

INFORMATION TECHNOLOGY SCOPE AND SEQUENCE

GRADES 7-9:

Introductory = general concepts are introduced, students are not expected to perform the task independently.

Developing = building on the introduction of skills, students are expected to increase their application of these skills.

Mastery = students are expected to demonstrate the skills independently.

OPERATIONS:

Introductory:

- Respond appropriately to error messages.

Developing:

- Use keyboard shortcuts.
- Practice basic trouble shooting techniques.
- Select appropriate software for the task.
- Distinguish between server/ hard drive – saving, retrieval (where appropriate) find files.
- Demonstrate competence in using basic information technology tools.

Mastery:

- Change print options (print specific pages, paper size and orientation).
- Turn computers on/use correct shut down procedures.
- Network operations (log-on, log-off) if appropriate.
- Identify parts/function (monitor, keyboard, mouse, printer)
- Demonstrate proper care and use of hardware including CD's and disks.
- Launch programs identified by teacher.
- Perform file management tasks (quit, save, print, close).
- Perform mouse operations (point, click, drag, double click).
- Change folder views (view modes, file system).
- Insert and eject disks and CD ROMs.
- Understand “undo/redo” function.
- Load paper into printer.
- Distinguish between “Save” and “Save As”.
- Create folders/organize files into folders.
- Initialize disks – if appropriate.
- Use menus, scroll bars, resize windows and close box.
- Respond appropriately to dialogue boxes.
- Move between applications.
- Delete file – if appropriate.

KEYBOARDING:

Introductory:

- Introduce power keys, control, and alt. keys where appropriate.
- Demonstrate data entry skills (eg. spread sheets).

Developing:

- Increase speed and accuracy (10-20 words per minute).
- Type words.
- Type phrases.
- Type sentences.
- Type paragraphs.
- Type compositions.
- Use correct keyboarding techniques without looking at the keyboard.
- Practice and reinforce their keyboarding skills.

Mastery:

- Identify the relative position of keys on the keyboard.
- Use letter, punctuation and symbol keys.
- Use space bar, shift, return and delete keys.
- Use numeric keyboard.
- Use both hands on the keyboard (left hand on left side, etc.).
- Use correct posture, placement of keyboard.
- Introduce home row and space bar technique.

WORD PROCESSING:

Introductory:

- Add automatic page numbers, date and time.

Developing:

- Create documents integrating text, charts and images (clip art, scanned images, digital camera images, original images).
- Create headers and footers.
- Relate writing process to computer.
- Evaluate when to use WP software components (ie. Spread Sheet, Data Base).
- Identify the use of WP software in problem-solving.
- Position and resize (text and images) to achieve an affective presentation.

Mastery:

- Enter page breaks.
- Use tabs.
- Use thesaurus.
- Type dictated caption or story to accompany picture.
- Write a simple caption or story to accompany a picture.
- Transcribe text from a prewritten document.
- Change font, size, style and colour of text appropriate to presentation.

- Copy and paste images into document (clip art, scanned images, digital camera images, original images).
- Save, name and retrieve files.
- Insert the cursor to add or delete text.
- Compose stories on the computer and draft to good copy.
- Introduce elementary graphic elements.
- Use spell checker and understand its limitations.
- Select, move, copy and cut text.
- Left, right, center and justify text appropriate to presentation.
- Use line spacing appropriate to presentation.
- Use “Find/Change” to correct repeated errors.
- Change the margin settings.
- Create a document using columns (brochure, newspaper).
- Move text and/or images (clip art, scanned images, digital camera images, original images) between two or more documents.

GRAPHICS:

Developing:

- Use grid and ruler function to align objects.
- In a paint program, magnify an image to edit pixels.
- Use an eyedropper to pick up colour.
- Understand scale and perspective.
- Create special effects with shear and distort tools.
- Design tessellations.
- Create a paint frame in a word processing document.

Mastery:

- Group and ungroup objects.
- Change the objects’ order (front to back, etc.).
- Resize and reposition images in a draw and a paint program.
- Flip and rotate objects in a draw program.
- Change the line attributes (thickness, pattern, arrows).
- Change brush shape/size and spray size.
- Create a simple drawing with the pencil/paint brush in a paint program.
- Use the eraser to alter the drawing.
- Use text tool to add a caption to a drawing.
- Fill in shapes with colour/patterns.
- Change the line colour and width.
- Use undo/redo feature to correct errors.
- Create geometric shapes with palette tools.
- Select within a painting document using the selection tool or lasso.
- Manipulate stamps e.g. flip, rotate, size, create new.
- Flip and rotate objects in a paint program.
- Edit colours, patterns and gradients.

- Understand the difference between the draw and paint applications.
- Copy and paste images (clip art, scanned images, digital camera images, original images) in a draw and a paint program.

DATABASE:

Introductory:

- Select data through matching records.
- Create, save and print report.
- Export database information into other documents.
- Create a print merge document.
- Sort data using multiple operators.

Developing:

- Use basic database terminology (record, field, etc.).
- Use an established database to retrieve information.
- Input data to an established database.
- Sort data alphabetically and numerically.
- Create a new database – define field names & data types.
- Design page layout.
- Add, delete, duplicate & edit records.
- Recognize the need for consistency of data.
- Add, delete, modify field and change layout.

Mastery:

- Save database.

SPREADSHEET

Developing:

- Understand purpose of a spreadsheet.
- Use spreadsheet terminology (cell, column, row).
- Recognize the parts of a spreadsheet.
- Protect cells from changes.
- Determine what data to use in the spreadsheet.
- Recognize the need for consistency of data.
- Incorporate spreadsheet information and charts into other documents.
- Copy and paste values of formulas to selected cells.
- Insert or delete rows, columns or blocks of the spreadsheet.
- Create simple charts from given information.
- Experiment with different types of charts.
- Select, move and resize chart.
- Set page breaks for printing.
- Build a formula into a cell.
- Add text and graphics to charts.
- Name, save, test and edit the spreadsheet.

- Select an appropriate chart to represent information.
- Write simple formulas.

Mastery:

- Print a spreadsheet document.
- Move to a specific cell on a spreadsheet.
- Select a cell or block of cells.
- Change data in a cell.
- Format a cell or cells.
- Change column widths.
- Sort information alphabetically.
- Sort information numerically.
- Sort information vertically or horizontally.
- Print graphs or charts.
- Save an updated spreadsheet or disk.

INFORMATION RETRIEVAL & TELECOMMUNICATIONS:

Introductory:

- Use information technology to solve other problems.
- Evaluate information technology tools for solving problems.

Developing:

- Combine information from multiple sources for presentation.
- Use search engine for keyword searches.
- Download and reference “free” information from WWW and FTP sites.
- Evaluate search results for accuracy/relevance.
- Send/receive electronic mail/attachments using an Internet browser.
- Participate in online discussions.
- Participate in collaborative projects.

Mastery:

- Identify, define/locate sources of electronic information (e.g. CD-ROM, Internet).
- Select relevant information.
- Respect the purpose and responsible use of passwords.
- Launch CD-ROM from desktop.
- Capture information from an article and transfer notes to a notepad.
- Browse through contents.
- Do a title search.
- Do a field word search.
- Print selected information.
- Launch browser to access the World Wide Web, FTP sites, Gopher.
- Access information files and search sites.
- Save reference information.
- Observe appropriate etiquette at all times.

MULTIMEDIA:

Developing:

- Create and interpret documents.
- Apply principles of effective communication and good design.
- Evaluate suitability of info for use in specific contexts.
- Create multimedia documents using a variety of electronic sources.
- Use special effects in multimedia presentations to influence a message.
- Create basic animations and other visuals.
- Create interactive multi-media documents (e.g. Hypercard, Hyperstudio, HTML).
- Create simple slide show presentations (e.g. Hypercard, ClarisWorks).
- Incorporate digital graphics into documents (e.g. scanned images).
- Access and use a variety of multimedia accessories (e.g. scanner, digital camera).
- Understand concepts of communicating using multimedia.
- Operate basic software.
- Evaluate the effectiveness of the component parts of multimedia presentation.
- Demonstrate the ability to manage the process of creating multimedia presentations.

Mastery:

- Navigate documents.
- Become conversant with terminology.
- Navigate a variety of multimedia documents (e.g. Hypercard, Kidpix, HTML).
- Integrate different media into a single document.
- Record sounds digitally and incorporate into documents.

LEGAL, ETHICAL, COMMUNITY & HEALTH:

Introductory:

- Demonstrates awareness of economic/health issues related to Information Technology.
- Identifies careers related to the field of information technology.

Developing:

- Practice handling Internet information in an ethical way.

Mastery:

- Understands the need of a password if applicable.
- Understands the need for security when using a network or telecommunications.
- Understands the value of privacy of information.
- Understands the concept of copyright.
- Uses proper etiquette when participating in an online discussion/news group.
- Understands the concept of intellectual property.
- Understands issues related to software piracy.