

Business Technology 11

At-a-Glance

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Business Technology 11 – At A Glance

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Learners will analyse the impact of technology use on health

Digital Foundations and Ergonomics

Rationale

The development of healthy technology habits at an early stage is essential to supporting positive long-term health and well-being. Establishing foundational skills, including appropriate workstation setup and the development of initial typing and technology interaction skills, supports safe and effective technology use. Modern work environments continue to evolve, requiring individuals to adapt to a range of settings and expectations. Through the study of ergonomic principles, learners analyse and adjust their own workspaces to promote health and safety and develop the skills needed to evaluate the physical health and safety conditions of workplace environments.

Competencies

- Communication (COM)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- **Investigate** the impacts of a workplace on long-term health (COM, CT, PCD)
- **Apply** ergonomic principles to ensure the safe operation of a personal computer system (CT, PCD, TF)
- **Develop** touch typing skills related to document production (COM, CT)
- **Evaluate** a workstation for ergonomic safety (CT, PCD, TF)

Concepts (and Guiding Questions)

Workplace Impacts on Long-term Health

- What are the factors that contribute to a healthy workplace (e.g., posture, lighting, device placement, size)?
- What features or adjustments make a work place “healthy,” and how can individuals evaluate and improve their own workspace?
- What are indications that a workplace may contribute to positive or negative long-term health outcomes?
- How can long term ergonomics related health issues be prevented?

Ergonomic Principles

- How do ergonomic principles work to help prevent strain and injury during computer use?
- What adjustments can be made to a workspace to improve comfort, reduce fatigue, and support long term health while using a computer?
- How do habits like taking breaks, stretching, and maintaining neutral wrist and body positions contribute to safer computer operation?
- What signs of poor ergonomics should users watch for, and how can these issues be addressed before they lead to long term problems?
- How can a workplace or set-up be adjusted for the individual using the computer?

Learners will analyse the impact of technology use on health (cont.)

Touch Typing Skills

- How does developing strong touch typing skills support efficient and accurate document production throughout the design and editing process?
- What techniques and habits (e.g., proper hand placement, posture, and practice routines) help to improve typing accuracy and fluency?

Ergonomic Safety

- How can I tell if a workplace is set-up correctly for individual needs?
- How does the use of devices other than a desktop computer (i.e. laptop or tablet) impact on the ways to assess for proper ergonomics?

Learners will analyse how digital systems are used in the organization and management of files and resources

Digital Foundations and Ergonomics

Rationale

As learners develop a variety of digital files it is important to build an understanding of effective file management. They will explore how digital systems support the organization and management of files and resources by applying effective file management techniques and examining the roles of software and hardware components. By organizing files using clear structures, naming conventions, and appropriate storage options, learners build skills for maintaining efficient and accessible systems. They evaluate legal considerations related to data collection and storage, fostering awareness of privacy and responsible data use. This learning is helpful to support informed decision making in academic and real world contexts.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- **Apply** effective file management techniques (CI, CT, PCD, TF)
- **Evaluate** factors that relate to the collection, storage, and management of data (COM, CT, TF)
- **Identify** the function and purpose of various programs, hardware, and components (COM, TF)

Concepts (and Guiding Questions)

File Management Techniques

- How are documents stored within a given program?
- How do I store and organize my own documents?
- What steps can we take to maintain an efficient file system on a device or cloud platform?
- What factors should be considered when deciding between local and cloud storage solutions for file management?
- How do different file management strategies (e.g., folder structure, naming conventions, version control) help keep digital work organized and easy to access?
- What steps can be taken to ensure files are stored safely and can be retrieved quickly when needed?

Data Considerations

- What legal responsibilities do individuals and businesses have when collecting, storing, and managing digital data?
- Where can businesses find information about the collection and use of data?
- How might data storage and management requirements differ when it involves personal information?
- How can data handling practices impact privacy, trust, and fairness?

Learners will analyse how digital systems are used in the organization and management of files and resources (cont.)

Programs, Hardware, and Components

- How does each major hardware component (e.g., Central Processing Unit (CPU), Random Access Memory (RAM), storage devices, input/output peripherals) contribute to the overall function of a computer system?
- Why is it important to understand the purpose of different hardware components when diagnosing problems or making decisions about upgrades or replacements?
- How does understanding the purpose and function of hardware components assist with problem solving?
- How do operating and application software work together to produce outputs in common applications?

Learners will create a variety of documents appropriate for a business scenario

Productivity and Collaborative Tools

Rationale

This outcome supports learners as they come to know and practice the skills needed for effective document production in business contexts. Learners explore key principles, terminology, and techniques, while selecting appropriate software based on task requirements. By applying formatting, layout, and editing strategies, they create clear, professional documents tailored to specific audiences and purposes. This process also supports their ability to manage revisions and use digital tools effectively, preparing them to meet a variety of needs within a business environment.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- **Investigate** how basic principles, terminology, and techniques are used in document production (COM, CT, TF)
- **Select** appropriate software for document production (CT, PCD, TF)
- **Apply** document production techniques when developing a given product (CT, CI, PCD)

Concepts (and Guiding Questions)

Foundations of Document Production

- What key terms and basic principles are involved in document production?
- How do different techniques (e.g., formatting, layout, editing tools) help to create clear and well structured documents?
- In what ways do formatting, layout, and editing strategies work together with typing proficiency to create clear, professional quality documents?
- How can following a structured design process improve the clarity, organization, and overall effectiveness of the documents we create?

Using Software

- What criteria (e.g. features, compatibility, usability, cost) should be considered when deciding which software is best suited for a specific task or project?
- How do the strengths and limitations of different software options influence the quality of and efficiency in producing a final product?
- How would I determine the situations that are better suited for specialized rather than general purpose digital tools?
- How can understanding the purpose and requirements of a task help people make informed decisions about which software to use?

Learners will create a variety of documents appropriate for a business scenario (cont.)

Document Production

- How can I use specific tools and formatting techniques to make a document clear, professional, and better suited to its intended audience and purpose?
- What choices do I need to make about layout, style, and structure, to ensure a document effectively communicates required information?
- How do I use features like track changes and version history to manage edits, collaborate effectively, and maintain control over document revisions?
- How can digital tools help me with document production and modification in relation to a given audience and purpose?

Learners will investigate ways to communicate and collaborate in business scenarios

Productivity and Collaborative Tools

Rationale

Learners develop essential workplace ready communication and collaboration skills for working in digital environments by using shared document tools to coordinate tasks, manage versions, and provide structured feedback through commenting and suggesting features. Developing technological fluency and communication skills enables learners to contribute effectively to team based projects, engage in constructive revision processes, and produce high quality shared documents suited to modern organizational settings.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Technological Fluency (TF)

Indicators

- **Investigate** methods for effective collaboration on shared documents (COM, CT, TF)
- **Determine** a feedback procedure for the editing of a document (COM, CI, CT, TF)
- **Use** commenting and suggesting tools when providing and responding to peer feedback (COM, TF)

Concepts (and Guiding Questions)

Collaboration on Shared Documents

- How do real time collaboration tools help teams work together more efficiently when creating and editing shared digital documents?
- What communication and coordination strategies are needed to ensure that real time edits and contributions are clear, organized, and productive?
- What are the professional expectations for collaboration and communication in a variety of workplaces?
- How can we organize roles, responsibilities, and communication so that collaboration on a shared document is efficient and productive?

Feedback Procedures

- What makes feedback effective?
- What digital tools can be used for feedback?
- What steps should a clear feedback procedure include, and why are these steps important for improving a document?
- How can constructive feedback help enhance the clarity and accuracy of a business document?
- How can we ensure our suggestions are specific and useful for improving a document?

Learners will investigate ways to communicate and collaborate in business scenarios (cont.)

Feedback Tools

- How do I use commenting and suggesting tools to give clear, constructive feedback on a document?
- What does effective peer feedback look and sound like?
- How can I incorporate feedback from others to improve the quality of my work?
- How do I provide a progress update and share a final version of a given document with collaborators?
- How can I convey how feedback was used or applied in the development of a document?

Learners will investigate how formula and functions can manipulate and refine business related data

Data Literacy and Problem Solving

Rationale

This outcome supports learners in developing the skills needed to use formulas and functions to manipulate and refine business related data. Learners explore common spreadsheet tools and investigate how businesses use spreadsheets to organize, analyse, and visualize information. By applying formulas for calculations and functions such as filtering, sorting, and conditional logic, learners improve their ability to extract meaningful insights from data. This process strengthens their capacity to begin producing accurate, well organized datasets which can be used to support decision making.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- **Identify** common spreadsheet formulas and functions (CT, TF)
- **Investigate** ways that spreadsheets are used in business environments (COM, CT, PCD)
- **Apply** formulas to perform basic calculations (CT, TF)
- **Use** functions to refine and organize data (e.g., filtering, conditional logic, sorting with criteria) (CT, CI, TF)

Concepts (and Guiding Questions)

Spreadsheet Formulas and Functions

- Which spreadsheet tools (e.g., formulas, functions, charts, filters) are available to help solve a given problem?
- What are the terms and functions found in spreadsheet programs?
- What are the different chart types available to display data?

Spreadsheets for Business Use

- How can spreadsheets be used to organize, track, and analyse data and other information?
- How can spreadsheets be used to visual data?
- How do businesses select the most appropriate visualization for the data that they have?
- In what ways can comparing calculated results (e.g., month to month changes, product performance) help businesses identify patterns or areas for improvement?

Applying Formulas

- How do formulas such as totals, averages, and percent change help us interpret spreadsheet data and make informed business decisions?
- Which formulas are most appropriate for calculating key business metrics like profit, loss, and trends, and why?
- What steps can we take to ensure that the spreadsheet's calculations and outputs are reliable and error free?

Learners will investigate how formula and functions can manipulate and refine business related data (cont.)

Refining and Organizing Data

- How can functions like filtering, sorting, and conditional logic help us refine large datasets to focus on the most relevant information?
- What criteria should we use when deciding how to sort or filter data to answer a specific question or solve a particular problem?
- How does applying conditional functions (e.g., AND, OR, NOT, IF) help us categorize or analyze data more effectively?
- In what ways do well organized datasets support more accurate analysis and better decision making in real world contexts?
- How does representing data visually, such as with charts or conditional formatting, support clearer interpretation of the solution?

Learners will **construct** a spreadsheet in response to a given scenario

Data Literacy and Problem Solving

Rationale

Learners build essential data literacy and problem solving skills by organizing, cleaning, and analysing information using advanced spreadsheet features and functions. Through the application of formulas, formatting, and structural conventions, learners build skills to interpret data accurately, produce professional quality outputs, and make informed decisions in academic, workplace, and real world contexts.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- **Plan** a spreadsheet solution based on a given scenario (CT, CI, PCD)
- **Create** a spreadsheet that uses appropriate formulas, formatting, and structure (CT, TF)
- **Analyse** data through the use of embedded functions and formulae (COM, CT, TF)
- **Justify** conclusions resulting from data analysis (COM, CI, CT)

Concepts (and Guiding Questions)

Spreadsheet Design Considerations

- What information from the problem is essential for deciding how a spreadsheet could be organized and structured?
- Which functions, formulas, or tools will best help address the requirements of the problem?
- How can I design a spreadsheet that is clear, easy to use, and effective for solving a task?
- What planning steps should be completed before beginning to build the spreadsheet?

Creating a Spreadsheet

- How does the structure and layout of a spreadsheet influence how easily someone can understand and use the data?
- Which formulas or functions are most appropriate for the type of data I have?
- How do I create formulas that best meet my needs?

Data Analysis

- How do different spreadsheet functions help me understand or interpret data in meaningful ways?
- Which functions are most effective for solving the specific problem or answering the question I'm investigating?
- What steps should I take to ensure my calculations are correct and analysis is reliable?
- How can we use results to draw accurate and meaningful conclusions?

Learners will **construct** a spreadsheet in response to a given scenario (cont.)

Justifying Conclusions

- How can I offer recommendations, next steps, or responses based on my data analysis?
- What evidence from my analysis informs the conclusions made?

Learners will investigate how digital skills impact individuals and organizations

Career Awareness

Rationale

Career awareness empowers learners to understand opportunities in their region and beyond. Knowledge of labour market trends helps learners make informed decisions about post-secondary pathways and emerging technology careers.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)

Indicators

- **Investigate** personal employability skills in relation to education and career goals (COM, CT, PCD)
- **Investigate** the role in labour market information in setting career goals (COM, CT, CI)
- **Identify** skill and certifications that can assist with career development (COM, CT, PCD)

Concepts (and Guiding Questions)

Employability Skills

- How do the skills I am developing apply in a variety of careers?
- What employability skills (e.g., problem solving, digital literacy, technological fluency) are most important for careers or post secondary pathways of interest?
- How do current strengths and areas for growth align with the skills employers look for in a chosen field?
- What steps can I take in high school, post secondary education, or training programs to develop the employability skills needed to support future goals?
- How can I reflect on my strengths and areas of growth to plan for and prepare for future career pathways?

Role of Labour Market Information

- How can labour market information (e.g. employment rate, forecast/outlook, and in demand skills) help individuals make informed decisions about their future careers?
- How does labour market information help people make informed decisions when exploring career options?
- How does understanding current and future labour market trends influence the education or training choices needed to achieve career goals?
- In what ways can labour market information help identify potential career pathways that match personal interests, strengths, and long term goals?

Learners will investigate how digital skills impact individuals and organizations (cont.)

Skills and Certifications

- How can I use information about a desired career path to connect me with certifications I can complete?
- What technical and transferable skills are most valuable in a possible career path?
- Which industry recognized certifications are available and can support career goals?
- How can developing specific skills or earning certifications improve employability, advancement opportunities, or readiness for careers or post secondary programs?
- What steps can I take now (e.g., courses, training programs, extracurricular activities) which help to build the skills and certifications needed for future careers?

Learners will create a digital résumé and portfolio

Career Awareness

Rationale

Learners develop the ability to create an effective digital résumé and portfolio by considering and applying layout and communication choices that enhance clarity and organization. By evaluating how design decisions influence audience perception and aligning their work with career goals and industry expectations, learners convey their skills and achievements effectively. Reflecting on this process further supports their ability to communicate strengths and produce professional, purpose-driven portfolio artifacts. A professional portfolio helps learners communicate and showcase their learning and skill development.

Competencies

- Communication (COM)
- Creativity and Innovation (CI)
- Critical Thinking (CT)
- Personal Career Development (PCD)
- Technological Fluency (TF)

Indicators

- Identify layout and communication options within a résumé and/or portfolio (CT, CI, TF)
- Evaluate the impact of design decisions in relation to possible career goals (COM, CT, PCD)
- Reflect on the development of a digital résumé and portfolio (COM, CT, PCD)

Concepts (and Guiding Questions)

Options within a Résumé/Portfolio

- What layout choices (e.g., page structure, visual hierarchy, navigation) help make a digital or print portfolio clear, organized, and easy to follow?
- How do different communication elements (e.g., text, images, captions, multimedia, reflections) contribute to effectively showcasing skills and achievements in a portfolio?
- How can I adapt the layout and communication style of a portfolio to suit different audiences, such as employers, post secondary programs, or potential clients?
- What features or design strategies help ensure a portfolio presents information professionally?

Impacts of Design Decisions

- How can the design choices (e.g., layout, color, typography, or structure) influence how potential employers or post secondary programs perceive your skills?
- In what ways can aligning design decisions with industry expectations or trends strengthen readiness for specific career pathways?
- How do thoughtful design choices help communicate and highlight strengths relevant to career interests?

Development of a Résumé/Portfolio

- How does my design match the purpose of my portfolio?
- How can I convey information within my portfolio in a way that aligns with business expectations?

Skill Descriptions

Analyse – Consider the nature or structure of something by deconstructing it into its component parts in order to understand or explain it.

Apply – Carry out, use, or complete a procedure/ technique.

Construct – Identify a purpose; brainstorm ideas; gather and select information to support a plan; identify and choose options within the plan; offer reasons to support choices; build a model; test and revise, modify as necessary; evaluate the results at each stage of the process; consider alternative options.

Create – Develop an idea; communicate a representation for a process and/or a product; produce a product; modify as necessary; evaluate results and/or modifications.

Determine – Decide or conclude through reasoning or observation.

Develop – Strengthen skills, knowledge, or understanding through building on acquired or existing abilities.

Evaluate – Offer a critical review of something by considering the strengths and limitations.

Identify – Distinguish specific elements based on their unique features.

Investigate – Carry out an inquiry to examine and better understand a concept.

Justify – Support a conclusion based on valid evidence.

Plan – Devise a process for the realization or achievement of an objective.

Reflect – Ask questions of experiences and/or concepts Examine further ideas and information; consider ideas, perceptions, and perspectives about experiences and/or concepts Evaluate perceptions and perspectives in relation to experiences and/or concepts. Synthesize perceptions, and perspectives in relation to experiences and/or concepts communicate the impact of the process.

Select – Locate several relevant and dependable details to support an answer.

Use – Put knowledge or skills into action or service.