# **Computer Applications I** Curriculum

Grades 9-12



NEPTUNE TOWNSHIP SCHOOL DISTRICT Office of the Superintendent 60 Neptune Blvd. Neptune, NJ 07753-4836

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# COMPUTER APPLICATIONS I CURRICULUM

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#### **Computer Applications I**

#### **Acknowledgements**

The Computer Applications I curriculum for grades 9-12 was developed through the dedicated efforts of Dawn Reinhardt, Department Chairperson, with guidance of the district's curriculum steering committee members including Stacie Ferrara, Ed.D., Supervisor, and Sally A. Millaway, Ed.D., Director for Curriculum, Instruction and Assessment. With special thanks to Tim Beaton, Teacher of Computer Applications, for the previous curriculum revisions.

This curriculum guide was developed to build a basic understanding of Microsoft Office products, including Excel, Work, Access database, Publisher, and PowerPoint. Students will gain confidence in using these programs for both personal and work related purposes.

This curriculum was written in alignment with the 2020 New Jersey Student Learning Standards for Computer Science and Design Thinking Standards, 2020 Career Readiness, Life Literacies, and Key Skills and focuses on the skills necessary to familiarize students with the computer and its applications in business, education, science and industry. It is our hope that this curriculum will serve as a valuable resource for the staff members who teach this course and that they will provide feedback and make recommendations for improvement.

## DISTRICT MISSION STATEMENT

The primary mission of the Neptune Township School District is to prepare all of our students for a life-long learning process and to become confident, competent, socially, and culturally- conscious citizens in a complex and diverse world. It is with high expectations that our schools foster:

- A strong foundation in academic and modern technologies.
- A positive, equitable, and varied approach to teaching and learning.
- An emphasis on critical thinking skills and problem-solving techniques.
- A respect for and an appreciation of our world, its resources, and its diverse people.
- A sense of responsibility, good citizenship, and accountability.
- An involvement by the parents and the community in the learning process.

## Neptune Township School District

## **Educational Outcome Goals**

The students in the Neptune Township schools will become life-long learners and will:

- Become fluent readers, writers, speakers, listeners, and viewers with comprehension and critical thinking skills.
- Acquire the mathematical skills, understandings, and attitudes that are needed to be successful in their careers and everyday life.
- Understand fundamental scientific principles, develop critical thinking skills, and demonstrate safe practices, skepticism, and open-mindedness when collecting, analyzing, and interpreting information.
- Become technologically literate.
- Demonstrate proficiency in all New Jersey Student Learning Standards (NJSLS).
- Develop the ability to understand their world and to have an appreciation for the heritage of America with a high degree of literacy in civics, history, economics and geography.
- Develop a respect for different cultures and demonstrate trustworthiness, responsibility, fairness, caring, and citizenship.
- Become culturally literate by being aware of the historical, societal, and multicultural aspects and implications of the arts.
- Demonstrate skills in decision-making, goal setting, and effective communication, with a focus on character development.
- Understand and practice the skills of family living, health, wellness and safety for their physical, mental, emotional, and social development.
- Develop consumer, family, and life skills necessary to be a functioning member of society.
- Develop the ability to be creative, inventive decision-makers with skills in communicating ideas, thoughts and feelings.
- Develop career awareness and essential technical and workplace readiness skills, which are significant to many aspects of life and work.

#### **COMPUTER APPLICATIONS I**

#### COURSE DESCRIPTION (5 Credits)

Computer Applications I provides students with the life and career skills needed to function optimally within an intensely competitive and changing worldwide marketplace. Students will learn to: apply information-literacy skills to access, manage, and communicate information using a range of emerging technological tools, think critically and creatively to solve problems, synthesize and create new knowledge; make informed decisions that affect individuals, the world community, and the environment; employ a systemic approach to understand the design process, the designed world, and the interrelationship and impact of technologies; and model digital citizenship.

#### INTEGRATED SOCIAL AND EMOTIONAL LEARNING COMPETENCIES

The following social and emotional competencies are integrated in this curriculum document:

Self-	Awareness
x	Recognize one's own feelings and thoughts
x	Recognize the impact of one's feelings and thoughts on one's own behavior
x	Recognize one's personal traits, strengths and limitations
x	Recognize the importance of self-confidence in handling daily tasks and challenges
Self-	Management
X	Understand and practice strategies for managing one's own emotions, thoughts and behaviors
	Recognize the skills needed to establish and achieve personal and educational goals
x	Identify and apply ways to persevere or overcome barriers through alternative methods to achieve one's goals
Soci	al Awareness
x	Recognize and identify the thoughts, feelings, and perspectives of others
x	Demonstrate an awareness of the differences among individuals, groups, and others' cultural backgrounds
	Demonstrate an understanding of the need for mutual respect when viewpoints differ
x	Demonstrate an awareness of the expectations for social interactions in a variety of setting
Resp	oonsible Decision Making
x	Develop, implement and model effective problem solving and critical thinking skill
x	Identify the consequences associated with one's action in order to make constructive choices
x	Evaluate personal, ethical, safety and civic impact of decisions.
Rela	tionship Skills
x	Establish and maintain healthy relationships
X	Utilize positive communication and social skills to interact effectively with others
	Identify ways to resist inappropriate social pressure
x	Demonstrate the ability to present and resolve interpersonal conflicts in constructive ways
x	Identify who, when, where, or how to seek help for oneself or others when needed

Unit Plan Title	Unit 1: Exploring Microsoft Programs
Suggested Time Frame	1 week

#### **Overview / Rationale**

Students will learn how to navigate the Microsoft platform and apply the computer skills to their everyday lives and potential job skills. Students will be able to understand how the basic skills of Microsoft Word can play an integral part in their future career choice.

#### **Stage 1 – Desired Results**

#### Established Goals:

New Jersey Student Learning Standards for Computer Science and Design Thinking (2020)

#### 8.1 Computer Science by the End of Grade 12

8.1.12.NI.2: Evaluate security measures to address various common security threats.

8.1.12.NI.3: Explain how the needs of users and the sensitivity of data determine the level of security implemented.

8.1.12.IC.1: Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.

8.1.12.DA.5: Create data visualizations from large data sets to summarize, communicate, and support different interpretations of real-world phenomena.

## 8.2 Design Thinking by the End of Grade 12

8.2.12.ITH.3: Analyze the impact that globalization, social media, and access to open source technologies has had on innovation and on a society's economy, politics, and culture. 8.2.12.EC.1: Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made. • 8.2.12.EC.2: Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.

#### **Essential Questions:**

- In a world of constant technological change, what skills should we learn?
- How are teamwork and communication skills valuable in the workplace?
- What qualities are important to become an effective leader?

#### **Enduring Understandings:**

Students will understand that...

- Technology is constantly changing and requires continuous learning of new skills.
- Effective communication skills are necessary to convey meaning and understanding.

• Collaboration and teamwork enable individuals or groups to achieve common goals w/ greater efficiency.

#### **Knowledge:**

Students will know...

- Procedures for correcting computer error messages as they arise.
- The importance of saving documents immediately to protect work from being lost. e
- Effective communication and collaboration skills for productive teamwork.
- Presentation applications to prepare and deliver presentations.

#### Skills:

Students will be able to ...

- Log onto the school network.
- Print documents to network printers.
- Communicate effectively with team members.
- Create and format a Word document.
- Give a PowerPoint presentation.
- Create interactive data visualizations using software tools.
- Explain how the needs of users and the sensitivity of data determine the level of security implemented.

#### **Interdisciplinary Connections**

#### New Jersey Student Learning Standards for English Language Arts (2016)

NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

## **Standards for Mathematical Practices (2016)**

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills (2020)

## 9.1 Personal Financial Literacy by the End of Grade 12

## **Civic Financial Responsibility**

9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights.

# **Financial Institutions**

9.1.12.FI.1: Identify ways to protect yourself from identity theft

# **Financial Psychology**

9.1.12.FP.1: Create a clear long-term financial plan to ensure its alignment with your values. 9.1.12.FP.2: Explain how an individual's financial values and goals may change across a lifetime and the adjustments to the personal financial plan that may be needed.

## **Planning and Budgeting**

9.1.12.PB.3: Design a personal budget that will help you reach your long-term and short-term financial goals.

9.1.12.PB.4: Explain how you would revise your budget to accommodate changing circumstances.

# 9.2 Career Awareness, Exploration, Preparation, and Training by the End of Grade 12

# **Career Awareness and Planning**

9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.

9.2.12.CAP.5: Assess and modify a personal plan to support current interests and postsecondary plans.

9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.

9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.

9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.

# 9.4 Life Literacies and Key Skills by the End of Grade 12

## **Creativity and Innovation**

9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities.

# **Critical Thinking and Problem-Solving**

9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).

9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).

# **Digital Citizenship**

9.4.12.DC.4: Explain the privacy concerns related to the collection of data (e.g., cookies) and generation of data through automated processes that may not be evident to users (e.g., 8.1.12.NI.3).

9.4.12.DC.6: Select information to post online that positively impacts personal image and future college and career opportunities.

# Information and Media Literacy

9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.

## **Technology Literacy**

9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.

# Career Ready Practices

- **CRP1.** Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- **CRP4.** Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- **CRP6.** Demonstrate creativity and innovation.
- **CRP7.** Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- **CRP10.** Plan education and career paths aligned to personal goals.
- **CRP11.** Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

## **Student Resources**

## **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA <u>https://www.canva.com/</u>

## Teacher Resources

## Websites:

Career Clusters - Post Secondary Opportunities <u>www.careerclusters.org</u>

## K-12 NJDOE Legislation

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.

#### Diversity and Inclusion Law (N.J.S.A. 18A:35-4.36a)

Beginning in the 2021-2022 school year, each school district shall incorporate instruction on diversity and inclusion in an appropriate place in the curriculum of students in grades kindergarten through 12 as part of the district's implementation of the New Jersey Student Learning Standards.

**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.

**LGBT and Disabilities Law (N.J.S.A. 18A:35-4.35)** A board of education shall include instruction on the political, economic, and social contributions of persons with disabilities and lesbian, gay, bisexual, and transgender people, in an appropriate place in the curriculum of middle school and high school students as part of the district's implementation of the New Jersey Student Learning Standards. N.J.S.A. 18A:35-4.36 A board of education shall have policies and procedures in place pertaining to the selection of instructional materials to implement the requirements of N.J.S.A. 18A:35-4.35

#### Stage 2 – Assessment Evidence

#### **Pre-Assessments:**

- Do Now and anticipatory assignments
- Peer- and/or self-assessments.

#### Formative Assessments:

- Class discussion: Teamwork and delegating responsibilities
- Group work: Interviewing team members for group project
- Class discussion: Communication and presentation skills
- Closure activities and exit slips

#### Summative Assessments:

• Group projects

## **Performance** Task(s):

- Group project: Written team member biography in Word.
- Group project: Team member biography PowerPoint.

## Stage 3 – Learning Plan

**Group Biography Project** 

**Project Purpose:** The purpose of this project is to gain an understanding of your prior knowledge of some of the programs that we will be covering in this class and your basic

understanding of computer usage. This project will also help us to get to know each other and begin developing important teamwork skills, communication skills, and time management skills.

# **Guidelines:**

- Work in groups of 4
- Interview each team member to learn about them
  - Get as much info as possible
  - Learn something interesting
  - Must have at least 15 pieces of info on each team member
- Create a biography page for each team member using WORD
- Create a PowerPoint presentation about your team
  - Create a team name and slogan
  - Be creative, but appropriate
- Each group will delegate responsibilities for the following jobs
  - Project Manager: Oversees project, helping with all parts, filling in where needed
  - Interviewer/Reporter: Conduct interviews, record responses, determine necessary information
  - Editor: Write biographies into a Word document, proofread and edit final copy
  - Designer: Develop and design PowerPoint presentation

## Grading:

- 1. Teamwork
- 2. Time on Task
- 3. Completion of project (15 facts on each team member)
- 4. Spelling and Grammar
- 5. Overall Quality
- 6. Creativity
- 7. Oral Presentation

Unit Plan Title	Unit 2: Excel Spreadsheets
Suggested Time Frame	5-6 weeks

#### **Overview / Rationale**

Students will be introduced to Microsoft Excel through key vocabulary terms, layout options, and uses. Students will create a basic worksheet and input simple formulas. Students will apply their learned knowledge to create charts, input data and conditional formatting.

#### **Stage 1 – Desired Results**

#### Established Goals:

New Jersey Student Learning Standards for Computer Science and Design Thinking (2020)

## 8.1 Computer Science by the End of Grade 12

8.1.12.NI.2: Evaluate security measures to address various common security threats.

8.1.12.NI.3: Explain how the needs of users and the sensitivity of data determine the level of security implemented.

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8.2.12.EC.1: Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made. • 8.2.12.EC.2: Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.

## **Essential Questions:**

- Why do businesses use Excel?
- Can Excel be useful in one's personal life?
- What do algebra and Excel have in common?
- Why is the chart function of Excel so useful in the business world?
- Why is it important to apply proper data formats to a worksheet?

## Enduring Understandings:

Students will understand that...

- Selection of technology should be based on personal and/or career needs assessment.
- A system has interrelated components designed to collectively achieve a desired goal.
- Excel allows one to enter, calculate, and manipulate data quickly and easily.
- Data formats make a worksheet easier to read and more functional.
- Charts act as a visual representation of data and make analysis of data less complex.
- Different types of charts allow a user to view data differently

# Knowledge:

Students will know...

- Excel is useful for both the business world and one's personal life.
- Excel has four major functions, each with a unique purpose. the process for using and entering simple formulas and functions in Excel.
- The layout and design terms used when working in Excel.
- Businesses use charts to help analyze data through visual representation.
- Data formats must be applied for data to make sense to the people viewing and analyzing it.
- Conditional formatting allows users of a worksheet to quickly identify important pieces of information for analytical purposes.
- Different types of charts are used depending on what type of information the chart must represent.
- An "if statement" must be written properly for conditional formatting to be useful.
- Key terms related to using data formats, charts and conditional formatting

## Skills:

Students will be able to ...

- Demonstrate knowledge of terms used in Excel.
- Enter data into a worksheet.
- Locate data in a worksheet using cell references.
- Format a worksheet.
- Use the basic functions of Excel (Sum, Max, Min, Ave)
- Enter basic formulas in a worksheet.
- Copy formulas using the fill handle.
- Demonstrate an understanding of key terms related to using data formats, charts, and conditional formatting.
- Write an "if statement" to apply a conditional format.
- Apply various data formats to a worksheet, including currency style, percent style, comma style, and date formats.
- Increase and decrease the number of decimal places in a cell. d
- Differentiate between a fixed dollar sign and a floating dollar sign.
- Identify the different parts of a chart.
- Create an embedded chart on a worksheet.
- Display and print the formulas version of a worksheet.

# Interdisciplinary Connections

## New Jersey Student Learning Standards for English Language Arts (2016)

NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

## **Standards for Mathematical Practices (2016)**

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills (2020)

# 9.1 Personal Financial Literacy by the End of Grade 12

## **Civic Financial Responsibility**

9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights.

# **Financial Institutions**

9.1.12.FI.1: Identify ways to protect yourself from identity theft

# **Financial Psychology**

9.1.12.FP.1: Create a clear long-term financial plan to ensure its alignment with your values.9.1.12.FP.2: Explain how an individual's financial values and goals may change across a lifetime and the adjustments to the personal financial plan that may be needed.

## Planning and Budgeting

9.1.12.PB.3: Design a personal budget that will help you reach your long-term and short-term financial goals.

9.1.12.PB.4: Explain how you would revise your budget to accommodate changing circumstances.

# **<u>9.2 Career Awareness, Exploration, Preparation, and Training by the End of Grade 12</u> Career Awareness and Planning**

9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.

9.2.12.CAP.5: Assess and modify a personal plan to support current interests and postsecondary plans.

9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.

9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.

9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.

# 9.4 Life Literacies and Key Skills by the End of Grade 12

## Creativity and Innovation

9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities.

## **Critical Thinking and Problem-Solving**

9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).

9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).

# **Digital Citizenship**

9.4.12.DC.4: Explain the privacy concerns related to the collection of data (e.g., cookies) and generation of data through automated processes that may not be evident to users (e.g., 8.1.12.NI.3).

9.4.12.DC.6: Select information to post online that positively impacts personal image and future college and career opportunities.

# Information and Media Literacy

9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.

# **Technology Literacy**

9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.

## Career Ready Practices

- **CRP1.** Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.

- CRP3. Attend to personal health and financial well-being.
- CRP4. Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- **CRP6.** Demonstrate creativity and innovation.
- **CRP7.** Employ valid and reliable research strategies.
- **CRP8.** Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- **CRP10.** Plan education and career paths aligned to personal goals.
- **CRP11.** Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

#### **Student Resources**

#### **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA <u>www.canva.com</u>

#### **Teacher Resources**

#### Websites:

• Career Clusters - Post Secondary Opportunities <u>www.careerclusters.org</u>

#### Handouts:

- Excel Writing Assignment
- Formulas practice worksheet instructions
- FYE CD Sales
- GameStop Sales Results
- Bills worksheet
- Monthly Budget Complete
- Monthly Budget worksheet
- NY Yankees Weekly Payroll
- Foot Locker Sneaker Sales
- GAP Jeans Sales
- Girl Scout Cookie Sales
- Yellow Brick Road Ice Cream Shop
- iTunes MP3 Sales
- If Statement Practice Worksheet
- Time Management Excel Project

#### Stage 2 – Assessment Evidence

*Pre-Assessments:* Do Now and Anticipatory Assignments

#### Formative Assessments:

• Class demonstration:

- Layout of Excel and describing a worksheet
- Entering Data and Using basic functions to create a worksheet.
- Formatting a worksheet
- Entering formulas and copying formulas (relative reference)
- Order of operations
- Different types of charts
- Steps for choosing a chart type; creating a chart, and naming the data
- Examples of conditional formatting.
- Class discussions:
  - Uses of Excel: Why use formulas? Determining what formula to use.
  - Order of operations: Why do we need to format data?
  - Different uses for different charts
  - Identifying uses of conditional formatting
- Guided practice and classwork:
  - Creating a basic worksheet
  - Formatting a worksheet
  - Creating a worksheet that utilizes simple formulas
  - Entering formulas with order of operations
  - Step-by-step practice formatting different types of data
  - Create an embedded chart for Sneaker Sales and NFL standings worksheet
  - Create "if statements" writing assignment
  - Practice worksheet to utilize conditional formatting
- Open-ended questions
- Unit wrap-up discussion

#### Summative Assessments:

- Quiz: Using formulas
- Quiz: Excel terms
- Quiz: Chart terms
- Q1/Q3 Exam / Midterm

## Performance Task(s):

- Creating and formatting a worksheet (NY Yankees Weekly Payroll).
- Creating and formatting a worksheet (Foot Locker Sneaker Sales)
- Creating a worksheet using formulas (iTunes MP3 profit worksheet)
- Monthly Budget worksheet
- Yellow Brick Road Ice Cream Shop worksheet w/ embedded chart
- Time management worksheet w/ embedded chart
- Stock worksheet

## Group Project(s):

- Creating a functional worksheet.
- Creating a unique worksheet utilizing data formats, conditional formatting, and a chart.

## Stage 3 - Learning Plan

## **Excel Writing Assignment**

**Task:** Answer the following questions in a Microsoft Word document. Please answer each question in a well thought out, complete paragraph. Proofread your answers before handing this assignment in.

- Q1. Microsoft Excel has 4 Major Functions.
  - Explain what each of the 4 Major Functions of Excel is used for.
  - Which of the 4 Major Functions do you think is most useful? Why?
- Q2. One of the nice features of Excel is that you can use functions and formulas to complete mathematical calculations in a worksheet.
  - How do functions and formulas make a worksheet more useful?
  - Explain what relative reference is and why it relates to using functions and formulas in a worksheet.
- Q3. We spent time in class learning how to format a worksheet properly.
  - What are some different adjustments that we make to a worksheet that are considered formatting?
  - How does formatting a worksheet make a worksheet easier to use and more functional?
- **Q4.** Ultimately, Excel is a very useful program in the workplace, but it can also be very useful in your personal life as well.
  - Explain how you could use Excel to keep track of your personal finances.
  - Which function of Excel would you be utilizing?

# **Excel Formulas Practice Worksheet Instructions**

- In cell A10 multiply cell A4 by cell B7
- In cell A11 multiply cell A7 by cell D3
- In cell A12 subtract cell C3 from cell B1
- In cell A13 add cell D4, B1, and A6
- In cell A14 divide cell C7 by cell D6
- In cell B10 add cell C1 to cell B3 and divide the total by cell A4
- In cell B11 subtract cell C1 from cell D3 and multiply the result by cell A3
- In cell B12 divide cell B5 by cell A2
- In cell B13 multiply cell B8 by cell D2
- In cell B14 divide cell C3 by cell B2 and multiply the result by cell D3

## "If Statement" Practice Worksheet

**Guidelines:** Write an "If Statement" that could be used to apply the conditional formats below. Be sure to write out the entire statement in the appropriate format.

**Example:** Highlight all numbers above 300 with bold white font and a blue background. If the cell value is greater than 300, apply a bold white font and blue background.

- 1. Highlight all totals above 147,000 red with white font
- 2. Highlight all monthly sales 240,000 and below with blue font and black background
- 3. Highlight all negative numbers with white font and red background
- 4. Highlight all numbers between 50 and 75 orange font with blue background
- 5. Highlight all percentages less than 65% with white font and a red background
- 6. Highlight all percentages higher than 75% with blue font and a black background
- 7. Highlight all October Sales 12,000 and above with white font and green background
- 8. Highlight all Amounts higher than 28 with bold red font and a yellow background

# <u>Time Management Excel Project</u>

**Purpose:** The purpose of this project is to help you analyze your time management skills by using Excel. You will not only demonstrate your understanding of Excel worksheets and charts, but you will also be able to analyze relevant data to find ways to make more time in your schedule for school work, a job, extracurricular activities, family, and friends.

# Instructions:

- Make a list of all the different things you do in a day
- Group this list by common themes (work, school, errands, exercise, etc.)
- Estimate how many hours you spend doing each type of activity in a 24 hour period (this should total up to 24 hours)
- Enter this information into an Excel worksheet
- Make sure that you format that worksheet so that it is easy to understand and analyze
- Create a chart using the data you have entered into the worksheet (you will probably want to use a Pie Chart)
- Analyze the chart and summarize your findings
  - What do you spend most of your time doing?
  - Could you cut back on one activity to make more time for more important things? Explain.
  - Do you think you use your time effectively? Explain.
  - Does viewing this breakdown in a worksheet and a chart make you realize anything? Explain.
- Create a poster to display your information. Poster must include:
  - A title
  - Printout of your worksheet and chart
  - Summary of your findings
  - Graphics or pictures
  - Make sure everything is big enough to see on the poster and be creative!
- Present your poster to the class

# **Open-Ended Question Review for Midterm Exam**

**Directions:** Please answer the following open-ended questions with detailed, well-thought out responses. The topics covered in these questions will appear on your midterm exam.

- 1. Microsoft Excel has 4 Major Functions.
  - a. Explain what each of the 4 Major Functions of Excel is used for.
  - b. Which of the 4 Major Functions do you think is most useful? Why?
- 2. One of the nice features of Excel is the ability to apply a conditional format.
  - a. Explain what conditional formatting is.
  - b. Give an example of an "If Statement" and explain what the statement means.
- 3. Applying data formats to a worksheet is an important step in creating a useful worksheet.
  - a. Explain what data formats are and give examples.
  - b. How does the process of applying data formats make a worksheet more useful?
- 4. One of the four major functions of Excel is Charts.
  - a. Explain how creating an embedded chart can make a worksheet more useful.
  - b. Give an example of how a business could use the chart function.
- 5. Excel allows users to enter mathematical formulas and functions into a worksheet to calculate data.
  - a. Explain how using formulas and functions in a worksheet can save you time and effort in the long-run.
- 6. Relative reference is a built-in tool that makes it possible for users to copy formulas and functions from one cell to another without having to edit the formula.
  - a. In your own words, explain what relative reference is.
  - b. How does relative reference make it possible to copy formulas in Excel?

Unit Plan Title	Unit 3: Access Database
Suggested Time Frame	9-10 days

#### **Overview / Rationale**

Students will learn how to input data into a Microsoft Access database. They will be introduced to the purpose, design, and creation of the database so they will better understand its application and business usage.

#### **Stage 1 – Desired Results**

#### Established Goals:

New Jersey Student Learning Standards for Computer Science and Design Thinking (2020)

#### 8.1 Computer Science by the End of Grade 12

8.1.12.NI.2: Evaluate security measures to address various common security threats.

8.1.12.NI.3: Explain how the needs of users and the sensitivity of data determine the level of security implemented.

8.1.12.IC.1: Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.

8.1.12.DA.5: Create data visualizations from large data sets to summarize, communicate, and support different interpretations of real-world phenomena.

## 8.2 Design Thinking by the End of Grade 12

8.2.12.ITH.3: Analyze the impact that globalization, social media, and access to open source technologies has had on innovation and on a society's economy, politics, and culture. 8.2.12.EC.1: Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made. • 8.2.12.EC.2: Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.

#### **Essential Questions:**

- What is a database?
- How do businesses use databases?

#### **Enduring Understandings:**

Students will understand that...

- Databases are used to store and organize information.
- Designing a database requires time and planning.

## Knowledge:

Students will know...

- Businesses use databases in a variety of ways, making Access a useful program in the real world.
- Databases are made up of tables that consist of fields and records.
- Each field must contain a unique identifier field in order to work as a database.
- Databases are used to store and organize information.
- Methods for designing a database.
- Procedures for creating a table and entering records in a database.
- Key terms and concepts related to using databases in Access.

## Skills:

Students will be able to ...

- Demonstrate an understanding of key terms and concepts related to using databases in Access.
- Describe the features and uses of Access.
- Design a database.
- Explain the design and make-up of a database.
- Create a table and add records.
- Navigate and edit records in a table.
- Modify field properties.

# **Interdisciplinary Connections**

## New Jersey Student Learning Standards for English Language Arts (2016)

NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

# **Standards for Mathematical Practices (2016)**

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

# New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills (2020)

# 9.1 Personal Financial Literacy by the End of Grade 12

## **Civic Financial Responsibility**

9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights.

# **Financial Institutions**

9.1.12.FI.1: Identify ways to protect yourself from identity theft

# **Financial Psychology**

9.1.12.FP.1: Create a clear long-term financial plan to ensure its alignment with your values.9.1.12.FP.2: Explain how an individual's financial values and goals may change across a lifetime and the adjustments to the personal financial plan that may be needed.

# **Planning and Budgeting**

9.1.12.PB.3: Design a personal budget that will help you reach your long-term and short-term financial goals.

9.1.12.PB.4: Explain how you would revise your budget to accommodate changing circumstances.

# 9.2 Career Awareness, Exploration, Preparation, and Training by the End of Grade 12

# **Career Awareness and Planning**

9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.

9.2.12.CAP.5: Assess and modify a personal plan to support current interests and postsecondary plans.

9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.

9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.

9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.

# 9.4 Life Literacies and Key Skills by the End of Grade 12

# **Creativity and Innovation**

9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities.

# **Critical Thinking and Problem-Solving**

9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).

9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).

# Digital Citizenship

9.4.12.DC.4: Explain the privacy concerns related to the collection of data (e.g., cookies) and generation of data through automated processes that may not be evident to users (e.g., 8.1.12.NI.3).

9.4.12.DC.6: Select information to post online that positively impacts personal image and future college and career opportunities.

# Information and Media Literacy

9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.

## **Technology Literacy**

9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.

## Career Ready Practices

- **CRP1.** Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- **CRP3.** Attend to personal health and financial well-being.
- **CRP4.** Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- **CRP6.** Demonstrate creativity and innovation.
- **CRP7.** Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- **CRP10.** Plan education and career paths aligned to personal goals.
- **CRP11.** Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

## **Student Resources**

## Technology:

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA <u>www.canva.com</u>

#### **Teacher Resources**

#### Websites:

• Career Clusters - Post Secondary Opportunities <u>www.careerclusters.org</u>

## Handouts:

- Access Projects 1-11 (text)
- Steps for Creating a Database in Access
- *iTunes* Database Project
- NCAA Database Fields
- ACCESS Short Answer Questions

## Stage 2 – Assessment Evidence

Pre-Assessments: Do Now and anticipatory assignments

#### Formative Assessments:

- Class discussion: Use of databases
- Class demonstration: Database design/layout
- Class activity: Primary key
- Closure activities and exit slips

## Summative Assessments:

- Group projects
- Midterm Exam

# Performance Task(s):

- Creating the Oakville Hills School database
- Creating the Downtown Art Market database
- **Group project:** Designing and creating the iTunes database and/or State information database.

## Stage 3 – Learning Plan

# **Steps for Creating a Database in Access**

- Open Access
- Double click the Blank Database Icon
- Give the database a name and choose where to save the database. This is done in the lower right hand of the opening page
- Click Create. This will open a new table for you to begin the design/layout process
- Click the Design View button in the lower right hand corner of the window. You can also choose a design view from the View button in the upper left corner.
- Define the field properties for each field. Enter the *Field Names*, *Data Types*, a *Description* of each field, and make any adjustments to the properties such as field size or whether or not the field is required
- Close the table design. Save the table and give it a descriptive name if you have not done so already.
- Double click the table name in the taskbar on the left side to open it.

- You are now ready to enter your records. Be sure to take your time and enter your data correctly
- Make necessary adjustments to column width and formatting so the data is easy to view
- To create multiple tables, repeat the steps above as necessary

#### Access Short Answer Questions:

Be sure to answer each question completely and use complete sentences.

- 1. What kind of program is Microsoft Access? Give an example of how a business could use Access.
- 2. Describe the basic setup of a database. Explain how tables, records, and fields make-up a database. Be sure to describe the relationship between records and fields.
- 3. What is a primary key? Why is it necessary to have a primary key for each table of information of your database?

## iTunes Database Project:

Please read all of the instructions carefully before beginning.

- Create the database in Microsoft Access and name it i*Tunes*.
- Create the table in the design view using the information in the chart below.
- Save the table design as *Songs*. Do not forget to assign the song ID# as your primary key.
- Enter 40 records into the database. You will need information about 40 songs.
- Use the internet to find necessary information to make this database as accurate as possible. This means:
  - You should look up the release date, album, and label.
  - You can make up the price, but please vary the pricing information since not all songs cost the same amount to download on *iTunes*.

Field Name	Data Type	Field Size	Required?
Song ID#	Text	5	Yes
Song Title	Text	40	Yes
Artist	Text	30	Yes
Album	Text	40	No
Genre	Text	15	No
Release Year	Text	4	No
Label	Text	30	No
Price	Currency	N/A	Yes

## iTunes Database Fields:

# NCAA Database Fields:

Field Name	Data Type	Field Size	Required?
Player Name	Number	N/A	Yes
Last Name	Text	255	Yes
First Name	Text	255	No
Position	Text	5	Yes
Height	Text	5	No
Weight	Number	N/A	No
Class	Text	4	Yes
Home State	Text	2	Yes

Unit Plan Title	Unit 4: Publisher
Suggested Time Frame	3 weeks

#### **Overview / Rationale**

Students will learn the importance of creating flyers, invitations and brochures for various career and educational purposes. Students will understand that the use of this type of program can save businesses money on advertising and allow for professional creativity.

#### **Stage 1 – Desired Results**

#### **Established Goals:**

#### New Jersey Student Learning Standards for Computer Science and Design Thinking (2020) <u>8.1 Computer Science by the End of Grade 12</u>

8.1.12.NI.2: Evaluate security measures to address various common security threats.

8.1.12.NI.3: Explain how the needs of users and the sensitivity of data determine the level of security implemented.

8.1.12.IC.1: Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.

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## 8.2 Design Thinking by the End of Grade 12

8.2.12.ITH.3: Analyze the impact that globalization, social media, and access to open source technologies has had on innovation and on a society's economy, politics, and culture. 8.2.12.EC.1: Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made. • 8.2.12.EC.2: Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.

#### **Essential Questions:**

- How can *Publisher* save businesses time and money?
- What makes a print publication effective?

## **Enduring Understandings:**

Students will understand that ...

- Businesses use *Publisher* in a variety of ways to save both time and money.
- Publisher is a user-friendly program which has many uses for one's personal life.

#### Knowledge:

Students will know ...

• The variety of ways businesses use Publisher to save time and money.

- Ways to use Publisher for career and educational purposes.
- The design process for creating print publications.
- The elements of a flyer.
- The elements of an invitation/card.
- The elements of a brochure.
- Key terms and concepts related to creating print publications in Publisher.

## Skills:

Students will be able to ...

- Demonstrate an understanding of key terms related to print publications using Publisher.
- Describe the features and uses of Publisher.
- Enter and format text in Publisher.
- Insert graphics in a Publisher document.
- Explain how text-fitting works in Publisher.
- Design and develop a full-page publication in Publisher.
- Design and develop an invitation and brochure in Publisher.

# Interdisciplinary Connections

## New Jersey Student Learning Standards for English Language Arts (2016)

NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

## Standards for Mathematical Practices (2016)

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

# New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills (2020)

# 9.1 Personal Financial Literacy by the End of Grade 12

# **Civic Financial Responsibility**

9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights.

# **Financial Institutions**

9.1.12.FI.1: Identify ways to protect yourself from identity theft

# **Financial Psychology**

9.1.12.FP.1: Create a clear long-term financial plan to ensure its alignment with your values.

9.1.12.FP.2: Explain how an individual's financial values and goals may change across a lifetime and the adjustments to the personal financial plan that may be needed.

# Planning and Budgeting

9.1.12.PB.3: Design a personal budget that will help you reach your long-term and short-term financial goals.

9.1.12.PB.4: Explain how you would revise your budget to accommodate changing circumstances.

# 9.2 Career Awareness, Exploration, Preparation, and Training by the End of Grade 12

# **Career Awareness and Planning**

9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.

9.2.12.CAP.5: Assess and modify a personal plan to support current interests and postsecondary plans.

9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.

9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.

9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.

# 9.4 Life Literacies and Key Skills by the End of Grade 12

# **Creativity and Innovation**

9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities.

# **Critical Thinking and Problem-Solving**

9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).

9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).

# **Digital Citizenship**

9.4.12.DC.4: Explain the privacy concerns related to the collection of data (e.g., cookies) and generation of data through automated processes that may not be evident to users (e.g., 8.1.12.NI.3).

9.4.12.DC.6: Select information to post online that positively impacts personal image and future college and career opportunities.

## Information and Media Literacy

9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.

## **Technology Literacy**

9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.

## **Career Ready Practices**

- **CRP1.** Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- **CRP4.** Communicate clearly and effectively and with reason.
- CRP5. Consider the environmental, social and economic impacts of decisions.
- **CRP6.** Demonstrate creativity and innovation.
- **CRP7.** Employ valid and reliable research strategies.
- **CRP8.** Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- **CRP10.** Plan education and career paths aligned to personal goals.
- **CRP11.** Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

## **Student Resources**

## **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA www.canva.com

## Teacher Resources

Websites:

Career Clusters - Post Secondary Opportunities <u>www.careerclusters.org</u>

## Handouts:

#### **Student Resources**

#### **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA www.canva.com
- Guidelines for Flyer Project
- Invitation Project
- Travel Brochure Project

#### Stage 2 – Assessment Evidence

Pre-Assessments: Do Now and Anticipatory Assignments

#### Formative Assessments:

- Class discussion:
  - How businesses use Publisher
  - Design process of a print publication
  - Elements of an invitation/card
  - Elements of a brochure and uses of brochures
- Class activity:
  - Creating a flyer step-by-step
  - Critique sales flyers
  - Create a practice brochure
- Publisher quiz
- Closure activities and exit slips

#### Summative Assessments:

• Group projects

#### Performance Task(s):

- Create a flyer for a rental property.
- Create a sales flyer.
- Create an invitation/event card.
- Create a travel brochure.
- Info Age Design Contest
## Stage 3 – Learning Plan

## **Travel Brochure Project**

Students will design and create an informational travel brochure for a destination of their choice. The brochure must be designed and created adhering to the design process of a print publication as covered in class. They must include necessary information included below to make the brochure informational and persuasive.

## Steps:

- Choose a destination (MUST BE OUTSIDE OF THE U.S.).
- Research the destination to gather information for your brochure.
- Layout the brochure using the provided template.
- Create the broch.ue using Publisher.
- Proofread, check for design flaws, get feedback from another person.
- Revise and edit.
- Complete final brochure

## **Guidelines:**

- You must use a tri-fold (6 panel) brochure template to begin
- All 6 panels must be used in your brochure
- Information that must be included:
  - Location of Destination
  - Activities available
  - Key attractions or sites to see
  - Local area hotels, restaurants, and other accommodations
  - Reasons to vacation at the location
  - Pictures of the destination
  - Information for booking a vacation
- Feel free to include any other information that you think adds to the appearance and effectiveness of the brochure

## **Grading Criteria:**

- Your flyer will be graded based on the following criteria.
- Use of template
- Use of appropriate graphic
- Inclusion of necessary information
- Quality of work (design and layout)
- Quality of work (spelling and grammar errors)
- Creativity

# **Guidelines for Flyer Project**

The sales flyer project will allow you to demonstrate your knowledge of Microsoft Publisher. I encourage you to be creative and step outside of your comfort zone as you design this project. Please adhere to the guidelines below in order to receive full credit for this project.

- You must use a template to begin your design. This includes choosing a color scheme and font scheme,
- Your flyer must include use of an appropriate graphic. This can be clipart or you can use a picture that you find online.
- Your flyer must include a heading.
- Your flyer must include contact information.
- Your flyer must include detail lines:
  - $\circ$  This is more detailed information to tell your audience what the flyer is for.
  - Example: a bullet list of key features of a car you are trying to sell.
- Your flyer must be designed to look neat in appearance and be free of design flaws, including aligning graphics and text.
- There should be NO spelling or grammar errors; capitalization and punctuation.
- Your flyer should show a sense of creativity and be attractive to the eye.
- Have fun....
  - Play around with the utilities in Publisher.
  - Do something you haven't done before.
  - Ask your friends for their opinion on your design.
  - Look for ideas online; don't just make the first thing that comes to mind!

Grading Criteria: Your flyer will be graded based on the following criteria:

- Use of template
- Use of appropriate graphic
- Inclusion of contact information
- Inclusion of detail lines
- Quality of work:
  - Design and layout
  - Spelling and grammar
- Creativity

# **Invitation Project Guidelines**

The objective of this project is for students to design and produce an event invitation using Microsoft Publisher. Please be creative, adhere to the guidelines listed below, and reference the rubric to make sure your invitation meets all requirements to earn full credit.

- Use a template that is a multipage invitation. This can be found under invitation card templates. Be sure the template makes sense!
- Include a graphic that is related to your project.
- Include details about the event:
  - What is the event for?
  - Why should they attend?
  - What will the event offer?
  - What is the cost to attend?
  - Is there anything guests should bring?
- Include contact information for RSVP:
  - Contact name
  - $\circ$  Phone number
  - E-mail
  - Date RSVP is required by
- Include details about the event:
  - Time
  - Date
  - $\circ$  Location
- Include information about the location:
  - Directions or landmarks
  - Contact information for the location of the event
- Signature Identify who is hosting the event; an individual or a company?

Unit Plan Title	Unit 5: Technology in Society
Suggested Time Frame	2 weeks

#### **Overview / Rationale**

Students will learn how to apply life skills to address cyberbullying and understand the consequences if they participate in it. Students will learn how to safely navigate social networking sites while keeping their personal information secure.

#### **Stage 1 – Desired Results**

#### Established Goals:

New Jersey Student Learning Standards for Computer Science and Design Thinking (2020)

## **<u>8.1 Computer Science by the End of Grade 12</u>**

8.1.12.NI.2: Evaluate security measures to address various common security threats.

8.1.12.NI.3: Explain how the needs of users and the sensitivity of data determine the level of security implemented.

8.1.12.IC.1: Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.

8.1.12.DA.5: Create data visualizations from large data sets to summarize, communicate, and support different interpretations of real-world phenomena.

## 8.2 Design Thinking by the End of Grade 12

8.2.12.ITH.3: Analyze the impact that globalization, social media, and access to open source technologies has had on innovation and on a society's economy, politics, and culture. 8.2.12.EC.1: Analyze controversial technological issues and determine the degree to which individuals, businesses, and governments have an ethical role in decisions that are made. • 8.2.12.EC.2: Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have responded.

#### **Essential Questions:**

- Why is cyberbullying a bigger issue than regular bullying?
- What are the pros and cons of using social networking sites?

#### **Enduring Understandings:**

Students will understand that...

- Cyber bullying is a growing concern in today's society.
- Social networking sites have their benefits, but must be used with caution.

## **Knowledge:**

Students will know...

- Participation in cyberbullying can have serious consequences, including criminal charges.
- Methods to address a cyber bullying situation.
- The benefits and dangers of social networking sites.
- How to navigate a social networking site safely.
- How social networking sites use personal information.
- College admissions and potential employers often check social networking sites to learn about candidates.

## Skills:

Students will be able to ...

- Explain what cyberbullying is.
- Explain the impact cyberbullying can have on the victim.
- Explain different ways a victim can address a cyber bullying situation.
- Explain why social networking sites must be used with caution.
- Explain how personal information is used by social networking sites.
- Explain how the use of social networking sites could have a negative impact on one's future.
- Evaluate the ways technology impacts their life.

# **Interdisciplinary Connections**

# New Jersey Student Learning Standards for English Language Arts (2016)

NJSLSA.W2. Write informative/explanatory texts to examine and convey complex ideas and information clearly and accurately through the effective selection, organization, and analysis of content.

NJSLSA.W4. Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience

NJSLSA.W7. Conduct short as well as more sustained research projects, utilizing an inquiry-based research process, based on focused questions, demonstrating understanding of the subject under investigation.

NJSLSA.W8. Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.

# **Standards for Mathematical Practices (2016)**

- 1. Make sense of problems and persevere in solving them.
- 2. Reason abstractly and quantitatively.
- 3. Construct viable arguments and critique the reasoning of others.
- 4. Model with mathematics.
- 5. Use appropriate tools strategically.
- 6. Attend to precision.
- 7. Look for and make use of structure.
- 8. Look for and express regularity in repeated reasoning.

# New Jersey Student Learning Standards for Career Readiness, Life Literacies, and Key Skills (2020)

# 9.1 Personal Financial Literacy by the End of Grade 12

# **Civic Financial Responsibility**

9.1.12.CFR.3: Research companies with corporate governance policies supporting the common good and human rights.

# **Financial Institutions**

9.1.12.FI.1: Identify ways to protect yourself from identity theft

# **Financial Psychology**

9.1.12.FP.1: Create a clear long-term financial plan to ensure its alignment with your values.9.1.12.FP.2: Explain how an individual's financial values and goals may change across a lifetime and the adjustments to the personal financial plan that may be needed.

# **Planning and Budgeting**

9.1.12.PB.3: Design a personal budget that will help you reach your long-term and short-term financial goals.

9.1.12.PB.4: Explain how you would revise your budget to accommodate changing circumstances.

# 9.2 Career Awareness, Exploration, Preparation, and Training by the End of Grade 12

# **Career Awareness and Planning**

9.2.12.CAP.3: Investigate how continuing education contributes to one's career and personal growth.

9.2.12.CAP.5: Assess and modify a personal plan to support current interests and postsecondary plans.

9.2.12.CAP.6: Identify transferable skills in career choices and design alternative career plans based on those skills.

9.2.12.CAP.7: Use online resources to examine licensing, certification, and credentialing requirements at the local, state, and national levels to maintain compliance with industry requirements in areas of career interest.

9.2.12.CAP.8: Determine job entrance criteria (e.g., education credentials, math/writing/reading comprehension tests, drug tests) used by employers in various industry sectors.

# 9.4 Life Literacies and Key Skills by the End of Grade 12

# **Creativity and Innovation**

9.4.12.CI.2: Identify career pathways that highlight personal talents, skills, and abilities.

# **Critical Thinking and Problem-Solving**

9.4.12.CT.1: Identify problem-solving strategies used in the development of an innovative product or practice (e.g., 1.1.12acc.C1b, 2.2.12.PF.3).

9.4.12.CT.2: Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).

# **Digital Citizenship**

9.4.12.DC.4: Explain the privacy concerns related to the collection of data (e.g., cookies) and generation of data through automated processes that may not be evident to users (e.g., 8.1.12.NI.3).

9.4.12.DC.6: Select information to post online that positively impacts personal image and future college and career opportunities.

# Information and Media Literacy

9.4.12.IML.2: Evaluate digital sources for timeliness, accuracy, perspective, credibility of the source, and relevance of information, in media, data, or other resources (e.g., NJSLSA.W8, Social Studies Practice: Gathering and Evaluating Sources.

# **Technology Literacy**

9.4.12.TL.2: Generate data using formula-based calculations in a spreadsheet and draw conclusions about the data.

# **Career Ready Practices**

- **CRP1.** Act as a responsible and contributing citizen and employee.
- CRP2. Apply appropriate academic and technical skills.
- CRP3. Attend to personal health and financial well-being.
- **CRP4.** Communicate clearly and effectively and with reason.
- **CRP5.** Consider the environmental, social and economic impacts of decisions.
- **CRP6.** Demonstrate creativity and innovation.
- **CRP7.** Employ valid and reliable research strategies.
- CRP8. Utilize critical thinking to make sense of problems and persevere in solving them.
- CRP9. Model integrity, ethical leadership and effective management.
- CRP10. Plan education and career paths aligned to personal goals.
- **CRP11.** Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

# **Student Resources**

# **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA <u>www.canva.com</u>

# **Teacher Resources**

#### **Student Resources**

#### **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- CANVA <u>www.canva.com</u>

#### Websites:

Career Clusters - Post Secondary Opportunities <u>www.careerclusters.org</u>

#### Handouts:

- Social Networking Sites Project
- Cyber Bullying Writing Assignment
- Cyber Bullying Awareness Plan
- Online Predator Case Analysis

## Stage 2 – Assessment Evidence

#### **Pre-Assessments:**

- Do Now and anticipatory assignments
- Peer- and/or self-assessments.

#### Formative Assessments:

- Social Networking Sites Project Guidelines
- Create a letter in response to a cyberbullying issue.
- Closure activities and exit slips

## Summative Assessments:

- Online Safety Activity: Cyberbullying Awareness Plan
- Online Safety Activity: Identify and Analyze an Online Predator Case
- Q1/Q3 Midterm Exam

## **Performance** Task(s):

- Create an awareness poster about cyber bullying
- Awareness project on social networking sites

## Stage 3 – Learning Plan

# Social Networking Sites Project Guidelines

Please follow the guidelines below when completing this project. The objective of this project is to demonstrate an understanding of the benefits and risks of using social networking sites such as *Facebook, Instagram, Snapchat, TikTok,* and *Twitter.* 

#### **Guidelines:**

• You may work alone, or in groups of up to 4 people.

- You can choice to demonstrate your understanding of the benefits and risks of using Social Network sites by doing any one of the following:
  - Create a Consumer Awareness Poster
  - Create a Public Service Television Commercial (these will be acted out in class unless you wish to record them on video outside of school)
  - Write a song or rap that details the necessary information. This will be performed in front of class and the teacher will also need a written copy in advance.
  - Write a letter to the school principal explaining the importance of telling all students about this information (only if you are working alone).
  - Draw a cartoon that depicts the information (this will be accompanied by a brief written explanation).
  - Note: If you come up with another idea, discuss it with your teacher before beginning.

# **Topics To Address:**

- What are social networking sites?
- Why are social networking sites good? Give both facts and opinions.
- What risks do you take by using social networking sites? Provide examples.
- How can you protect yourself from some of the risks when using social networking sites?
- Overall Opinion: What are the advantages and disadvantages of social networking site? Support your opinion with evidence.

# Cyber Bullying Writing Assignment

Please answer the following questions in a Microsoft Word document. You can use the internet to look up the necessary information. Be prepared to share your answers with the class.

- 1. In your own words, what is cyber bullying? Give an example.
- 2. Have you ever been a victim of cyberbullying? Explain that situation.
- 3. Do you know someone who was ever victimized somebody through cyber bullying? Explain the situation. (Be Honest!! This could be something as simple as posting a mean comment on somebody's Facebook wall).
- 4. What evidence is there that cyberbullying is a societal problem?
- 5. Do you think that schools should have to educate students about cyber bullying? If so, at what age and through what methods?
- 6. Do you think that laws should be put in place to deter cyber bullying in our society? Explain.
- 7. Go Online and find one incident of cyber bullying that has been brought to court. Summarize this incident.

# Cyberbullying Awareness Plan

Develop a plan to address cyberbullying in Neptune High School. Follow the guidelines below.

Guidelines - Your cyberbullying plan should address the following:

1. How will you educate students on cyber bullying?

- 2. When will you educate students on cyber bullying?
- 3. Who will have to attend?
- 4. What do you plan to do to make students take cyberbullying more seriously?
- 5. Who will present the information?
- 6. What protocol will you have in place for handling cyber bullying in the school?
- 7. What consequences should there be for cyber bullying another student?
- 8. What will you do to reinforce the information throughout the year?

When you have finished laying out your awareness plan, complete the following:

- Explain why you think it is important for schools to educate students on cyber bullying.
- Do you think cyberbullying is a major issue in our school? Explain.
- Do you think our school does enough to address the issue of cyber bullying? Explain.

# Identify and Analyze an Online Predator Case

Work with another student to locate a case involving an online predator. Once you have located the case, read the details and answer the questions below. Discuss the questions with your partner as you analyze the case

- 1. When and where did this event occur?
- 2. How old was the victim in this case?
- 3. How did the predator in this case use the internet to find his/her victim?
- 4. What could the victim in this case have done differently to protect themselves from the predator?
- 5. Give a brief summary of the events of this case in the space below.

Unit Plan Title	Unit 6: PowerPoint
Suggested Time Frame	3 weeks

#### **Overview / Rationale**

Students will learn how to create high-quality PowerPoint presentations that incorporate design skills such as media links, formatting, and basic design principles. Students will learn how to properly present their formal creations using presentation etiquette .

#### **Stage 1 – Desired Results**

#### Established Goals:

New Jersey Student Learning Standards for Computer Science and Design Thinking (2020)

## 8.1 Computer Science by the End of Grade 12

8.1.12.NI.2: Evaluate security measures to address various common security threats.

8.1.12.NI.3: Explain how the needs of users and the sensitivity of data determine the level of security implemented.

8.1.12.IC.1: Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

8.1.12.DA.1: Create interactive data visualizations using software tools to help others better understand real world phenomena, including climate change.

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8.2.12.EC.2: Assess the positive and negative impacts of emerging technologies on developing countries and evaluate how individuals, non-profit organizations, and governments have

responded.

## **Essential Questions:**

- Why are presentation skills important in the business world?
- What is PowerPoint?
- Why is it important to follow the basic design principles when creating a PowerPoint presentation?

## Enduring Understandings:

Students will understand that...

- Presentation skills are important in the business world and in one's personal life.
- Media and other tools can be used to enhance a presentation.

## **Knowledge:**

Students will know ...

- Presentation skills can be used in completing personal projects.
- The features and uses of PowerPoint.
- The variety of ways and importance of using PowerPoint in business.
- Design principles to follow when creating a PowerPoint presentation.
- Proper etiquette for giving a presentation.
- Ways to enhance presentations using media and hyperlinks.

## Skills:

Students will be able to...

- Describe the features and uses of PowerPoint.
- Design and create a presentation that adheres to the basic design principles of PowerPoint.
- Create a PowerPoint presentation that utilizes bulleted lists, slide transitions, and media.
- Insert hyperlinks in a PowerPoint presentation.
- Design and deliver in a formative presentation using PowerPoint.
- Print a PowerPoint presentation in different formats.
- Use proper presentation etiquette while giving a formal presentation.

## **Interdisciplinary Connections**

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- CRP9. Model integrity, ethical leadership and effective management.
- **CRP10.** Plan education and career paths aligned to personal goals.
- **CRP11.** Use technology to enhance productivity.
- CRP12. Work productively in teams while using cultural global competence.

#### **Student Resources**

#### **Technology:**

- Microsoft Platform: Word, Excel, PowerPoint, Access, Publisher
- Google Slides
- CANVA <u>www.canva.com</u>

#### **PowerPoint Design Principles to Keep In Mind**

- Bulleted Lists:
  - Only use them for key points.
  - Don't put too much text on a single slide.
- Color Schemes: Pick one that is easy to view and not harsh on the eyes.
- Backgrounds: Keep it consistent and not too busy.
- Font Choice: Make it easy to read; font style and size matter!
- Animation: Don't overdo it!
- Media: Make sure it's appropriate.

## **Teacher Resources**

#### Websites:

• Career Clusters - Post Secondary Opportunities <u>www.careerclusters.org</u>

#### Handouts:

- Design Principles to Keep in Mind
- Family Heritage Project
- My Idol Project
- Favorite hobby/sport presentation
- PowerPoint Critique Points

#### **Stage 2 – Assessment Evidence**

#### **Pre-Assessments:**

- Do Now and anticipatory assignments
- Peer- and/or self-assessments.

#### Formative Assessments:

- Class discussions:
  - How Businesses Use PowerPoint.
  - What Makes a Good Presentation?
- Video: What Not to Do in a PowerPoint. Student-created practice PowerPoint.
- Selected presentations by students with critiques.
- Homework
- Closure activities and exit slips

#### Summative Assessments:

- Group projects
- Final Exam

**Performance** Task(s):

- Create a PowerPoint presentation about your favorite hobby or sport.
- Create a PowerPoint presentation about your heritage.
- Create a PowerPoint presentation about your idol.
- Final student presentations

# Stage 3 – Learning Plan

# **Favorite Hobby or Sport Project**

Your presentation must be a minimum of 8 slides and include the following information:

- What is your favorite sport or hobby?
- Why is it your favorite sport or hobby?
- How long have you enjoyed this sport or hobby?
- Why should other people consider trying this sport or hobby?
- Any other information you think is important to share with your audience.

# <u>My Heritage Project</u>

•

Your presentation must be a minimum of 6 slides and include the following information:

- Where is your family originally from?
  - Ethnic background
  - Location
  - Do you know when and how your family first came to America?
- Information about your cultural background:
  - $\circ$  Food
  - Activities
  - Traditions
  - $\circ$   $\,$  Any other information you find interesting
  - How will you find this information?
    - Interview family members
    - Research online
    - Use the library

# <u>My Idol Project</u>

Your presentation must be a minimum of 6 slides and include the following information:

- Who is your personal idol/hero?
- Why is this person your idol/hero?
- A brief biography about this person
- When you choose your idol, you will submit an explanation as to why you chose them and your choice will be approved before starting the project.

**Project Grading**: Your presentation will be graded on the following:

- Use of PowerPoint
- Inclusion of animation schemes
- Inclusion of media
- Use of hyperlinks
- Inclusion of required information (including minimum number of slides)
- Organization and presentation
- Creativity

Peer Project Grading: Your presentation will be graded on the following:

- Design of PowerPoint
  - Use of text
  - Color schemes
  - Fonts
  - Backgrounds
  - Use of media
  - Use of animation
- Content and Organization
  - Was there enough information in the presentation?
  - Was the presentation informative?
  - Was the information organized in a way that flowed well?
- Presentation
  - Efficacy of the presentation
  - Did they follow presentation etiquette? i.e. eye contact, good posture, reading off the presentation, tone of voice, enthusiasm.
- Wildcard: You can comment on any of the above topics

## **Guidelines for Projects:**

- Must meet requirement for minimum number of slides
- Must include use of animation schemes
- Must include use of media; clipart, pictures from files, sounds or video
- Must make use of hyperlinks; link between slides, to websites, to a documents
- Must adhere to design concepts

## Accommodations and Modifications:

Below please find a list of suggestions for accommodations and modifications to meet the diverse needs of our students. Teachers should consider this a resource and understand that they are not limited to the recommendations included below.

An accommodation changes HOW a student learns; the change needed does not alter the grade-level standard. A modification changes WHAT a student learns; the change alters the grade-level expectation.

## **Special Education and 504 Plans**

All modifications and accommodations must be specific to each individual child's IEP (Individualized Educational Plan) or 504 Plan.

- Provide redirection
- Provide notes and copies of handouts with
- Have student highlight rules in notes
- Pre-teach or preview vocabulary
- Have students repeat directions
- Pair visual prompts with verbal presentations
- Ask students to restate information, directions, and assignments
- Model skills/techniques to be mastered
- Provide a copy of class notes
- Emphasize key words or critical information by highlighting
- Use of graphic organizers
- Teachers should note any issue that may impact safety- ex. contact lenses, allergies.

## **English Language Learners:**

All modifications and accommodations should be specific to each individual child's LEP level as determined by the WIDA screening or ACCESS, utilizing the WIDA Can Do Descriptors.

- Pre-teach or preview vocabulary
- Repeat or reword directions
- Have students repeat directions
- Use of small group instruction
- Scaffold language based on their Can Do Descriptors
- Alter materials and requirements according to Can Do Descriptors
- OpenSci Ed -All Student Handouts for Lesson 1 to 8 (Spanish Version)

#### **Students at Risk of Failure:**

- Use of self-assessment rubrics for check-in
- Pair visual prompts with verbal presentations
- Ask students to restate information and/or directions
- Opportunity for repetition and additional practice
- Model skills/techniques to be mastered
- Extended time
- Provide copy of class notes
- Strategic seating with a purpose

- Provide students opportunity to make corrections and/or explain their answers
- Support organizational skills

#### **High Achieving - Extension Activities:**

- Allow for student choice from a menu of differentiated outcomes; choices grouped by complexity of thinking skills; variety of options enable students to work in the mode that most interests them.
- Allow students to pursue independent projects based on their individual interests
- Provide enrichment activities that include more complex material
- Allow opportunities for peer collaboration and team-teaching
- Set individual goals.
- Conduct research and provide presentations of appropriate topics

## **COMPUTER APPLICATIONS I**

# PACING GUIDE

UNIT and TOPIC	# of WEEKS
Unit 1 - Exploring Microsoft Programs	1
Unit 2 - Excel Spreadsheets	6
Unit 3 - Access Database	2
Unit 4 - Publisher	3
Unit 5 - Technology in Society	3
Unit 6- PowerPoint	3
Final Exam & Review	1

NEPTUNE TOWNSHIP SCHOOL DISTRICT Office of the Superintendent 60 Neptune Blvd. Neptune, NJ 07753

An Affirmative Action Equal Opportunity Employer

2022