



21st CENTURY TECHNOLOGY SKILLS
for
21st CENTURY LEARNERS

A Complete Scope and Sequence
Students Ages 6-12

Beginning Level: Ages 6-7
Intermediate Level: Ages 8-9
Advanced Level: Ages 10-12

Scope & Sequence for Basic Computer Usage

Beginning Level

- 1.01 Identify external parts of a computer: system case, monitor/screen, keyboard, mouse, touchpad
- 1.02 Identify internal parts of a computer: hard disk drive, CD or DVD-ROM disk drive, USB port, modem or Ethernet port
- 1.03 Identify peripherals: printer, speakers, Web cam, trackball, scanner
- 1.04 Identify examples of software and hardware
- 1.05 State the differences between software and hardware
- 1.06 Demonstrate use of the mouse
- 1.07 Turn computer parts on and off: CD-ROM drive, printer, modem (may be internal), monitor, speakers
- 1.08 Identify examples of input devices: keyboard, mouse, touchpad, trackball, modem, scanner, digital camera,
- 1.09 Identify examples of output devices: monitor, printer, speakers
- 1.10 Demonstrate proper handling of disks
- 1.11 Troubleshoot to determine why computer is not working
- 1.12 Open a program
- 1.13 Explore Menus
- 1.14 Save to the hard drive
- 1.15 Exit or quit a program

Intermediate Level

- 1.16 Use the Control Panel
- 1.17 Open, close and adjust windows
- 1.18 Identify different drives
- 1.19 Open files from different drives
- 1.20 Save work to a portable storage device
- 1.21 Properly eject portable storage device
- 1.22 Use desk accessories: change background, screensaver, and appearance
- 1.23 Delete files using the Recycle Bin/Trash
- 1.24 Explain importance of copyright laws
- 1.25 Use Help features
- 1.26 Install a program
- 1.27 Locate and run installed software

Scope & Sequence for Basic Computer Usage continued

Advanced Level

- 1.28 Use Windows Explorer to locate and move files and folders
- 1.29 Use drag and drop to move or copy files
- 1.30 Use right-click to access sub-menus
- 1.31 Create new folders to organize files
- 1.32 Create desktop short cuts
- 1.33 Change desktop resolution
- 1.34 Create a screen capture
- 1.35 Use Ctrl and Shift keys to select multiple files
- 1.36 Explain the difference between using Ctrl and Shift for selecting files
- 1.37 Use Windows search to locate files
- 1.38 Identify computer ports
- 1.39 Arrange icons on the desktop

Scope & Sequence for Keyboarding

Beginning Level

- 2.01 Enter text not regarding finger placement
- 2.02 Locate keyboard keys space bar, arrow keys, Backspace, Delete, Enter /Return
- 2.03 Locate keyboard keys: Shift, Escape, Caps Lock, Tab, numeric keypad
- 2.04 Use the numeric keypad to enter numbers
- 2.05 Identify letter location (A – G)
- 2.06 Identify letter location (H - P)
- 2.07 Identify letter location (Q – U)
- 2.08 Identify letter location (V – Z)
- 2.09 Identify location of punctuation keys: period, comma, semi-colon, forward slash, backward slash, apostrophe
- 2.10 Identify location of Shift keys
- 2.11 Identify location of number keys on the regular keyboard
- 2.12 Identify location of symbol keys and opposing Shift key on the regular keyboard
- 2.13 Demonstrate which letter keys are used by the right hand and which letter keys are used by the left hand
- 2.14 Locate function keys: Control, Tab, Alt, Esc, Number Lock, Caps Lock

Intermediate Level

- 2.15 Demonstrate correct finger placement for letter keys (A – G)
- 2.16 Demonstrate correct finger placement for letter keys (H – P)
- 2.17 Demonstrate correct finger placement for letter keys (Q – U)
- 2.18 Demonstrate correct finger placement for letter keys (V – Z)
- 2.19 Demonstrate correct finger placement for punctuation keys: period, comma, semi-colon, forward slash, backward slash, apostrophe
- 2.20 Demonstrate correct finger placement for Shift keys with opposing key: left Shift Key for right hand letters, right Shift key for left hand letters
- 2.21 Demonstrate correct finger placement for number keys on the regular keyboard:
1,2,3,4,5,6,7,8,9,0
- 2.22 Make symbols (use correct finger placement for symbol and opposing shift key) ! @ # \$ % ^ & * () _ + < > ? { } |
- 2.23 Enter text, numbers, and symbols using correct finger placement while continuing to build speed

Scope & Sequence for Keyboarding Continued

Advanced Level

- 2.24 Use correct finger placement for letter keys (A – G)
- 2.25 Use correct finger placement for letter keys (H – P)
- 2.26 Use correct finger placement for letter keys (Q – U)
- 2.27 Use correct finger placement for letter keys (V – Z)
- 2.28 Use correct finger placement for punctuation keys: period, comma, semi-colon, forward slash, backward slash, apostrophe
- 2.29 Use correct finger placement for Shift keys with opposing key: left Shift key for right hand letters, right shift key for left hand letters
- 2.30 Use correct finger placement for number keys on the regular keyboard: 1, 2, 3, 4, 5, 6, 7, 8, 9, 0
- 2.31 Use correct finger placement and correct shift key when making symbols: ! @ # \$ % ^ & * () _ + < > ? { } |
- 2.32 Consistently improve accuracy
- 2.33 Consistently advance Adjusted Words Per Minute (AWPM)

Scope & Sequence for Word Processing

Beginning Level

- 3.01 Open a word processing application
- 3.02 Use the mouse to position cursor in text
- 3.03 Enter text
- 3.04 Change text color
- 3.05 Use different fonts
- 3.06 Use different font sizes
- 3.07 Save a document to the hard drive
- 3.08 Print the document
- 3.09 Open a saved document
- 3.10 Demonstrate the ability to write a paragraph of 2-3 sentences
- 3.11 Exit/Quit application

Intermediate Level

- 3.12 Demonstrate the ability to distinguish between the commands: Save and Save As
- 3.13 Use Enter/Return key to begin new paragraphs
- 3.14 Format paragraphs
- 3.15 Use Tab key
- 3.16 Use Backspace/Delete key to delete letters or text areas
- 3.17 Use scroll bar to move through document
- 3.18 Use a spell checker to edit a document
- 3.19 Demonstrate the ability to write and edit text
- 3.20 Demonstrate the ability to write and edit a poem
- 3.21 Select text
- 3.22 Use Undo feature to undo the most recent action
- 3.23 Use toolbar selector
- 3.24 Use pull-down menus to view and use commands
- 3.25 Use Edit pull-down menu to Cut, Copy and Paste
- 3.26 Use toolbar icons to Cut, Copy and Paste
- 3.27 Use different text styles
- 3.28 Align text
- 3.29 Adjust line spacing
- 3.30 Preview smaller document page
- 3.31 Format document using vertical and horizontal page setup
- 3.32 Use Find command to find and change a word
- 3.33 Use Replace command to find and replace a word
- 3.34 Use word count feature
- 3.35 Use a thesaurus to assist writing
- 3.36 Demonstrate the ability to write a letter

Scope & Sequence for Word Processing Continued

Advanced Level

- 3.37 Use multi-column formats
- 3.38 Set up left-aligned tabs on ruler
- 3.39 Remove or change tab measurements
- 3.40 Use other tab alignments
- 3.41 Set up first line indent marker
- 3.42 Open multiple documents at the same time
- 3.43 Import graphic images into a text document
- 3.44 Use special insertion tools such as Date, Time and Page #
- 3.45 Use Headers and Footers
- 3.46 Use Tab leaders
- 3.47 Format margins
- 3.48 Use page breaks
- 3.49 Insert bullets and numbers
- 3.50 Use a hanging indent
- 3.51 Copy and Paste between documents
- 3.52 Track changes in a document
- 3.53 Insert a footnote

Scope & Sequence for Graphics

Beginning Level

- 4.01 Open a drawing or paint program
- 4.02 Identify tool bar
- 4.03 Draw shapes and lines with drawing tools
- 4.04 Use different line tools
- 4.05 Add stamps to a drawing screen
- 4.06 Save documents
- 4.07 Print documents
- 4.08 Exit/Quit a program
- 4.09 Open a saved file
- 4.10 Use color palettes
- 4.11 Use patterns as fills
- 4.12 Use gradients as fills
- 4.13 Insert graphic images/clip art
- 4.14 Erase (delete) graphic images
- 4.15 Select graphic images
- 4.16 Move graphic images
- 4.17 Re-size graphic images

Intermediate Level

- 4.18 Cut, Copy and Paste images
- 4.19 Add text / text box to a drawing or painting
- 4.20 Use fonts that provide graphic images
- 4.21 Use Undo feature to undo the most recent action
- 4.22 Use Eyedropper tool to pick up the attributes of an object
- 4.23 Duplicate objects
- 4.24 Import clip art of other graphic images into a document
- 4.25 Rotate objects / graphic images
- 4.26 Flip objects / graphic images horizontally and vertically
- 4.27 Move objects / graphic images
- 4.28 Use handles to re-size a graphic image
- 4.29 Use scroll bar to view document
- 4.30 Preview a smaller document
- 4.31 Zoom in on a document

Scope & Sequence for Graphics Continued

Advanced Level

- 4.32 Group (ungroup) objects / graphic images
- 4.33 Arrange stacking order of objects / graphic images
- 4.34 Create grid lines
- 4.35 Create ruler guides
- 4.36 Align objects using grid lines / ruler guides
- 4.37 Copy an object / graphic image onto the clipboard
- 4.38 Copy or Cut and Paste an object / graphic image into another document

Scope & Sequence for Multimedia

Beginning Level

- 5.01 Create a slide with images
- 5.02 Create a slide with text
- 5.03 Create a slide show presentation (several slides)
- 5.04 View a slide presentation manually (by click)

Intermediate Level

- 5.05 Insert images from a variety of sources (clipart, scanned, digital camera) to a slide
- 5.06 Use tools to apply special effects to images
- 5.07 Resize an image
- 5.08 Delete an image
- 5.09 Create a presentation (several slides) with text and graphics
- 5.10 Create a slide with pre-recorded video

Advanced Level

- 5.11 Use animation tools
- 5.12 Insert sound effects or music to a presentation
- 5.13 Record sound to use in a presentation
- 5.14 Research and download information from the Internet to use in a presentation
- 5.15 Use background features in a slide
- 5.16 Use transitions in a slide show
- 5.17 Add videos to a slide
- 5.18 Resize a video icon
- 5.19 Rearrange the order of slides
- 5.20 Add a design theme
- 5.21 Use timings in a slide presentation

Scope & Sequence for Databases

Beginning Level

- 6.01 Open database program
- 6.02 Identify records and fields
- 6.03 Define record and field
- 6.04 Enter data in the empty fields
- 6.05 Print a database document
- 6.06 Exit/Quit a database program

Intermediate Level

- 6.07 Create field labels
- 6.08 Create a new record
- 6.09 Save the database document
- 6.10 Correctly identify parts of a database: field, record, field label (name), field type
- 6.11 Exit or quit an application
- 6.12 Open a saved document
- 6.13 Use record book to move through records
- 6.14 Edit field labels
- 6.15 Delete fields
- 6.16 Edit records
- 6.17 Delete a record
- 6.18 Change the font, size, color, and style of text
- 6.19 Create a columnar layout
- 6.20 Sort records
- 6.21 Search records
- 6.22 Insert keywords or list box into database
- 6.23 Create graphs from a database
- 6.24 Describe best uses of a database

Advanced Level

- 6.25 Change layout of field labels and boxes
- 6.26 Move two or more fields at the same time
- 6.27 Resize field label area and field boxes
- 6.28 Use the database with the Mail Merge feature of the word processor
- 6.29 Make a list of field labels or categories for a research report
- 6.30 Search and sort a database to answer questions

Scope & Sequence for Spreadsheets

Beginning Level

- 7.01 Open a spreadsheet program
- 7.02 Exit/Quit spreadsheet program
- 7.03 Save the spreadsheet document
- 7.04 Open saved document
- 7.05 Print spreadsheet document
- 7.06 Enter text and/or numbers
- 7.07 Highlight cells
- 7.08 Use Formula Bar
- 7.09 Create & use a simple addition formula
- 7.10 Display cell borders
- 7.11 Use the Enter/Return key to move down to next row
- 7.12 Use keyboard arrow keys to move to nearby cells

Intermediate Level

- 7.13 Use the Tab key to move across the row
- 7.14 Identify cells by name
- 7.15 Identify the active cell
- 7.16 Enter titles for columns
- 7.17 Add & format a table
- 7.18 Insert a chart
- 7.19 Resize a chart
- 7.20 Change the font, size and style of text
- 7.21 Delete information from a cell
- 7.22 Edit information in a cell
- 7.23 Create simple formulas (AutoSum, average, multiplication, subtraction, etc.)
- 7.24 Wrap text in a cell
- 7.25 Manually adjust the width of columns
- 7.26 Decide when to use a spreadsheet

Scope & Sequence for Spreadsheets Continued

Advanced Level

- 7.27 Manually adjust the height of rows
- 7.28 Automatically change width of a cell
- 7.29 Automatically change the height of a cell
- 7.30 Insert cells, columns and rows
- 7.31 Delete cells, columns and rows
- 7.32 Use the Cut, Copy and Paste functions
- 7.33 Align text/numbers within a cell
- 7.34 Hide gridlines
- 7.35 Add / delete borders
- 7.36 Add shading
- 7.37 Enter a formula
- 7.38 Insert a function
- 7.39 Cut, Copy and Paste a formula
- 7.40 Sort information in a spreadsheet
- 7.41 Choose an appropriate chart for the information in a spreadsheet
- 7.42 Erase the chart
- 7.43 Change the labels on the chart
- 7.44 Insert a Header/Footer
- 7.45 Create a variety of uses for spreadsheets
- 7.46 Use an Absolute cell reference
- 7.47 Merge and center cells
- 7.48 Identify the spreadsheet selection tool in another type of program
- 7.49 Create a spreadsheet in a word processing, drawing, or painting document
- 7.50 Place a spreadsheet in a word processing, drawing, or painting document

Scope & Sequence for Telecommunications/Web 2.0

Beginning Level

- 8.01 Define and view a Website and discuss its components
- 8.02 Understand the Internet
- 8.03 Find Website entering URLs
- 8.04 Maneuver within a Website

Intermediate Level

- 8.05 Define Internet terms: ISP-Internet Service Provider, modem, WWW

World Wide Web, Web browser, search engines, hypertext link

- 8.06 State purpose of parts of a URL address
- 8.07 Recognize site domain names by 3-letter codes
- 8.08 Identify parts of an e-mail message
- 8.09 Locate symbols on keyboard found in URLs or e-mail addresses
- 8.10 Log onto Internet
- 8.11 Protect the privacy of a password
- 8.12 Describe the meaning of the term “on-line”
- 8.13 Access a variety of Websites including the Computer Explorers www. site
- 8.14 Identify information to keep off the Net
- 8.15 Write and send an e-mail message
- 8.16 Receive and read an e-mail message
- 8.17 Use proper Netiquette to be polite on the net
- 8.18 Use the print feature of a Website
- 8.19 Access a search engine
- 8.20 Type appropriate keywords into a search box in a search engine
- 8.21 Identify the Home Page of a Website
- 8.22 Use the Back button in the Website
- 8.23 Use the Forward button in the Website
- 8.24 Use the Stop button in the Website to stop the loading of a page
- 8.25 Download text only from a Website
- 8.26 Use hypertext links
- 8.27 Use the scroll arrows on a Web page
- 8.28 Bookmark a Website
- 8.29 Access a Website using a bookmark
- 8.30 Recognize 2-letter codes as standing for different countries

Scope & Sequence for Telecommunications/Web 2.0 Continued

Advanced Level

- 8.31 Use Boolean logic operators in search engines: AND (+), OR, NOT (-)
- 8.32 Use symbols and capital letters correctly
- 8.33 Select needed information from search results
- 8.34 Continue to refine searches
- 8.35 Download information from the Internet
- 8.36 Write a report using information from the Internet
- 8.37 Discuss and follow copyright protection rules
- 8.38 Create a Website using HTML code
- 8.39 Write opening and closing HTML tags
- 8.40 Use HTML tags containing elements, attributes, and values
- 8.41 Use and edit a basic HTML page template
- 8.42 Save a file as .html
- 8.43 Open an HTML file in a Web browser
- 8.44 Reload or refresh pages in a Web browser
- 8.45 Add background colors using color names or hex codes
- 8.46 Use formatting tags for new paragraph
- 8.47 Use formatting tags for line breaks
- 8.48 Align text using correct HTML codes for left, center, or right alignment
- 8.49 Emphasize text using bold, italic, or underline tags
- 8.50 Emphasize text by changing font color using hex codes or color names
- 8.51 Emphasize text by changing font size
- 8.52 Create ordered and unordered lists
- 8.53 Add hypertext links
- 8.54 Add images with and without borders