

New Jersey Core Curriculum Content Standards For Technological Literacy

STANDARD 8.1

COMPUTER AND INFORMATION LITERACY

ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.

Descriptive Statement: Using computer applications and technology tools, students will conduct research, solve problems, improve learning, achieve goals, and produce products and presentations in conjunction with standards in all content areas, including career education and consumer family, and life skills. They will also develop, locate, summarize, organize, synthesize, and evaluate information for lifelong learning.

GRADE 7

Technology Curriculum

8.1.A - Building upon knowledge and skills gained in preceding grades, by the end of Grade 7, students will:

Basic Computer Skills and Tools

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Use appropriate technology vocabulary.	Continue using vocabulary words that students were exposed to last year and build on it.	8.1.A.1 (R/M)	<ul style="list-style-type: none"> • Students are reminded of their typing skills • They review by re-doing what was done last year which is: • Do lessons with Microtype or other typing programs for 10 minutes • The expectation is for them to type a little faster and are expected to complete 15-20 lessons. • They review everyday at the beginning of class.
Use common features of an operating system (e.g., creating and organizing files and folders).	File management is automatically applied.	8.1.A.2 (M)	As they create files they are encouraged to save them under the correct folder.
Demonstrate effective input of text and data, using touch keyboarding with proper technique.	Build confidence with the basic survival skills of any software package, formatting and editing.	8.1.A.3 (M)	This is no longer reviewed, unless a new software package is introduced.

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Input and access data and text efficiently and accurately through proficient use of other input devices, such as the mouse.	Students are expected to know the difference and benefits of input devices.	8.1.A.4 (M)	As students encounter problems with editing and formatting, they are encouraged to solve it themselves.
Create documents with advanced text-formatting and graphics using word processing.	Enhance the basics of Microsoft Word.	8.1.A.5 (R/M)	<ul style="list-style-type: none"> • Students are introduced to vocabulary related to tables • Basics of tables are reviewed • They will create a document using customized tables by creating an advertisement. They apply callouts, merging cells and WordArt. • Students are encouraged to customize the borders • Expectations are higher.
Create a file containing customized information by merging documents.		8.1.A.6	
Construct a simple spreadsheet, enter data, and interpret the information.	Expand spreadsheets by showing them how to customize formulas and create readable graphs.	8.1.A.7 (R)	<ul style="list-style-type: none"> • Students will follow the textbook and then create a document using <ul style="list-style-type: none"> -Built-in functions -Customized formulas • Before discussing customized formulas with the book, students create the times-table as a warm-up.
Design and produce a basic multimedia project.	Continue building on the concept of creating a presentation in chronological order, but with appropriate color schemes, pictures and special affects.	8.1.A.8 (M)	<ul style="list-style-type: none"> • Students are expected to sharpen their presentation by putting more emphasis on the presentation. • It has to be less wordy and • No more than 4 colors • They will create a presentation on how technology has affected society.

Plan and create a simple database, define fields, input data, and produce a report using sort and query.	Introduce this concept using a spreadsheet.	8.1.A.9	(I)	This concept is introduced with Excel, by having students make a list based on a survey, and then they use the filter feature to see its results.
Use network resources for storing and retrieving data.	Understand networking by saving and retrieving their projects.	8.1.A.10	(M)	This is used on regular bases with projects given in class.
Choose appropriate electronic graphic organizers to create, construct, or design a document.	Use templates to make their lives easier and they can apply it to their personal lives.	8.1.A.11	(M)	<ul style="list-style-type: none"> • Review the old way of doing things • Introduce templates • Discuss its benefits • Apply a template to books that they have read.
Create, organize and manipulate shortcuts.	Students gain more control!	8.1.A.12	(I)	Students has the control of creating shortcuts on websites that they find important.

GRADE 7
Application of Productivity Tools

8.1.B - Social Aspects

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Demonstrate an understanding of how changes in technology impact the workplace and society.		8.1.B.1	Please see A.1.A8
Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse.	Share articles on Cyber bullying and plagiarism.	8.1.B.2 (M)	<ul style="list-style-type: none"> • Students are reminded that Cyber-bullying and plagiarism is real by checking some Newspaper articles.
Explain the purpose of an Acceptable Use Policy and the consequences of inappropriate use of technology.	Understand the Acceptance Use Policy	8.1.B.3 (M)	<ul style="list-style-type: none"> • Students read out-loud the AUP and its importance is stated by the reader or someone else in class. • Then they are tested on it with true/false questions.
Describe and practice safe Internet usage.	The impact of Cyber bullying	8.1.B.4	Create a poster identifying when they are being cyber bullied and what to do about it.

Describe and practice “etiquette” when using the Internet and electronic mail.	Bring awareness to how things are interpreted.	8.1.B.5	While having our discussion on Cyber bullying we discuss “etiquette”
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GRADE 7
Application of Productivity Tools

8.1.B - Information Access and Research

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Choose appropriate tools and information resources to support research and solve real world problems, including but not limited to: <ul style="list-style-type: none"> • On-line resources and databases • Search engines and subject directories 		8.1.B.6	
Evaluate the accuracy, relevance, and appropriateness of print and non-print electronic information sources.	When and what is appropriate to print.	8.1.B.7	An open conversation is used to discuss what is and not appropriate to print.

GRADE 7
Application of Productivity Tools

8.1.B – Problem Solving and Decision Making

Problem Solving and Decision Making

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Use computer applications to modify information independently and/or collaboratively to solve problems.		8.1.B.8	
Identify basic hardware problems and demonstrate the ability to solve common problems.		8.1.B.9	
Determine when technology tools are appropriate to solve a problem and make a decision.		8.1.B.10	

New Jersey Core Curriculum Content Standards For Technological Literacy

STANDARD 8.2

TECHNOLOGY EDUCATION

ALL STUDENTS WILL DEVELOP AN UNDERSTANDING OF THE NATURE AND IMPACT OF TECHNOLOGY, ENGINEERING, TECHNOLOGICAL DESIGN, AND THE DESIGNED WORLD AS THEY RELATE TO THE INDIVIDUAL, SOCIETY, AND THE ENVIRONMENT.

Descriptive Statement:

The following indicators are based on the Standards for Technological Literacy (STL, 2000) and support the National Academy of Engineering's (2002) call for students to gain technological literacy. Students will be expected to understand the various facets of technology and the design process. They will analyze and evaluate design options and then apply the design process to solve problems. A systems perspective is employed to emphasize the interconnectedness of all knowledge and the impact of technology and technological change. Students will be expected to use technology as it applies to physical systems, biological systems, and information and communication systems. The intent at the elementary and middle school levels is that all students develop technological literacy and are prepared for the option of further study in the field of technology education. At the elementary level, the foundation for technology education is found in the science standards, particularly standards 5.2 and 5.4

GRADE 7 Technology Curriculum

8.2.A – Building upon knowledge and skills gained in the preceding grades
By the end of 7th grade students will:

Problem Solving and Decision Making

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Describe the nature of technology and the consequences of technological activity.	Being smart when using the internet.	8.2.A.1	Kid Smatz is used to discuss the pros and cons of technology and the internet.
Describe how components of a technological product, system, or environment interact.		8.2.A.2	
Describe how one technological innovation can be applied to solve another human problem that enhances human life or extends human capability.	Relating technology being used in Society.	8.2.A.3	Research different Technology jobs and then capture everything in a diagram showing how that field is being through technology.
Describe how technological activity has an affect on economic development, political actions, and cultural change.		8.2.A.4	
Explain the cultural and societal effects resulting from the dramatic increases of knowledge and information available today.		8.2.A.5	

GRADE 7 Technology Curriculum

8.2.B – Building upon knowledge and skills gained in the preceding grades
By the end of 7th grade students will:

Design Process and Impact Assessment

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Demonstrate and explain how the design process is not linear	Understand the flow of diagrams. How its direction affects its interpretation.	8.2.B.1	While using a graphical interphase program, students interpret the diagram by changing the arrows.
Use hands on activities to analyze products and systems to determine how the design process was applied to create the solution.		8.2.B.2	
Identify a technological problem and use the design process to create an appropriate solution.		8.2.B.3	
Describe how variations in resources can affect solutions to a technological problem.		8.2.B.4	
Select and safely use appropriate tools and materials in analyzing, designing, modeling or making a technological product, system or environment.	Recognize what is the proper tool for the job on hand.	8.2.B.5	Students will create the same project while using two different applications. Then, they will determine whether, for instance, a word processor is easier to use for a letter or a spreadsheet.

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8.2.C – Building upon knowledge and skills gained in the preceding grades
By the end of 7th grade students will:

System in the Designed World

INSTRUCTIONAL OBJECT	SUBJECT MATTER	STANDARDS	ACTIVITIES
Explain technological advances in medical, agricultural, energy and power, information and communication, transportation, manufacturing and construction technologies		8.2.C.1	
Explain reasons why human-designed systems, products, and environments need to be monitored, maintained, and improved to ensure safety, quality, cost efficiency, and sustainability.		8.2.C.2	
Explain the functions and interdependence of subsystems such as waste disposal, water purification, electrical, structural, safety, climate control, and communication.		8.2.C.3	