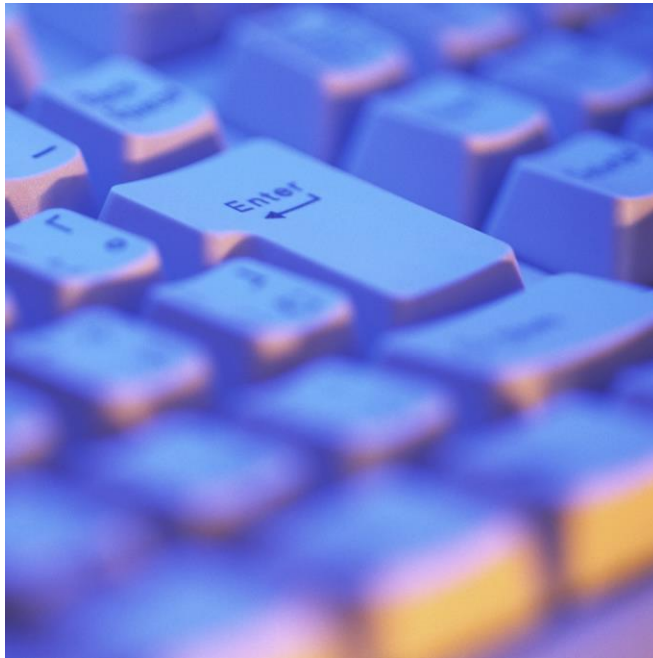


Plainfield Public Schools
Educational Services

Curriculum Pacing Guide



Technology
9-12th grade
2016-2017

9-12th GRADE Technology CURRICULUM PACING GUIDE

Plainfield Public Schools
Educational Services
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The Board of Education for Plainfield Public Schools

Plainfield Public Schools
Educational Services
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9-12th Grade CURRICULUM PACING OVERVIEW

This document provides a pacing guide for instruction involving 9-12th **grade students enrolled in (see sequence of courses)**. It includes the content addressed in the 9-12th grade New Jersey Core Curriculum Content Standards (NJCCCS). It is designed to help teachers in pacing instruction of what students are expected to know and be able to use in technology for the entire year.

Purpose of the 9-12th Grade Technology Curriculum Pacing Guide

The 9-12th **Grade Technology Curriculum Pacing Guide** was formulated for the purpose of providing 9-12th Grade teachers with a guide for pacing instruction throughout the year. It will serve as a “road map” to help teachers develop 9-12th concepts and processes through instruction and practice. The Division of Educational Services responded to the request of administrators and teachers in the District to create a guide that would serve as a resource for teachers.

9-12th GRADE Technology CURRICULUM PACING GUIDE

Description of the 9-12th Grade Technology Curriculum Pacing Guide

The 9-12th Grade Technology Curriculum Pacing Guide specifies the New Jersey Core Curriculum Content Standards (NJCCCS) Cumulative Progress Indicators (CPIs), Objectives, and Standards/Strands taught during each instructional quarter.

- Column One: Standard/Strands
Identifies the Standard and Strands as required by the NJCCCS.
- Column Two: Objectives
Identifies the specific, measurable objectives to be addressed in lessons
- Column Three: CPIs
Contains the NJCCCS CPIs for Grade 9-12th.

Suggestions for Implementing the 9-12th Grade Technology Curriculum Pacing Guide

The role of the teacher is to:

- teach the NJCCCS content matter;
- provide classroom activities that address the NJCCCS;
- enhance curriculum by using textbooks, manipulatives, technology, and other instructional materials;
- use varying methods of instruction to address diverse learning styles; and
- administer teacher-made assessments

In addition to using the 9-12th Grade Technology Curriculum Pacing Guide, teachers should:

- consider intra-school collaborative planning and spiraling of the curriculum to ensure efficient and effective pacing and delivery of instruction;
- adjust pacing and discuss progress with peers;
- document questions and suggested improvement of the guide for further support and future revisions; and
- align and connect mathematics literature to support reading.

9-12th GRADE Technology CURRICULUM PACING GUIDE

Course Pathways

Business

Introduction to Business
Business Management
Business Law

Or

Accounting I
Accounting II
College Accounting

Or

Marketing I
Marketing II
Entrepreneurship

Or

Intro to Cosmetology
Cosmetology I
Cosmetology II

Or

Culinary Arts – Foods I
& Foods II

Or

Family Services –
Parenting, Family Living
& Child Care

Engineering

Pre-Engineering
CAD I
CAD II

Or

Robotics I
Robotics II

Or

Wood Technology I
Wood Technology II
Construction I
Construction II

Or

Cisco I
Cisco II
Cisco III
Cisco IV

Technology

Intro to Computer Applications
MOUS I
MOUS II

Or

Graphics I
Graphics II
Web Design

Or

TV Production I
TV Production II
Video Production

9-12th GRADE Technology CURRICULUM PACING GUIDE

Grade 11: First Quarter

Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p>8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.</p>	<p>By the end of the 12th grade students will be able to:</p> <ul style="list-style-type: none"> A. Students will review and practice topics related to NOCTI and MOS testing. <ul style="list-style-type: none"> 1. To demonstrate ability to evaluate appropriate questions typical to NOCTI MOS testing. B. Students will examine the social and ethical issues related to computers and the Internet. <ul style="list-style-type: none"> 1. Read and discuss topics related to the social issues related to computers including ethics. C. Students will develop an understanding and skill using the Internet as a resource. <ul style="list-style-type: none"> 1. To demonstrate the ability to search the Internet for useable sites. 2. To evaluate the authenticity and bias of an Internet site. 3. To use the Internet as a source for obtaining practical information such as train schedules, airline reservations, hotel accommodations, etc. D. Students will plan and create a database in Access. <ul style="list-style-type: none"> 1. Recognize and use the vocabulary associated with base database management. 2. To demonstrate the awareness of database concepts by designing structures for databases. E. Students will review and use the practice software for the MOS Exam. <ul style="list-style-type: none"> 1. To demonstrate the ability to accurately answer sample MOS questions in Word and Excel. F. Students will examine the social and ethical issues related to computers and the Internet. <ul style="list-style-type: none"> 1. Read and discuss topics related to the social issues related to computers including ethics. G. Identify input devices, output devices, storage devices, and communications devices. <ul style="list-style-type: none"> 1. Identify input devices, output devices, storage devices, and communications devices. 2. To develop techniques to make an informed decision as a consumer when purchasing a computer. 3. To describe the various parts of the computer system. 4. To demonstrate proper techniques of safe and standard handling of 	<p>8.1.12.A.1 Create a multipage document with citations using word processing software in conjunction with other tools that demonstrate the ability to format, edit, and print.</p> <p>8.1.12.A.2 Create documents including a resume and a business letter using professional format.</p> <p>8.1.12.A.3 Construct a spreadsheet, enter data, use mathematical or logical functions to manipulate and process data, generate charts and graphs, and interpret the results.</p> <p>8.1.12.A.4 Given a data base, define fields, input data from multiple records, produce a report using sort and query. And interpret the data.</p> <p>8.1.12.A.5 Produce a multimedia project using text, graphics, moving images, and sound.</p> <p>8.1.12.A.8 Discuss and/or demonstrate the capability of emerging technologies and software in the creation of documents or files.</p> <p>8.1.12.B.1 Describe the potential and implications of contemporary and emerging computer applications for personal, social, lifelong learning, and workplace needs.</p> <p>8.1.12.B.2 Exhibit legal and ethical behaviors when using information and technology, and discuss consequences of misuse.</p> <p>8.1.12.B.3 Make informed choices among technology systems, resources, and services in a variety of contexts.</p> <p>8.1.12.B.4 Use appropriate language when communication with diverse</p>

9-12th GRADE Technology CURRICULUM PACING GUIDE

Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p style="text-align: center;">Strand(s)</p> <p>A. Basic Computer Skills and Tools B. Application and Productivity Tools</p>	<p>computer components.</p> <p>6. To describe the various parts of the computer system.</p> <p>7. To demonstrate proper techniques of safe and standard handling of computer components</p> <p>H. Vector-Based Drawing- All students will have the opportunity to achieve competence in the use of vector-based drawing programs such as Adobe Illustrator.</p> <p>1. Identify specifics of software workspace including tools, palettes an menu options.</p> <p>2. Use type tool and character palette to create a graphic organizer.</p> <p>3. Draw and layout an illustration project.</p> <p>4. Assemble an illustration using layers.</p> <p>5. Demonstrate ability to categorize text.</p>	<p>audiences using computer and information literacy.</p> <p>8.1.12.B.5 Select and use specialized databases for advanced research to solve real world problems.</p> <p>8.1.12.B.6 Identify new technologies and other organizational tools to use in personal, home, and/or work environments for information retrieval, entry and presentation.</p> <p>8.1.12.B.7 Evaluate information sources for accuracy, relevance, and appropriateness.</p> <p>8.1.12.B.8 Compose, send, and organize e-mail messages with and without attachments.</p> <p>8.1.12.B.9 Create and manipulate information, independently and/or collaboratively, to solve problems and design and develop products.</p> <p>8.1.12.B.12 Integrate new information into an existing knowledge base and communicate the results in a project or presentation.</p>
<p>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.</p> <p style="text-align: center;">Strand(s)</p> <p>A. Nature and Impact of Technology B. Design Process and Impact Assessment C. Systems in the Designed World</p>	<p>By the end of the 12th grade students will be able to:</p>	

9-12th GRADE Technology CURRICULUM PACING GUIDE

Grade 11: Second Quarter

Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p>8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.</p>	<p>By the end of the 12th grade students will be able to:</p> <p>A. Students will create reports using the wizard in Access.</p> <ol style="list-style-type: none"> 1. Access Wizard. 2. Evaluate and select options in Wizard. <p>B. Students will create queries and reports in Access.</p> <ol style="list-style-type: none"> 1. Create and run a query. 2. Enter criteria for a query. 3. Create a range query. 4. Use fields and wildcards in a query. 5. Print a query. 6. Sort data in a query <p>C. Students will produce written communications using word processing.</p> <ol style="list-style-type: none"> 1. Students will produce documents using wizards and templates in Word. <p>D. Students will create announcements, newsletters, menus, advertisements, and flyers in Word.</p> <ol style="list-style-type: none"> 1. Students will border and shade a paragraph. 2. Students will enhance a document through watermarks, charts, bullets and character style. <p>E. Students will create mail merge files in Word.</p> <ol style="list-style-type: none"> 1. Explain the mail merge process. 2. Use the mail merge task pane. 3. Create and edit a data source. 4. Insert merge fields in a main document. 5. Use an IF statement in a main document. 6. Sort data records. 7. Print mailing labels and envelopes. <p>F. Graphic Editing - All students will develop perceptual, intellectual, physical, and technical skills in the creation of visual design.</p> <ol style="list-style-type: none"> 1. Identify specifics of software workspace including tools, palettes and menu options. 2. Import, export, cut, copy, paste, and place graphics. 3. Master skills using selection tools. 	<p>8.1.12.A.1 Create a multipage document with citations using word processing software in conjunction with other tools that demonstrate the ability to format, edit, and print.</p> <p>8.1.12.A.2 Create documents including a resume and a business letter using professional format.</p> <p>8.1.12.A.4 Given a data base, define fields, input data from multiple records, produce a report using sort and query. And interpret the data.</p> <p>8.1.12.A.7 Develop a document or file for inclusion into a website or web page.</p> <p>8.1.12.A.9 Merge information from one document to another.</p> <p>8.1.12.B.1 Describe the potential and implications of contemporary and emerging computer applications for personal, social, lifelong learning, and workplace needs.</p> <p>8.1.12.B.3 Make informed choices among technology systems, resources, and services in a variety of contexts.</p> <p>8.1.12.B.6 Identify new technologies and other organizational tools to use in personal, home, and/or work environments for information retrieval, entry and presentation.</p> <p>8.1.12.B.8 Compose, send, and organize e-mail messages with and without attachments.</p>

9-12th GRADE Technology CURRICULUM PACING GUIDE

Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p style="text-align: center;">Strand(s)</p> <p>A. Basic Computer Skills and Tools B. Application and Productivity Tools</p>	<p>4. Produce layered designs in Adobe Photoshop. 5. Manipulate the digital image. 6. Identify career opportunities. 7. Editing digital images for various formats and platforms 8. Editing digital images for inclusion into a website</p>	8.1.12.B.9 Create and manipulate information, independently and/or collaboratively, to solve problems and design and develop products.
<p>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.</p>	<p>By the end of the 12th grade students will be able to:</p>	
<p style="text-align: center;">Strand(s)</p> <p>A. Nature and Impact of Technology B. Design Process and Impact Assessment C. Systems in the Designed World</p>		

Grade 11: Third Quarter

Standard/Strands	Goals/Objectives	Strand Letter/CPI
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9-12th GRADE Technology CURRICULUM PACING GUIDE

Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p>8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.</p>	<p>By the end of the 12th grade students will be able to:</p> <p>A. Students will design and create presentations using graphical and presentation programs.</p> <ol style="list-style-type: none"> 1. Explain the purpose of a presentation. 2. Plan a presentation. 3. Add and delete slides. 4. Change the design of a presentation 5. Apply a different color scheme. 6. Change font style and font size. 7. Create bulleted list. 8. Print a presentation outline. 9. Print a presentation as handouts. 10. Create and print speaker notes. <p>B. Students will develop an understanding and skill using the Internet as a resource.</p> <ol style="list-style-type: none"> 1. To demonstrate the ability to search the Internet for useable sites. 2. To evaluate the authenticity and bias of an Internet site. 3. To use the Internet as a source for obtaining practical information such as train schedules, airline reservations, hotel accommodations, etc. <p>C. Students will create formulas to plan, create, and analyze spreadsheets and graphs using a spreadsheet program in Excel.</p> <ol style="list-style-type: none"> 1. To demonstrate the knowledge of spread sheeting principles by designing spreadsheet layouts. 2. To produce spreadsheets utilizing techniques including formulas and functions. 3. To apply conditional and unconditional formatting to a spreadsheet. 4. Create and use templates. 5. Use the IF function. 6. Change the orientation and margins of a worksheet. <p>D. Desktop Publishing- All students will be able to use layout software such as Adobe InDesign to create print collateral including posters, brochures and newsletters.</p> <ol style="list-style-type: none"> 1. Identify specifics of software workspace including tools, palettes and menu options. 2. Format text, paragraphs and create and apply styles. 3. Design documents using templates. 4. Explore the psychological impacts of color. 	<p>8.1.12.A.3 Construct a spreadsheet, enter data, use mathematical or logical functions to manipulate and process data, generate charts and graphs, and interpret the results.</p> <p>8.1.12.A.5 Produce a multimedia project using text, graphics, moving images, and sound.</p> <p>8.1.12.A.6 Produce and edit page layouts in different formats using desktop publishing and graphics software.</p> <p>8.1.12.A.8 Discuss and/or demonstrate the capability of emerging technologies and software in the creation of documents or files.</p> <p>8.1.12.A.9 Merge information from one document to another.</p> <p>8.1.12.B.3 Make informed choices among technology systems, resources, and services in a variety of contexts.</p> <p>8.1.12.B.4 Use appropriate language when communication with diverse audiences using computer and information literacy.</p> <p>8.1.12.B.5 Select and use specialized databases for advanced research to solve real world problems.</p> <p>8.1.12.B.6 Identify new technologies and other organizational tools to use in personal, home, and/or work environments for information retrieval, entry and presentation.</p> <p>8.1.12.B.7 Evaluate information sources for accuracy, relevance, and appropriateness.</p> <p>8.1.12.B.8 Compose, send, and organize e-mail messages with and without attachments.</p> <p>8.1.12.B.9 Create and manipulate</p>

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Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p style="text-align: center;">Strand(s)</p> <p>A. Basic Computer Skills and Tools B. Application and Productivity Tools</p>	<p>E. Animation All students will be able to create interactive experiences and animations using an animation program such as Macromedia Flash.</p> <ol style="list-style-type: none"> 1. Identify specifics of software workspace including tools, stage and timeline. 2. Integrate vector-based drawing concepts into multimedia presentations. 3. Open a document and play a movie. 4. Create and save a movie. 5. Demonstrate ability to work with timelines and scenes. 6. Create frame-by-frame animations. 7. Create motion-tweened animation. 8. Produce an animation using imported graphics. 	<p>information, independently and/or collaboratively, to solve problems and design and develop products.</p> <p>. 8.1.12.B.12 Integrate new information into an existing knowledge base and communicate the results in a project or presentation.</p>
<p>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.</p>	<p>By the end of the 12th grade students will be able to:</p>	
<p style="text-align: center;">Strand(s)</p> <p>A. Nature and Impact of Technology B. Design Process and Impact Assessment C. Systems in the Designed World</p>		

Grade 11: Fourth Quarter

Standard/Strands	Goals/Objectives	Strand Letter/CPI
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Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p>8.1 (COMPUTER AND INFORMATION LITERACY) ALL STUDENTS WILL USE COMPUTER APPLICATIONS TO GATHER AND ORGANIZE INFORMATION AND TO SOLVE PROBLEMS.</p>	<p>By the end of the 12th grade students will be able to:</p> <ul style="list-style-type: none"> A. Students will use visuals to enhance a slide show in PowerPoint. <ul style="list-style-type: none"> 1. Insert clip art. 2. Animate clip art 3. Add custom animation and transitions B. Students will create various publications for print in Microsoft Publisher. <ul style="list-style-type: none"> 1. Create business forms such as business cards, letterhead, invoices. 2. Create advertising media appropriate for community service or a business entity. C. Students will discuss and view the communication capabilities of Microsoft Outlook. <ul style="list-style-type: none"> 1. Create a Calendar 2. Add and delete items on a schedule 3. Create a mini database of personal contacts 4. Utilize e-mail. 5. Discuss and demonstrate how determine the difference between “SPAM” and a “HOAX” 6. Discuss the variety of Internet “viruses” and how they are implemented 7. Discuss the Internet Protocol – Transfer Control Protocol/Internet Protocol (TCP/IP) model and how it impacts email transmission 8. Discuss and demonstrate how do compose an e-mail 9. Identify and discuss various Internet Service Providers (ISP); i.e. MSN, Yahoo, Verizon, etc. 10. Identify and discuss how to send an e-mail with and without an attachment 11. Discuss and examine file storage space and resource management 12. Discuss and demonstrate file sharing 13. Identify, examine, and discuss various e-mail options and e-mail formats 14. Discuss WiMax vs. WiFi utilized in mobile phone transmission with various mobile phone carriers. 	<ul style="list-style-type: none"> 8.1.12.A.3 Construct a spreadsheet, enter data, use mathematical or logical functions to manipulate and process data, generate charts and graphs, and interpret the results. 8.1.12.A.5 Produce a multimedia project using text, graphics, moving images, and sound. 8.1.12.A.9 Merge information from one document to another. 8.1.12.B.6 Identify new technologies and other organizational tools to use in personal, home, and/or work environments for information retrieval, entry and presentation. 8.1.12.B.8 Compose, send, and organize e-mail messages with and without attachments. 8.1.12.B.9 Create and manipulate information, independently and/or collaboratively, to solve problems and design and develop products. 8.1.12.B.10 Identify, diagnose, and suggest solutions for non-functioning technology systems. 8.1.12.B.11 Identify a problem in a content area and formulate a strategy to solve the problem using brainstorming. 8.1.12.B.12 Integrate new information into an existing knowledge base and communicate the results in a project or presentation.

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Standard/Strands	Goals/Objectives	Strand Letter/CPI
<p style="text-align: center;">Strand(s)</p> <p>A. Basic Computer Skills and Tools B. Application and Productivity Tools</p>	<p>D. Students will use financial functions, data tables, amortization schedules and hyperlinks in Excel.</p> <ol style="list-style-type: none"> 1. Students will create, sort, and query a list in Excel. 2. Create an amortization table using functions. 3. Create and use various types of charts to enhance a spreadsheet. 4. Apply chart formatting. 5. Create a hyperlink in Excel. 	
<p>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.</p>	<p>By the end of the 12th grade students will be able to:</p> <p>E. Three-Dimensional Modeling - All students will be able to create a three-dimensional graphic representation of a drawing or object using a modeling program such as SolidWorks.</p> <ol style="list-style-type: none"> 1. Identify specifics of software workspace including tools, palettes and menu options. 2. Demonstrate skill using three-dimensional modeling programs. 3. Produce a three-dimensional representation of an object. 4. Integrate vector-based documents into three-dimensional projects. 	<p>8.2.12.B.3 Develop methods for creating possible solutions, modeling and testing solutions, and modifying proposed design in the solution of a technological problem using hands-on activities.</p> <p>8.2.12.4 Use a computer assisted design (CAD) system in the development of an appropriate design solution.</p>
<p style="text-align: center;">Strand(s)</p> <p>A. Nature and Impact of Technology B. Design Process and Impact Assessment C. Systems in the Designed World</p>		