

Unit 1: Computer Applications - Fundamentals

Content Area: **Technology**
Course(s): **Sample Course**
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Computer Fundamentals

Department of Curriculum and Instruction



Belleville Public Schools

Curriculum Guide

Unit 1-Computer Applications Introduction - Fundamentals

Grade levels 9-12

Belleville Board of Education

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Board Approved:

Unit Overview

- The student will be able understand and become familiar with:
 - What is Computer Technology/ Hardware, Software Microsoft Operating System, Microsoft Word
- Introductory Computer Concepts and Techniques and PC Fundamentals.
- Students will understand copyright laws and the dangers of plagiarism
- Student will understand and apply what digital citizenship is

Enduring Understanding

The Belleville High School District serves learners by assisting them to acquire the knowledge, skills, abilities, and attitudes necessary to function successfully in the business and economic environment. In order to achieve this, students will understand that: Creativity, innovation, and critical thinking are essential for success in a technologically advanced world.

- Responsible digital citizenship requires effective oral, written and online communication and collaboration skills.
- The ability to navigate the World Wide Web is essential to being a successful student now and a productive citizen later.
- The ability to join the World Wide Web community by creating original content and navigating existing content is essential to being a successful student now and a productive citizen later.
- The ability to allocate and manage personal and business-related finances is important for future success.
- Proficiency with hardware and software leads to more success in academics and in finding employment.
- Successful college and career planning is essential to future success.
- Application of essential business knowledge is essential to assimilation into the world of work.
- Individuals have important rights and responsibilities as citizens in the work place.
- The ability to work with diverse populations is key to participation in a global economic society.
- Individuals can make informed and reasoned decisions for the public good.
- The ability to interpret and apply data to business situations is an integral part of the world of work.

Essential Questions

The following questions guide Business teachers' work in developing curriculum and planning units and lessons.

They are examples of questions that students should be able to answer during and at the conclusion of taking Business classes.

In the age of information, how can data be best stored, retrieved, and organized for reporting and analysis, in order to improve business operations?

How can I effectively use the Internet to gather a variety of research from valid/reliable sources?

What professional organizations are available to provide accurate information in answering questions regarding different areas of business?

How can a Computer keep you organized?

To what extent are we dependant on Technology?

Exit Skills

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

What are the **Exit Skills** that the students should have acquired by the end of this Unit?

Examples:

By the end of Grade 1, ELA Unit 1, the student should be able to:

- Print his/her full name
- Identify/print capital letters
- Identify/print lowercase letters

New Jersey Student Learning Standards (NJSL-S)

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please list only the content-level and cross-curricular **New Jersey Student Learning Standards** applicable to the unit. **Do not list**

standards that are not used in the unit.

Interdisciplinary Connections

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please list all and any additional **Interdisciplinary Connections/Cross-Curricular** New Jersey Student Learning Standards that link to this unit, and which are not included in the NJSL section above.

Learning Objectives

Students will be able to:

1. Load and exit windows; use mouse and keyboard; identify the components of the windows desktop; organize screen based desktop; switch tasks in a multi-tasking environment.
2. Start and exit Microsoft Word 2013; open and close a document; delete and inset text and blank lines; select blocks of text; change justification and line spacing; save and print a document.
3. Spell-check a document; open and display two documents; cut, copy, and move text; enter date codes; set margins and tabs; bold and italicize text; search and replace text.
4. Objectives related to basic computer competency specify the skills a student must demonstrate before successfully completing the training. These statements include the knowledge of basic computing concepts, security measures and the ability to use popular software applications to produce documents, spreadsheets and presentations. Other objectives are creating and managing files and folders and retrieving data.

Suggested Activities & Best Practices

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Guidelines for Suggested Activities:

- Includes activities **appropriate & specific** to the development of the Unit;
- Is comprised of the variety of learning activities that will be referenced in lesson plans, constructed/developed and instructionally delivered in the classroom;
- Are authentic;
- Recognizes the learning styles of the students;
- Integrates problem- or project-based learning.

Assessment Evidence - Checking for Understanding (CFU)

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

By identifying the **Evidence of Student Learning with Checking for Understanding (CFU)** techniques used during the lesson and/or for Closure (Madeline Hunter), please list the variety of means used to assess students' learning (e.g. quizzes, tests, academic prompts, observations, homework, journals).

- 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

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please list all district-provided Primary Resources & Materials and/or those outside that are accessed with district resources.

Ancillary Resources

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please list all additional resources that will be used to strengthen this unit's lessons.

Technology Infusion

Upon completion of this sections, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

What **Technology Infusion** and/or strategies are integrated into this unit to enhance learning? Please list all hardware, software and strategies. Please find a technology pedagogy wheel for assistance while completing this section.

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
 Flipboard
 Office 365
 Nova Mindmapping

Ted Talks
 Record Voice Pen



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

Alignment to 21st Century Skills & Technology

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

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.

21st Century Skills/Interdisciplinary Themes

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please list only the **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

21st Century Skills

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please list only the **21st Century Skills** that will be incorporated into this unit.

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

Differentiation

Upon completion of this section, please remove all remaining descriptions, notes, outlines, examples and/or illustrations that are not needed or used.

Please remember: Effective educational **Differentiation** in a lesson lies within content, process, and/or product.

Please identify the ones that will be employed in this unit.

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

Special Education Learning (IEP's & 504's)

Please identify the **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
- multiple test sessions
- multi-sensory presentation
- 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)

Please identify the **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

Please identify 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)

Please identify the **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 Computer Applications

Framework for Technological Literacy

Classroom Activity for Belleville High School



Title: Internet Safety in the High School Author Information:

Classroom

Name: Corey Woodring
School: Belleville High School

Content Area: Technological Literacy County: Essex

Grade Level: 9-12

Student Learning Objectives:

NJ Core Curriculum Content
Standards

Students will be able to:

	Content Area	Standard	Grade	Strand	CP
1. Develop a criteria sheet for evaluating websites used for research.	Technology Literacy	8.1	12	B	1-4, 6-7
2. Research and identify facts related to plagiarism and copyright infringement and the basic guidelines of the fair use policy (e.g., purpose, nature, amount, and effect)	Language Arts	3.4	12	B	2
3. Become familiar with and develop a basic understanding of Internet safety concepts.	Language Arts	3.5	12	A	2,3
4. Create a presentation with a multimedia software program on an Internet safety topic.	Language Arts	3.5	12	C	1,3
5. Create a brochure with a publishing software program on an Internet safety topic.	Career Education and Consumer, Family, and Life Skills	9.1	12	A	1,3,5

Purpose and Overview:

The purpose of this lesson is for students to become familiar with copyright laws and the dangers of plagiarism. This activity requires students to create a multimedia presentation.

Instructional Activity:

Teacher will establish a purpose for lesson and provide background information related to copyright laws and plagiarism.

Evaluating Websites

1. Then students will visit Evaluating a Website at

<http://www.2learn.ca/evaluating/evaluating.html>. Use one of the criteria guides for a specific grade level. Write a summary paragraph about evaluating websites in general.

2. After visiting this website, students will participate in class discussion about how to determine if

information is accurate and true.

3. Next, students will complete the Internet Scavenger Huntworksheet called Internet Safety Scavenger Hunt-- #1. After completing the scavenger hunt students will review the section Evaluating Online Resources? at http://edsitement.neh.gov/reference_shelf_evaluating.asp

and also visit <http://lib.nmsu.edu/instruction/evalcrit.html> to compare the criteria for evaluating websites. Students are surprised that the original site they visited from the scavenger hunt appeared so scientific and yet is completely false.

Plagiarism & Copyright Use

4. Students will conduct some research on plagiarism by visiting <http://www.2learn.ca/mapset/SafetyNet/plagiarism/Plagiarism.html> and listing three facts about it.

5. Students will visit the copyright and fair use website in the scavenger hunt activity to find three facts.

Internet Safety

6. Students will be assigned or can select a topic they want to learn more about in regards to Internet safety such as: hoaxes, spamming, chat rooms, viruses, cookies, hate sites, filtering software, software blocks, etc. Students will then conduct research online to find appropriate information to create a multimedia presentation and present to the class to share the information.

7. Students will take the data collected from their research and create multimedia presentations. Then students will present the information and develop a two-fold brochure to disseminate to the class during their presentation.

Assessment Strategies: Rubric, Question/Answer, Oral Presentation Rubric

1. Students will give an oral presentation on their Internet safety topics. Students should use rubric: Making A Brochure: Internet Safety #2 to assess each presentation.

2. Students will create a two-fold brochure related to their Internet safety topic information, as well as vocabulary words.
3. Students will take a quiz on the five main criteria in evaluating websites (e.g., accuracy, authority, objectivity, currency, and coverage). Knowledge of information and internet safety vocabulary words will be included.

*Key vocabulary words for study include:

AUP, URL, bookmark, Boolean operators, browser, domain, hyperlink, keyword, netiquette, post, search engine, search tools, website, and webpage

<http://www.sharpened.net/glossary/index.php>

<http://whatis.techtarget.com/>

Additional Information:

Other websites to visit include:

Encourage Safe Use of the Internet, www.webteacher.org.

Search Engines:

www.dogpile.com, www.altavista.com, www.yahoo.com, www.google.com, and www.goto.com.

Students can scroll toward the bottom of the website and take the vocabulary quiz on ?Learning Computer Terminology?.

http://www.sheppardsoftware.com/web_games_vocab.htm.

Students can create their own free word game using www.puzzlemaker.com.

Students can use the assessments on internet safety at <http://coe.nevada.edu/slefevre/Tasks.html>.

Teachers might want to read more about plagiarism at <http://alexia.lis.uiuc.edu/~janicke/plagiary.htm> or Anti

Plagiarism ideas at <http://virtualsalt.com/antiplag.htm>.

PowerPoint for students on Plagiarism (downloadable) for college students can be found at <http://www.libraryinstruction.com/plagiarism/lib97plag.ppt>.

Teen Safety on the Internet can be found at <http://www.safeteens.com/safeteens.htm>.

Students and/or teachers can use this site for additional information on cyber safety http://www.cybersmart.org/info/overview_pres.asp.

Fair and Use Guidelines for Teachers can be found at <http://www.mediafestival.org/chartshort.html>.

Making A Brochure: Internet Safety #2

Teacher Name: _____

Student Name: _____

CATEGORY	4	3	2	1
Sources	Careful and accurate records are kept to document the source of 95-100% of the facts and graphics in the brochure.	Careful and accurate records are kept to document the source of 94-85% of the facts and graphics in the brochure.	Careful and accurate records are kept to document the source of 84-75% of the facts and graphics in the brochure.	Sources are not documented accurately or are not kept on many facts and graphics.
Multimedia Presentation	Each slide of the multimedia presentation has a clear purpose.	Almost all slides of the multimedia presentation have a clear purpose.	Most slides of the multimedia presentation have a clear purpose.	Less than half of the slides of the multimedia presentation have a clear purpose.
Spelling & Proofreading	No spelling errors remain after one person other than the typist reads and corrects the brochure.	No more than 1 spelling error remains after one person other than the typist reads and corrects the brochure.	No more than 3 spelling errors remain after one person other than the typist reads and corrects the brochure.	Several spelling errors in the brochure.

Attractiveness & Organization	The brochure has exceptionally attractive formatting and well-organized information.	The brochure has attractive formatting and well-organized information.	The brochure has well-organized information.	The brochure's formatting and organization of material are confusing to the reader.
Presentation	Well rehearsed with smooth delivery that holds audience attention.	Rehearsed with fairly smooth delivery that holds audience attention most of the time.	Delivery not smooth, but able to maintain interest of the audience most of the time.	Delivery not smooth and audience attention often lost.
Graphics/Pictures	Graphics go well with the text and there is a good mix of text and graphics.	Graphics go well with the text, but there are so many that they distract from the text.	Graphics go well with the text, but there are too few and the brochure seems "text-heavy".	Graphics do not go with the accompanying text or appear to be randomly chosen.
Multimedia Presentation	Each slide of the multimedia presentation has a clear purpose.	Almost all slides of the multimedia presentation have a clear purpose.	Most slides of the multimedia presentation have a clear purpose.	Less than half of the slides of the multimedia presentation have a clear purpose.

Internet Safety Scavenger Hunt--#1

1. Go to Alan November's website and read the article about Zack doing research on the Holocaust, <http://www.anovember.com/articles/zack.html>
 - a. Why is it important for students to learn how to validate the information?
 - b. What are 3 categories the author suggests you use to evaluate findings?
 - c. Click on <http://pubweb.acns.nwu.edu/~abutz/index.html> under the Meta-

Web information and determine what the information is intended for.

Beware of what follows the .

2. Visit <http://www.yahooligans.com/parents/> Yahooligans ?Surfing as a Family Adventure.? What do they say to look at when evaluating web content?? Does this agree with the website in question #1 Explain your answer.

3. Visit the Virginia State Department of Education's Acceptable Use Policy site at

<http://www.pen.k12.va.us/go/VDOE/Technology/AUP/home.shtml#TOC>.

Review the importance of having such a policy.? List a few key components of an?

Acceptable Use Policy. List the facts below:

1. _____

2. _____

3. _____

4. _____

4. Using the above website, look at one or two of the sample AUP's they provide. Do you notice common items?

a. What do you think is important to include? Explain your answer:

5. Go to the Family Guidebook <http://www.familyguidebook.com/permit.html> and view Sophie's Safe Surfing Permit. Could you use this in your school Explain your answer. Take the quiz at <http://yahooligans.yahoo.com/parents/kids/quiz.html>.

6. Visit the New Jersey State Department of Education's site at:<http://www.state.nj.us/njded/techno/htcrime/index.html> and visit their General Information section Visit Guide for Educators:? Critical Evaluation Information.?? Select an article to review and write threeI learned statements based on the article.

1. I learned _____

2. I learned _____

3. I learned _____