

# **Unit 3: Computer Applications - Excel - Powerpoint & Access**

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Length: **27 Days**  
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**Unit 3, Spreadsheets, Presentation Software and Introduction to Database**

**Department of Curriculum and Instruction**



**Belleville Public Schools**

**Curriculum Guide**

## **Unit 3 -Computer Applications**

## **Spreadsheets, Presentation Software and Database**

**Belleville Board of Education**

**56 Ralph Street**

**Belleville, NJ 07109**

**Prepared by:** Teacher, Corey Woodring

Dr. Richard Tomko, Ph.D., M.J., Superintendent of Schools

Ms. LucyAnn Demikoff, Director of Curriculum and Instruction K-12

Ms. Nicole Shanklin, Director of Elementary Education K-8

Mr. Joseph Lepo, Director of Secondary Education

Board Approved:

## **Unit Overview**

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Students should be asking, What is Microsoft Excel and What would I Use it for?

Here is the overview

Excel is an Electronic Spreadsheet Program.

An electronic spreadsheet is a computer software program that is used for storing, organizing and manipulating [data](#).

Electronic spreadsheet programs were originally based on paper spreadsheets used for accounting. As such, the basic layout of computerized spreadsheets is the same as the paper ones.

Related data is stored in tables - which are a collection of small rectangular boxes or [cells](#) organized into rows and columns.

Current versions of Excel and other spreadsheet programs can store multiple spreadsheet pages in a single computer file.

The saved computer file is often referred to as a [workbook](#) and each page in the workbook is a separate [worksheet](#).

Additionally -What is Microsoft PowerPoint? - How Do I Use PowerPoint?

PowerPoint is [a presentation software program](#) that is part of the [Microsoft Office](#) package.

PowerPoint uses a [graphical approach](#) to presentations in the form of [slide shows](#) that accompany the oral delivery of the topic. This program is widely used in [business](#) and [classrooms](#) and is an effective tool when used for training purposes.

PowerPoint is one of the simplest computer programs to learn. It is the **number 1** program used worldwide for presentations. Anyone can create stunning presentations that look like they were designed by a professional.

## **Enduring Understanding**

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Enduring Understandings for this section:

- MS Excel is a tool used to communicate data in an organized format in a variety of personal and professional situations.
- Data can be calculated, sorted and analyzed using MS Excel.
- MS PowerPoint can be an effective communication tool when used properly.
- MS PowerPoint is used as an enhancement for an oral presentation in professional situations.
- MS Applications are effective vehicles for communicating information for both personal and professional uses.
- MS Applications can enhance communications.
- Principles of Design must be considered in the creation of documents, spreadsheets, presentations and databases.

## **Essential Questions**

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ESSENTIAL QUESTIONS:

- 1.Can you explain what a spreadsheet is?
- 2.Can you identify the spreadsheet components in Microsoft Excel?
- 3.Can you navigate through a spreadsheet?
- 4.Can you explain the difference between a Label and a Value, and Formula and Formatting?
- 5.Can you enter data into a spreadsheet and create and align columns?

WHAT ARE YOU LEARNING TODAY?

I am learning how to properly navigate and enter data in a spreadsheet.

WHY DO YOU THINK THIS IS IMPORTANT?

This is important so that I may learn to use spreadsheets.

Spreadsheets are a very useful tool for “What If” analysis, and learning the proper usage and capabilities of spreadsheets will benefit me in the future, whether it is in my education or business life.

## **Exit Skills**

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Skills that the students should have obtained by the end of this unit are:

### **Modifying an Excel worksheet. Performance will be satisfactory when:**

- o learner opens and edits an Excel worksheet.
- o learner inserts and deletes rows and columns in worksheet.
- o learner changes worksheet settings including margins, page orientation, page alignment, etc.
- o learner creates headers and footers for the worksheet.
- o learner adjusts column width and row height.
- o learner renames worksheet tabs.
- o learner copies and pastes cell contents.

Applying Formats to an Excel worksheet. Performance will be satisfactory when:

- o learner clears cell contents and formats.
- o learner formats text for alignment.
- o learner formats numbers in a cell.
- o learner formats cells in a worksheet including borders, color, etc.
- o learner uses Format Painter.
- o learner applies conditional formatting
- o learner applies text styles including bold, font size, and color.
- o learner centers cell entries across columns.

Create formulas and identify function arguments. Performance will be satisfactory when:

- o learner identifies the function arguments and enters function into the worksheet.
- o learner uses different types of formula functions such SUM, AVERAGE, MAX, and MIN.
- o learner enters formulas using the “point and click” method.
- o learner uses AutoFill.
- o learner applies proper relative and absolute cell references in formulas.
- o learner uses the IF function to perform a logical test.
- o learner uses the DATE function to perform a logical test [i.e. =NOW(), =TODAY()].

Create charts based on Excel worksheet data. Performance will be satisfactory when:

- o learner distinguishes between the different types of charts.
- o learner distinguishes between a chart embedded in a worksheet and one in a separate chart sheet.
- o learner creates charts with the Chart Wizard.
- o learner enhances charts with additional tools.

### **Create a PowerPoint Presentation. Performance will be satisfactory when:**

- o learner identifies parts of the PowerPoint window.
- o learner creates, views, and edits a PowerPoint presentation.
- o learner formats a presentation including changing fonts, applying styles and bullets.
- o learner inserts and formats pictures and shapes.

- o learner inserts and formats tables.
- o learner inserts and formats charts.
- o learner applies slide transitions.
- o learner uses animation schemes.
- o learner sets effect and timing options.
- o learner prints PowerPoint slides, handouts, notes, outline.

## **New Jersey Student Learning Standards (NJSL-S)**

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CS.9-12.8.1.12.CS.1	Describe ways in which integrated systems hide underlying implementation details to simplify user experiences.
CS.9-12.8.1.12.CS.2	Model interactions between application software, system software, and hardware.
CS.9-12.8.1.12.CS.3	Compare the functions of application software, system software, and hardware.
CS.9-12.CS	Computing Systems
TECH.9.4.12.CI	Creativity and Innovation
TECH.9.4.12.CI.1	Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
TECH.9.4.12.CI.2	Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
TECH.9.4.12.CI.3	Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
TECH.9.4.12.CT	Critical Thinking and Problem-solving
TECH.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).
TECH.9.4.12.CT.2	Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
TECH.9.4.12.CT.3	Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).
TECH.9.4.12.CT.4	Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.

## **Interdisciplinary Connections**

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## Key Ideas and Details

LA.RL.11-12.1	Cite strong and thorough textual evidence and make relevant connections to support analysis of what the text says explicitly as well as inferences drawn from the text, including determining where the text leaves matters uncertain.
LA.RL.11-12.2	Determine two or more themes or central ideas of a text and analyze their development over the course of the text, including how they interact and build on one another to produce a complex account; provide an objective summary of the text.
LA.RL.11-12.3	Analyze the impact of the author's choices regarding how to develop and relate elements of a story or drama (e.g., where a story is set, how the action is ordered, how the characters are introduced and developed).
LA.SL.11-12.1	Initiate and participate effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with peers on grades 11–12 topics, texts, and issues, building on others' ideas and expressing their own clearly and persuasively.
LA.SL.11-12.1.A	Come to discussions prepared, having read and researched material under study; explicitly draw on that preparation by referring to evidence from texts and other research on the topic or issue to stimulate a thoughtful, well reasoned exchange of ideas.
LA.SL.11-12.1.B	Collaborate with peers to promote civil, democratic discussions and decision-making, set clear goals and assessments (e.g., student developed rubrics), and establish individual roles as needed.
LA.SL.11-12.1.C	Propel conversations by posing and responding to questions that probe reasoning and evidence; ensure a hearing for a full range of positions on a topic or issue; clarify, verify, or challenge ideas and conclusions; and promote divergent and creative perspectives.

## Learning Objectives

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### To understand the practicality of Excel

To familiarize oneself with Excel's basic features

To appreciate what a spreadsheet is and how to analyze it

To recognize the difference between a formula and a constant

To become comfortable with the toolbars that are presented in Excel

To open, save, and print Excel worksheets with ease

To differentiate between an Excel worksheet and an Excel workbook

To feel comfortable inserting and deleting new rows and columns

To recognize the existence and importance of Excel's Office Assistant

To develop formulas to simplify calculations

To use Print Preview to examine a spreadsheet before printing

To create future Excel spreadsheets with ease and comfort

In Powerpoint, Students will learn to:

Identify parts of the Powerpoint Screen

Work with menus, toolbars and task panes

Start and Run slide shows, Create Slide shows

Utilize multimedia - music and video in Powerpoint

<b>Remember</b>	<b>Understand</b>	<b>Apply</b>	<b>Analyze</b>	<b>Evaluate</b>	<b>Create</b>
Choose	Classify	Choose	Categorize	Appraise	Combine
Describe	Defend	Dramatize	Classify	Judge	Compose
Define	Demonstrate	Explain	Compare	Criticize	Construct
Label	Distinguish	Generalize	Differentiate	Defend	Design
List	Explain	Judge	Distinguish	Compare	Develop
Locate	Express	Organize	Identify	Assess	Formulate
Match	Extend	Paint	Infer	Conclude	Hypothesize
Memorize	Give Examples	Prepare	Point out	Contrast	Invent
Name	Illustrate	Produce	Select	Critique	Make
Omit	Indicate	Select	Subdivide	Determine	Originate
Recite	Interrelate	Show	Survey	Grade	Organize
Select	Interpret	Sketch	Arrange	Justify	Plan
State	Infer	Solve	Breakdown	Measure	Produce
Count	Match	Use	Combine	Rank	Role Play
Draw	Paraphrase	Add	Detect	Rate	Drive
Outline	Represent	Calculate	Diagram	Support	Devise
Point	Restate	Change	Discriminate	Test	Generate
Quote	Rewrite	Classify	Illustrate		Integrate
Recall	Select	Complete	Outline		Prescribe
Recognize	Show	Compute	Point out		Propose
Repeat	Summarize	Discover	Separate		Reconstruct
Reproduce	Tell	Divide			Revise
	Translate	Examine			Rewrite
	Associate	Graph			Transform
	Compute	Interpolate			
	Convert	Manipulate			
	Discuss	Modify			
	Estimate	Operate			
	Extrapolate	Subtract			
	Generalize				
	Predict				



## Suggested Activities & Best Practices

<https://www.microsoft.com/en-us/education/education-workshop>

[https://www.educationworld.com/sites/default/files/Lesson4\\_2007.pdf](https://www.educationworld.com/sites/default/files/Lesson4_2007.pdf)

1. Students will identify famous African Americans whom contributed to the computer field.
2. Students will incorporate global technical energy efficient products in the computer field being used in the classroom.

## **Assessment Evidence - Checking for Understanding (CFU)**

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Unit test-summative assessment

Explaining-formative assessment

Written reports-alternate assessment

Create a Multimedia poster-benchmark assessment

- Admit Tickets
- Anticipation Guide
- Common Benchmarks
- Compare & Contrast
- Create a Multimedia Poster
- DBQ's
- Define
- Describe
- Evaluate
- Evaluation rubrics
- Exit Tickets
- Explaining
- Fist- to-Five or Thumb-Ometer
- Illustration
- Journals
- KWL Chart
- Learning Center Activities
- Multimedia Reports
- Newspaper Headline
- Outline
- Question Stems
- Quickwrite
- Quizzes
- Red Light, Green Light

- Self- assessments
- Socratic Seminar
- Study Guide
- Surveys
- Teacher Observation Checklist
- Think, Pair, Share
- Think, Write, Pair, Share
- Top 10 List
- Unit review/Test prep
- Unit tests
- Web-Based Assessments
- Written Reports

## **Primary Resources & Materials**

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Go Office 2013

Pearson

## **Ancillary Resources**

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GCF learn Free.org

Applied Educational Systems

<https://support.office.com/en-us/article/excel-for-windows-training-9bc05390-e94c-46af-a5b3-d7c22f6990bb>

<https://digital.com/blog/excel-tutorials/>

## **Technology Infusion**

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**Technology Infusion** and/or strategies are integrated into this unit to enhance learning

Khan Academy

Office 365

GCF Learn Free.org

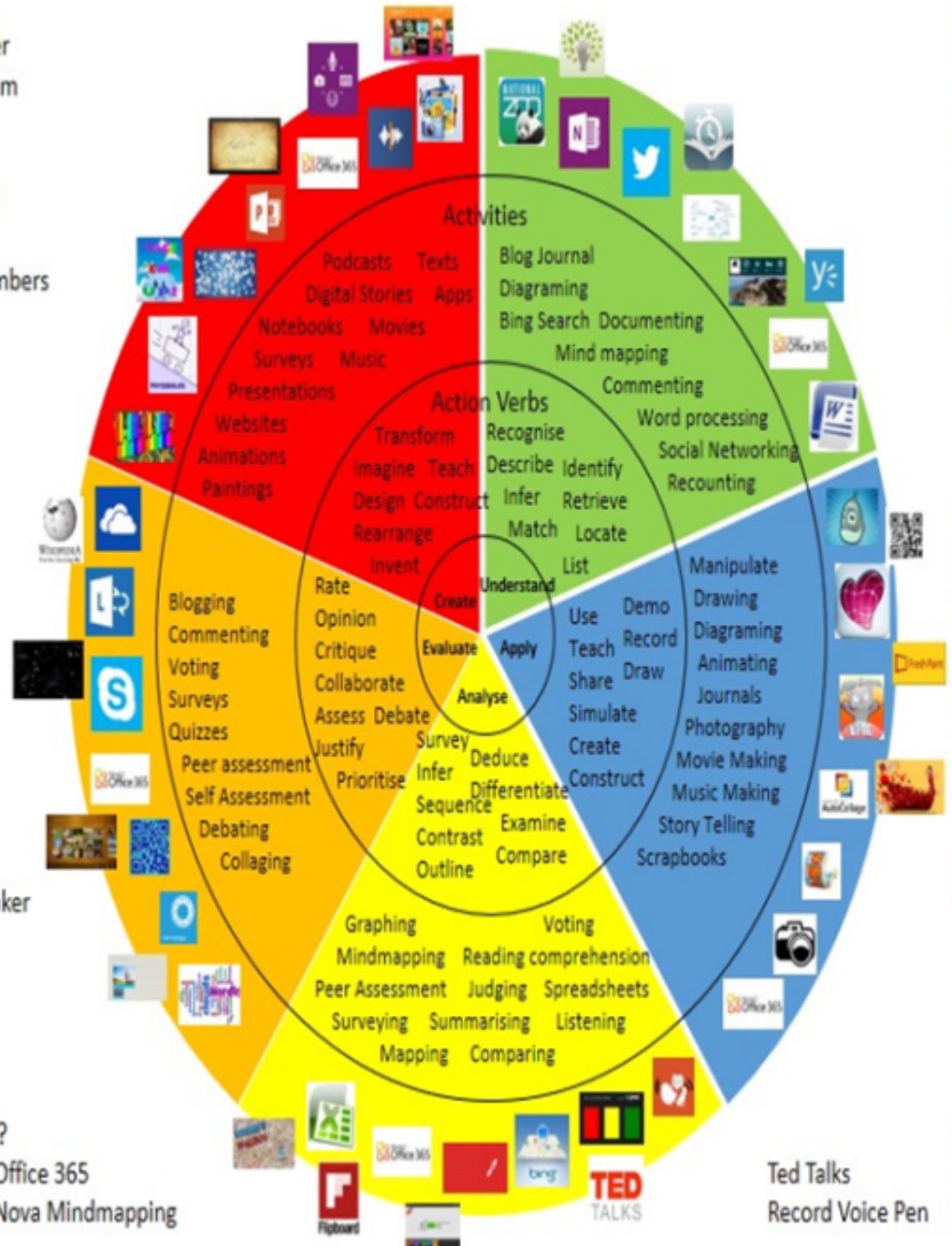
## Win 8.1 Apps/Tools Pedagogy Wheel

Podcasts  
 Photostory 3  
 Kid Story Builder  
 Music Maker Jam  
 Paint A Story  
 Office 365  
 MS PowerPoint  
 Stack 'Em Up  
 NqSquared Numbers  
 Physamajig  
 Xylophone 8

Wikipedia  
 Skydrive  
 Lync  
 SkyMap  
 Skype  
 Office 365  
 Puzzle Touch  
 Easy QR  
 Memorylage  
 Life Moments  
 Word Cloud Maker

Where's Waldo?  
 MS Excel      Office 365  
 Flipboard      Nova Mindmapping

Ted Talks  
 Record Voice Pen



Originally taken from <http://www.coetail.com/vzimmer/files/2013/02/IPadagogy-Wheel.001.jpg>  
 And adapted for Windows 8.1 devices by Charlotte Beckhurst @CharBeckhurst

## Alignment to 21st Century Skills & Technology

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Mastery and infusion of **21st Century Skills & Technology** and their Alignment to the core content areas is essential to student learning. The core content areas include:

- English Language Arts;
- Mathematics;
- Science and Scientific Inquiry (Next Generation);
- Social Studies, including American History, World History, Geography, Government and Civics, and Economics;
- World languages;
- Technology;
- Visual and Performing Arts.

WRK.9.2.12.CAP	Career Awareness and Planning
WRK.9.2.12.CAP.1	Analyze unemployment rates for workers with different levels of education and how the economic, social, and political conditions of a time period are affected by a recession.
WRK.9.2.12.CAP.2	Develop college and career readiness skills by participating in opportunities such as structured learning experiences, apprenticeships, and dual enrollment programs.
WRK.9.2.12.CAP.3	Investigate how continuing education contributes to one's career and personal growth.
WRK.9.2.12.CAP.4	Evaluate different careers and develop various plans (e.g., costs of public, private, training schools) and timetables for achieving them, including educational/training requirements, costs, loans, and debt repayment.
TECH.9.4.12.CI	Creativity and Innovation
TECH.9.4.12.CI.1	Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
TECH.9.4.12.CI.2	Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
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TECH.9.4.12.CT.2	Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
TECH.9.4.12.CT.3	Enlist input from a variety of stakeholders (e.g., community members, experts in the field)

to design a service learning activity that addresses a local or global issue (e.g., environmental justice).

TECH.9.4.12.CT.4

Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.

## 21st Century Skills/Interdisciplinary Themes

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**21st Century/Interdisciplinary Themes** that will be incorporated into this unit.

- Communication and Collaboration
- Creativity and Innovation
- Critical thinking and Problem Solving
- ICT (Information, Communications and Technology) Literacy
- Information Literacy
- Life and Career Skills
- Media Literacy

TECH.8.1.12.A.5

Create a report from a relational database consisting of at least two tables and describe the process, and explain the report results.

TECH.8.1.12.A.CS1

Understand and use technology systems.

TECH.8.1.12.A.CS2

Select and use applications effectively and productively.

TECH.8.1.12.B.CS1

Apply existing knowledge to generate new ideas, products, or processes.

## 21st Century Skills

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**21st Century Skills** that will be incorporated into this unit.

- Civic Literacy
- Environmental Literacy
- Financial, Economic, Business and Entrepreneurial Literacy
- Global Awareness
- Health Literacy

LA.RST.6-8.1

Cite specific textual evidence to support analysis of science and technical texts.

CAEP.9.2.12.C

Career Preparation

CAEP.9.2.12.C.1

Review career goals and determine steps necessary for attainment.

CAEP.9.2.12.C.2

Modify Personalized Student Learning Plans to support declared career goals.

TECH.8.1.12

Educational Technology: All students will use digital tools to access, manage, evaluate, and synthesize information in order to solve problems individually and collaborate and to

create and communicate knowledge.

TECH.8.1.12.A

Technology Operations and Concepts: Students demonstrate a sound understanding of technology concepts, systems and operations.

Determining an output value for a particular input involves evaluating an expression; finding inputs that yield a given output involves solving an equation. Questions about when two functions have the same value for the same input lead to equations, whose solutions can be visualized from the intersection of their graphs. Because functions describe relationships between quantities, they are frequently used in modeling. Sometimes functions are defined by a recursive process, which can be displayed effectively using a spreadsheet or other technology.

## **Differentiation**

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The teacher will scaffold the lesson with a slow release from assisted support with guided practice to independent practice.

Students will have extra time or fewer assignments, one-to-one assistance, and group work will often be enlisted.

**Differentiation** in a lesson lies within content, process, and/or product.

### **Differentiations:**

- Small group instruction
- Small group assignments
- Extra time to complete assignments
- Pairing oral instruction with visuals
- Repeat directions
- Use manipulatives
- Center-based instruction
- Token economy
- Study guides
- Teacher reads assessments allowed
- Scheduled breaks
- Rephrase written directions
- Multisensory approaches
- Additional time
- Preview vocabulary
- Preview content & concepts
- Story guides
- Behavior management plan
- Highlight text
- Student(s) work with assigned partner
- Visual presentation

- Assistive technology
- Auditory presentations
- Large print edition
- Dictation to scribe
- Small group setting

#### **Hi-Prep Differentiations:**

- Alternative formative and summative assessments
- Choice boards
- Games and tournaments
- Group investigations
- Guided Reading
- Independent research and projects
- Interest groups
- Learning contracts
- Leveled rubrics
- Literature circles
- Multiple intelligence options
- Multiple texts
- Personal agendas
- Project-based learning
- Problem-based learning
- Stations/centers
- Think-Tac-Toes
- Tiered activities/assignments
- Tiered products
- Varying organizers for instructions

#### **Lo-Prep Differentiations**

- Choice of books or activities
- Cubing activities
- Exploration by interest
- Flexible grouping
- Goal setting with students
- Jigsaw
- Mini workshops to re-teach or extend skills
- Open-ended activities
- Think-Pair-Share
- Reading buddies
- Varied journal prompts
- Varied supplemental materials

Use of digital audio-visual materials, such as YouTube, to assist the child with directions.

Students will have access to “How To” videos, so they may more easily follow along with directions for their assignments.

**Special Education Learning** adaptations that will be employed in the unit, using the ones identified below.

- printed copy of board work/notes provided
- additional time for skill mastery
- assistive technology
- behavior management plan
- Center-Based Instruction
- check work frequently for understanding
- computer or electronic device utilizes
- extended time on tests/ quizzes
- have student repeat directions to check for understanding
- highlighted text visual presentation
- modified assignment format
- modified test content
- modified test format
- modified test length
- multi-sensory presentation
- multiple test sessions
- preferential seating
- preview of content, concepts, and vocabulary
- Provide modifications as dictated in the student's IEP/504 plan
- reduced/shortened reading assignments
- Reduced/shortened written assignments
- secure attention before giving instruction/directions
- shortened assignments
- student working with an assigned partner
- teacher initiated weekly assignment sheet
- Use open book, study guides, test prototypes

## **English Language Learning (ELL)**

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Software applications have instructions available in other languages, and Google translate will be used as necessary. Students will be allowed to work with partners.

**English Language Learning** adaptations that will be employed in the unit, using the ones identified below.

- teaching key aspects of a topic. Eliminate nonessential information
- using videos, illustrations, pictures, and drawings to explain or clarify
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning;
- allowing students to correct errors (looking for understanding)
- allowing the use of note cards or open-book during testing
- decreasing the amount of work presented or required
- having peers take notes or providing a copy of the teacher's notes
- modifying tests to reflect selected objectives
- providing study guides
- reducing or omitting lengthy outside reading assignments
- reducing the number of answer choices on a multiple choice test
- tutoring by peers
- using computer word processing spell check and grammar check features
- using true/false, matching, or fill in the blank tests in lieu of essay tests

## **At Risk**

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One-to-one conferences between teacher and student to determine specific challenges and troubleshoot ways to overcome them.

Intervention Strategies that will be employed in the unit, using the ones identified below.

- allowing students to correct errors (looking for understanding)
- teaching key aspects of a topic. Eliminate nonessential information
- allowing products (projects, timelines, demonstrations, models, drawings, dioramas, poster boards, charts, graphs, slide shows, videos, etc.) to demonstrate student's learning
- allowing students to select from given choices
- allowing the use of note cards or open-book during testing
- collaborating (general education teacher and specialist) to modify vocabulary, omit or modify items to reflect objectives for the student, eliminate sections of the test, and determine how the grade will be determined prior to giving the test.
- decreasing the amount of work presented or required
- having peers take notes or providing a copy of the teacher's notes
- marking students' correct and acceptable work, not the mistakes
- modifying tests to reflect selected objectives
- providing study guides

- reducing or omitting lengthy outside reading assignments
- reducing the number of answer choices on a multiple choice test
- tutoring by peers
- using authentic assessments with real-life problem-solving
- using true/false, matching, or fill in the blank tests in lieu of essay tests
- using videos, illustrations, pictures, and drawings to explain or clarify

## **Talented and Gifted Learning (T&G)**

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Teacher can use a pre-assessment to determine students' knowledge of standard being taught in lesson and then provide an extension activity for students

1. Compact lesson
2. Provide students with problem-based learning activity using multiple standards from the unit.

**Talented and Gifted** adaptations that will be employed in the unit, using the ones identified below.

- Above grade level placement option for qualified students
- Advanced problem-solving
- Allow students to work at a faster pace
- Cluster grouping
- Complete activities aligned with above grade level text using Benchmark results
- Create a blog or social media page about their unit
- Create a plan to solve an issue presented in the class or in a text
- Debate issues with research to support arguments
- Flexible skill grouping within a class or across grade level for rigor
- Higher order, critical & creative thinking skills, and discovery
- Multi-disciplinary unit and/or project
- Teacher-selected instructional strategies that are focused to provide challenge, engagement, and growth opportunities
- Utilize exploratory connections to higher-grade concepts
- Utilize project-based learning for greater depth of knowledge

## **Sample Lesson**

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**Lesson Plan Title : Introduction to Microsoft Excel**

**Overview and Purpose:** A basic review of excel toolbars, buttons, functions, cursors, and intro to the use of

formulas.

### **Goals:**

1. Each student will gain the basic skills needed to operate and navigate MS Excel.
2. Identify, gather and input data into a spreadsheet.
3. Successfully create, copy and paste formulas and functions.
4. to be able to work collaboratively with peers in groups.
5. Successfully print areas of the spreadsheet.
6. Identify Excel as a tool used for manipulating data.

### **Objectives:**

1. Identify ways of utilizing Excel as a tool
2. Students will be able to identify and create a spreadsheet.
3. Students will successfully record data and be able to create, copy and paste formulas and functions.
4. Students will acquire information using various resources.
5. Review of standard and formatting toolbars and menus within Excel.
6. Review of worksheets, workbooks, cells, columns, rows, and Excel cursors
7. Introduction of basic use of formulas in Excel.

### **Resources:**

LCD Projector, handouts, audio equipment.

Students will be provided a computer workstation in the computer lab.

Students will utilize Microsoft Excel to develop a spreadsheet using the data they obtain.

Students will have access to the Internet.

Students will be given a copy of the rubric to refer to while working on this lesson.

A laptop/projector set up will be provided for presentation.

A flash drive will be used to save and copy student work onto the laptop.

A shared drive will be available to store completed spreadsheets.

### **Methods**

#### **Introduction:**

1. First we will discuss uses of spreadsheets
2. A payroll with three records will be opened and cell contents identified.
3. Discussion on the data necessary to complete a payroll.
4. Request that students perform actions such as cell alignment, formatting cells, shading cells, placing borders around cells etc. individually.
5. Request that students exhibit knowledge of renaming worksheets, deleting worksheets, adjusting row heights and column widths etc.

**Engagement:**

1. As a class we will add one record of data.
2. Each student will verbally add their record (fictitious); the payroll now contains 10-12 records.
3. I will demonstrate formula building, copying, pasting and printing.

**Class Practice:**

1. Students will complete the payroll (pay).
2. Overtime, bonus will be added to the spreadsheet (use of absolute value)
3. They are encourage to look on each others screens and speak out loud.
4. Students will be given opportunity to print (print preview).

**Independent Practice:**

1. Students will create a spreadsheet from scratch (grocery budget, address list or book inventory a book inventory)
2. They will create, copy and paste formulas and functions.
3. They are encourage to look on each others screens and speak out loud.
4. Students have been asked to complete a detailed budget exercise to exhibit gathered knowledge of MS Excel.

**Accommodations (Differentiated Instruction):**

1. Slow typists - they will be able to Open my completed spreadsheet (as emphasis in this class is not on typing)
2. Quick to create - we we add the overtime calculation and bonus (using absolute value)
3. Experienced in a payroll (completed examples of advanced payrolls will be on shared drive, to be explored during breaks)

**Learning Checkup:**

1. I will walk around the room as they create and work on their spreadsheets
2. Challenge students by changing the data (pay rate)- does the 'ripple down' effect occur?

### Wrap Up:

1. Verbally as a class (encouraging them to speak out loud) describe (while I write on board) the steps to create a spreadsheet.
2. Students will reflect on what they have learned.
3. Teacher will review each student's assignment individually to insure that they have a clear understanding of how to operate Excel.

As an instructor, I have never done this. The students have always evaluated me! Students will be evaluated using a rubric. I will forward each student's completed rubric via email.

CS.9-12.8.1.12.CS.1	Describe ways in which integrated systems hide underlying implementation details to simplify user experiences.
CS.9-12.8.1.12.CS.2	Model interactions between application software, system software, and hardware.
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CS.9-12.CS	Computing Systems
TECH.9.4.12.CI	Creativity and Innovation
TECH.9.4.12.CI.1	Demonstrate the ability to reflect, analyze, and use creative skills and ideas (e.g., 1.1.12prof.CR3a).
TECH.9.4.12.CI.2	Identify career pathways that highlight personal talents, skills, and abilities (e.g., 1.4.12prof.CR2b, 2.2.12.LF.8).
TECH.9.4.12.CI.3	Investigate new challenges and opportunities for personal growth, advancement, and transition (e.g., 2.1.12.PGD.1).
TECH.9.4.12.CT	Critical Thinking and Problem-solving
TECH.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).
TECH.9.4.12.CT.2	Explain the potential benefits of collaborating to enhance critical thinking and problem solving (e.g., 1.3E.12profCR3.a).
TECH.9.4.12.CT.3	Enlist input from a variety of stakeholders (e.g., community members, experts in the field) to design a service learning activity that addresses a local or global issue (e.g., environmental justice).
TECH.9.4.12.CT.4	Participate in online strategy and planning sessions for course-based, school-based, or other project and determine the strategies that contribute to effective outcomes.
TECH.9.4.12.GCA.1	Collaborate with individuals to analyze a variety of potential solutions to climate change effects and determine why some solutions (e.g., political, economic, cultural) may work better than others (e.g., SL.11-12.1., HS-ETS1-1, HS-ETS1-2, HS-ETS1-4, 6.3.12.GeoGI.1, 7.1.IH.IPERS.6, 7.1.II.IPERS.7, 8.2.12.ETW.3).