texts that support the author's point of view opinion, or attitude.
		4. Compare and contrast how the various forms of media (e.g. newspapers, radio, Television, internet news outlets) cover the same topic.
<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
4, 5, 6	B. Visual and Verbal Messages	1. Understand that creators of both print media and electronic media have a purpose and target audience for their work.
5, 6		7. Understand the uses of technology (e.g., the Internet for research)
5, 6	C. Living with Media	1. Express and justify preferences for media choices.
		2. Choose the most appropriate media for a presentation.
		3. Use a rubric to evaluate the content of media presentations.
		4. Examine and evaluate effects of media on the family, home, and school.
7, 8		3. Create media presentations and written reports, using multi-media resources such as an Overhead projector, computer, and/or a tape recorder to communicate information.

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STANDARD 4.1 (NUMBER AND NUMERICAL OPERATIONS) ALL STUDENTS WILL DEVELOP NUMBER SENSE AND WILL PERFORM STANDARD NUMERICAL OPERATIONS AND ESTIMATIONS ON ALL TYPES OF NUMBERS IN A VARIETY OF WAYS.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	A. Number Sense	4. Investigate how technology and medical advances impact wellness.
2,3,4,5,6,7	B. Numerical Operations	4. Construct, use, and explain procedures for performing addition and subtraction calculations with: <ul style="list-style-type: none"> • Pencil-and-paper • Mental math • Calculator
3,4,5,6		6, 7, 4 Select pencil-and-paper, mental math, or a calculator as the appropriate computational method in a given situation depending on the context and numbers.
7		1. Use and explain procedures for performing calculations involving addition, subtraction, multiplication, division, and exponentiation with integers and all number types named above with: <ul style="list-style-type: none"> • Pencil-and-paper • Mental math • Calculator
3,4	C. Estimation	4. Use estimation to determine whether the result of a computation (either by calculator or by hand) is reasonable.

STANDARD 4.2 (GEOMETRY AND MEASUREMENT) ALL STUDENTS WILL DEVELOP SPATIAL SENSE AND THE ABILITY TO USE GEOMETRIC PROPERTIES, RELATIONSHIPS, AND MEASUREMENT TO MODEL, DESCRIBE AND ANALYZE PHENOMENA.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
2	A. Geometric Properties	2. Use concrete objects, drawings, and computer graphics to identify, classify, and describe standard three-dimensional and two-dimensional shapes. <ul style="list-style-type: none"> • Vertex, edge, face, side • 3D figures – cube, rectangular prism, sphere, cone, cylinder, and pyramid • 2D figures – square, rectangle, circle, triangle • Relationships between three- and two-dimensional shapes (i.e., the face of a 3D shape is a 2D shape)

STANDARD 4.3 (PATTERNS AND ALGEBRA) ALL STUDENTS WILL REPRESENT AND ANALYZE RELATIONSHIPS AMONG VARIABLE QUANTITIES AND SOLVE PROBLEMS INVOLVING PATTERNS, FUNCTIONS, AND ALGEBRAIC CONCEPTS AND PROCESSES.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
7, 8	D. Procedures	2. Solve simple linear equations informally and graphically. <ul style="list-style-type: none"> • Multi-step, integer coefficients only (although answers may not be integers) • Using paper-and-pencil, calculators, graphing calculators, spreadsheets, and other technology

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STANDARD 4.5 (MATHEMATICAL PROCESSES) ALL STUDENTS WILL USE MATHEMATICAL PROCESSES OF PROBLEM SOLVING, COMMUNICATION, CONNECTIONS, REASONING, REPRESENTATIONS, AND TECHNOLOGY TO SOLVE PROBLEMS AND COMMUNICATE MATHEMATICAL IDEAS.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
Each grade	E. Representations	1. Create and use representations to organize, record, and communicate mathematical ideas. <ul style="list-style-type: none"> • Concrete representations (e.g., base-ten blocks or algebra tiles) • Pictorial representations (e.g., diagrams, charts, or tables) • Symbolic representations (e.g., a formula) • Graphical representations (e.g., a line graph)
	F. Technology	1. Use technology to gather, analyze, and communicate mathematical information. 2. Use computer spreadsheets, software and graphing utilities to organize and display quantitative information. 3. Use graphing calculators and computer software to investigate properties of functions and their graphs. 4. Use calculators as problem-solving tools (e.g., to explore patterns, to validate solutions). 5. Use computer software to make and verify conjectures about geometric objects. 6. Use computer-based laboratory technology for mathematical applications in the sciences.

STANDARD 5.1 (SCIENTIFIC PROCESSES) ALL STUDENTS WILL DEVELOP PROBLEM-SOLVING, DECISION-MAKING AND INQUIRY SKILLS, REFLECTED BY FORMULATING USABLE QUESTIONS AND HYPOTHESES, PLANNING EXPERIMENTS, CONDUCTING SYSTEMATIC OBSERVATIONS, INTERPRETING AND ANALYZING DATA, DRAWING CONCLUSIONS, AND COMMUNICATING RESULTS.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
4	B. Inquiry and Problem Solving	1. Develop strategies and skills for information gathering and problem-solving, using appropriate tools and technologies.

STANDARD 5.2 (SCIENCE AND SOCIETY) ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF HOW PEOPLE OF VARIOUS CULTURES HAVE CONTRIBUTED TO THE ADVANCEMENT OF SCIENCE AND TECHNOLOGY, AND HOW MAJOR DISCOVERIES AND EVENTS HAVE ADVANCED SCIENCE AND TECHNOLOGY.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
4	A. Cultural Contributions	1. Describe how people in different cultures have made and continue to make contributions to science and technology.
8		2. Know that scientists are men and women of many cultures who often work together to solve scientific and technological problems.
		3. Describe how different people in different cultures have made and continue to make contributions to science and technology.
		3. Describe how different people in different cultures have made and continue to make contributions to science and technology.
	B. Historical Perspectives	1. Describe the impact of major events and people in the history of science and technology, in conjunction with other world events.
		2. Describe the development and exponential growth of scientific knowledge and technological innovations.

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STANDARD 5.3 (MATHEMATICAL APPLICATIONS) ALL STUDENTS WILL INTEGRATE MATHEMATICS AS A TOOL FOR PROBLEM-SOLVING IN SCIENCE, AND AS A MEANS OF EXPRESSING AND/OR MODELING SCIENTIFIC THEORIES.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	D. Data Analysis and Probability	4. Use computer spreadsheets, graphing and database applications to assist in quantitative analysis of data.

STANDARD 5.8 (EARTH SCIENCE) ALL STUDENTS WILL GAIN AN UNDERSTANDING OF THE STRUCTURE, DYNAMICS, AND GEOPHYSICAL SYSTEMS OF THE EARTH.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	D. How We Study the Earth	1. Utilize data gathered from emerging technologies (e.g., geographic information systems (GIS) and global positioning systems (GPS) to create representations and describe processes of change on the Earth's surface.

6.1: ALL STUDENTS WILL UTILIZE HISTORICAL THINKING, PROBLEM SOLVING, AND RESEARCH SKILLS TO MAXIMIZE THEIR UNDERSTANDING OF CIVICS, HISTORY, GEOGRAPHY, AND ECONOMICS.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
2	A. Social Studies Skills	3. Identify sources of information on local, national, and international events (e.g., books, newspaper, TV, radio, Internet).
4		3. Locate sources for the same information (e.g., weather forecast on TV, the Internet or in a newspaper).

STANDARD 6.2 (CIVICS) ALL STUDENTS WILL KNOW, UNDERSTAND AND APPRECIATE THE VALUES AND PRINCIPLES OF AMERICAN DEMOCRACY AND THE RIGHTS, RESPONSIBILITIES, AND ROLES OF A CITIZEN IN THE NATION AND THE WORLD.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
4	E. International Education: Global Challenges, Cultures, and Connections	10. Use technology to learn about students and their families in other countries through classroom links, email, and Internet research.
8		11. Discuss the impact of the Internet and technology on global communication.

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STANDARD 6.3 (WORLD HISTORY) ALL STUDENTS WILL DEMONSTRATE KNOWLEDGE OF WORLD HISTORY IN ORDER TO UNDERSTAND LIFE AND EVENTS IN THE PAST AND HOW THEY RELATE TO THE PRESENT AND THE FUTURE.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	C. Expanding Zones of Exchange and Interaction to 1400 CE	7. Discuss the evolution of significant political, economic, social and cultural institutions and events that shaped European medieval society, including Catholic and Byzantine churches, feudalism and manorialism, the Crusades, the rise of cities, and changing technology.
8	D. The Age of Global Encounters (1400-1750)	1. Discuss factors that contributed to oceanic travel and exploration in the 15th and 16 th centuries, including technological innovations in ship building navigation, naval warfare, navigational inventions such as the compass, and the impact of wind currents on the major trade routes.

STANDARD 6.6 (GEOGRAPHY) ALL STUDENTS WILL APPLY KNOWLEDGE OF SPATIAL RELATIONSHIPS AND OTHER GEOGRAPHIC SKILLS TO UNDERSTAND HUMAN BEHAVIOR IN RELATION TO THE PHYSICAL AND CULTURAL ENVIRONMENT.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	A. The World in Spatial Terms	5. Use geographic tools and technologies to pose and answer questions about spatial distributions and patterns on Earth.
		10. Describe location technologies, such as Geographic Information Systems (GIS) and Global Positioning Systems (GPS).
8	E. Environment and Society	1. Discuss the environmental impacts or intended and unintended consequences of major technological changes (e.g., autos and fossil fuels, nuclear power and nuclear waste).

STANDARD 7.1 (COMMUNICATION) ALL STUDENTS WILL BE ABLE TO COMMUNICATE IN AT LEAST ONE WORLD LANGUAGE IN ADDITION TO ENGLISH. THEY WILL USE LANGUAGE TO ENGAGE IN CONVERSATION, UNDERSTAND AND INTERPRET SPOKEN AND WRITTEN LANGUAGE, PRESENT INFORMATION, CONCEPTS, AND IDEAS WHILE MAKING CONNECTIONS WITH OTHER DISCIPLINES, AND COMPARE THE LANGUAGE/CULTURE STUDIED WITH THEIR OWN.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	C. Presentational Mode (spoken or written communication for an audience)	1. Present student-created and/or authentic short plays, skits, poems, songs, stories or reports. <ul style="list-style-type: none"> Grade level appropriate visual and performing arts, language arts and career education (e.g., staging a dramatic presentation of a significant aspect of the life of an important person in the target culture; doing an oral presentation on a famous person, place, or event from target culture supported by research obtained in the target language; creating a visual representation of region or country supported by technological resources and other media)

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STANDARD 9.1: (CAREER AND TECHNICAL EDUCATION) ALL STUDENTS WILL DEVELOP CAREER AWARENESS AND PLANNING, EMPLOYABILITY SKILLS, AND FOUNDATIONAL KNOWLEDGE NECESSARY FOR SUCCESS IN THE WORKPLACE.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	A. Career Awareness and Planning	3. Apply research skills to career exploration.
	B. Employability Skills	1. Research local and state employment opportunities. 2. Develop an employment package that includes a job application, letter of interest, and resume.

STANDARD 9.2 (CONSUMER, FAMILY, AND LIFE SKILLS) ALL STUDENTS WILL DEMONSTRATE CRITICAL LIFE SKILLS IN ORDER TO BE FUNCTIONAL MEMBERS OF SOCIETY.

<u>By the end of grade...</u>	Strands	Cumulative Progress Indicators
8	A. Critical Thinking	1. Communicate, analyze data, apply technology, and problem solve.