



**SUCCESS IN
APPRENTICESHIP
Instructor Guide**



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This Instructor Guide will help you prepare to incorporate essential skills (ES) training with your technical training. The guide contains the following information:

- Overview: Success in Apprenticeship at a glance
- Details on the types of learning materials
- Guidelines for selecting and using the materials
- Talking points for introducing essential skills
- Considerations for remote or online delivery and links to additional resources

SUCCESS IN APPRENTICESHIP AT A GLANCE

- All the materials are:
 - Based on the NOC job descriptions for trades occupations
 - Relevant to apprentices and pre-apprentices
 - Designed to reinforce, not replace, technical training
 - Designed to strengthen essential reading, numeracy and document use skills
- Review all of the materials and choose 20 hours worth to support what you are teaching in your technical training. There are three types of materials:
 - Skill Builders (do these **first**)
 - Workplace Activities
 - Math Practice Worksheets
- Choose the delivery option that works for you:
 - Integrated in your technical training
 - Offered as a full-time pre-instruction block
 - Scheduled outside of technical training (lunch breaks, before or after classes)

LEARNING MATERIALS

Success in Apprenticeship is a library of learning materials that you select from to fit your technical training and the needs of your learners. In order to make the best selection, you are encouraged to familiarize yourself with all the materials before deciding which ones to use. The program is designed for approximately 20 hours which means you do not have time to use all the materials.

The materials are intended to strengthen the essential skills targeted in this program: reading, document use and numeracy. All the materials are designed to be of interest to pre/apprentices and all the incorporate authentic workplace tasks and activities.

There are three types of materials: Skill Builders, Workplace Activities and Math Practice Worksheets.

Skill Builders

- Do all these **first!**
- There are 15 Skill Builders covering reading, document use and numeracy.
- Each Skill Builder takes 30 to 45 minutes to complete.
- Skill Builders emphasize the core essential skills used by apprentices. They help learners develop strategies for effective use of their essential skills.
- More details on pages 3-4.

Workplace Activities

- There are 54 different Workplace Activities.
- Each Workplace Activity takes approximately 15 minutes to complete.
- Workplace Activities require learners to solve problems or complete workplace tasks by applying and reinforcing the skills developed through the Skill Builders.
- More details on page 5-6.

Math Practice Worksheets

- There are 52 different Math Practice Worksheets that provide practice in math concepts such as geometry, algebra, and trigonometry.
- Each Math Practice Worksheet takes approximately 5 minutes to complete.
- They can be used with groups or to support individual learners who want to improve or brush up their basic math skills.
- More details on page 7.

More on Skill Builders

There are 15 different Skill Builders.

Reading (3)	Document Use (6)	Numeracy (6)
<ul style="list-style-type: none"> • Key Words & Phrases • Scanning • Skimming 	<ul style="list-style-type: none"> • Charts & Graphs • Entry Forms • Flowcharts • Navigating Regulations • Tables & Lists • Technical Drawings 	<ul style="list-style-type: none"> • Calculating Area • Conversion • Percentages, Decimals & Fractions • Pythagorean Theorem • Rounding Whole Numbers & Decimals • Volume

- Do the Skill Builders **first!**
- All the Skill Builders are contextualized to the workplace.
- Each Skill Builder takes 30-45 minutes to complete including a review of the skill by the instructor, using the material provided, and time for learners to read the background and complete the tasks.
- Completing all the Skill Builders will take the first 7.5 to 11 hours of the 20 hours required to complete the program.
- TIP: Use the Reading and Document Use Skill Builders first. Although many learners struggle with Numeracy, they often do so because they have trouble locating the information they need to set up the math problems. Improved reading and document use skills help learners to that faster and more accurately.
- All Skill Builders follow the same pattern for organizing the information:
 - Key Points, Steps, Example Using the Skill, and Reflection.

The Using the Skill section is a Workplace Activity (with Answer Key) built into the Skill Builder and includes all authentic materials needed to complete the task. Organizing all Skill Builders with the same pattern makes it easier for learners to follow the information. The next page shows the pattern using the Tables & Lists Skill Builder.

TABLES & LISTS SKILL BUILDER

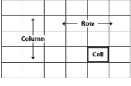
TABLES & LISTS

Tables are made up of lists and are one of the most common structures used to organize information. They are not meant to be read in detail. They are used to help people quickly find specific information or easily compare and contrast information.

KEY POINTS

Tables:

- are an arrangement of information that is displayed in rows and columns and cells
- are typically read top to bottom and left to right.
- contain two or more columns of information related to each other across the row.



Lists:

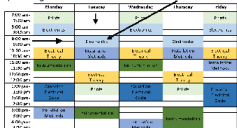
- The most basic table is a list with one column and two rows.
- The 2nd row in the table can also be called a label or heading.
- The 2nd row contains items that can be organized in different ways such as alphabetically or by importance.
- The title of the list indicates the relationship between the items.
 - In the example to the right, the relationship amongst the items is that they are all gasses.

GASES

- Riftan
- Methane
- Oxane
- Propane

Intersecting table:

- Contain three separate lists of information in one display
- Information is found in the intersecting cell where a row and column meet. The intersection relates two types of information to each other.
- Is a type of table in which the information you require is found by looking down and across to a third location.



BOW VALLEY COLLEGE TABLES & LISTS | 1

TABLES & LISTS SKILL BUILDER

STEPS

- Determine what information you are trying to find.
- Scan the row and column headers and find the point where they meet (or intersect) in the table.
- Double-check that this is the information you are looking for.

EXAMPLE

Tables can be used to organize jobs with many steps. For example, the table below shows the tasks to be completed to install an in-ground pool.

TASK	WORKER	# WORKERS	DAY	MATERIAL COSTS
Excavate	Machine operator	2	5	1,500
Frame walls	Mason	4	6	800
Install plumbing	Plumber	2	3	700
Install electrical	Electrician	2	2	500
Pour concrete	Mason	2	4	2,000
Install pump & filter	Plumber	1	1	3,000
TOTALS		13	21	8,500

This one small table contains a wealth of information about what needs to be done to install the pool.

It describes, with very few words:

- what types of skilled workers are needed for the project,
- how many of each worker is required,
- how many days each task will take,
- the cost of any materials needed to complete each task.

With this information it is possible to answer questions related to the job such as how many electricians will be needed, how much will the plumbing materials cost, how many days will it take in total to install the pool. If you had to read all this in a page of text it would take considerably longer to find the information.

Think you understand how tables and lists work? Try it yourself on the next page.

BOW VALLEY COLLEGE TABLES & LISTS | 2

TABLES & LISTS SKILL BUILDER

USING THE SKILL

In the Workplace: Safety bulletins contain important information related to maintaining safe conditions on the jobsite to reduce accidents, injuries and lost time.

QUESTIONS

Locate the answers to the following questions in the table and write them in the space provided.

- How many columns and rows does the table have?
- Aside from the table format, what are two other formatting clues that will help you find information quickly?
- You have been asked to find the lockout guidelines for materials in the supply lines of bins and silos. Highlight the row in which you would find the information.
- Kinetic energy sources are used at your workplace. What is the most important thing you need to explain to co-workers about what must be done to lockout kinetic energy sources?
- In your own words, summarize the lockout guideline for Electrical Energy.

REFLECTION

How do you use tables and lists at work? When do you use them?

BOW VALLEY COLLEGE TABLES & LISTS | 3

TABLES & LISTS SKILL BUILDER

Lockout

Figure 1
Energy forms, energy sources, and general lockout guidelines

Energy Form	Energy Source	General Lockout Guideline
Electrical Energy	<ul style="list-style-type: none"> Power sources such as: buses Automatic power cuts Switches Isolators Control systems (electrical energy) 	<ul style="list-style-type: none"> There is 10 times as much stored energy in a cable (as compared with a switch) and, thus, a cable will store more energy for the reaction. Lock out tag out devices, switch cutters, or fuse links, and fuse links (if applicable). Fully discharge all capacitor systems (e.g., static machines) to drain power from capacitor's secondary or tertiary windings.
Hydraulic Energy	<ul style="list-style-type: none"> Hydraulic systems (e.g., hydraulic presses, cranes, cylinders, jacks, etc.) 	<ul style="list-style-type: none"> Use self-locking hydraulic fluid and relief devices, or lock out attachments and cylinders. Block off and block lines to the source.
Pneumatic Energy	<ul style="list-style-type: none"> Pneumatic systems (e.g., heavy presses, presses, actuators, etc., for large presses, cranes, or hoists) 	<ul style="list-style-type: none"> Use self-locking hydraulic fluid and relief devices, or lock out attachments and cylinders. Block off and block lines to the source. Block off and block lines to the source.
Mechanical Energy (stored in a spring, stored in a flywheel, stored in a rotating mass, stored in a compressed gas, stored in a compressed liquid, stored in a compressed solid)	<ul style="list-style-type: none"> Spings (e.g., in air hoists) Rotations Coil springs Brake bands Flywheels Pressure vessels Supply lines Storage tanks and vessels 	<ul style="list-style-type: none"> Block and lock out in a safe location. Remove any stored energy (e.g., in a flywheel, in a rotating mass, in a compressed gas, in a compressed liquid, in a compressed solid). Block off and block lines to the source. Block off and block lines to the source. Block off and block lines to the source.
Stored Energy (stored in a spring, stored in a flywheel, stored in a rotating mass, stored in a compressed gas, stored in a compressed liquid, stored in a compressed solid)	<ul style="list-style-type: none"> Spings (e.g., in air hoists) Rotations Coil springs Brake bands Flywheels Pressure vessels Supply lines Storage tanks and vessels 	<ul style="list-style-type: none"> Block and lock out in a safe location. Remove any stored energy (e.g., in a flywheel, in a rotating mass, in a compressed gas, in a compressed liquid, in a compressed solid). Block off and block lines to the source. Block off and block lines to the source. Block off and block lines to the source.
Thermal Energy	<ul style="list-style-type: none"> Supply lines Storage tanks and vessels 	<ul style="list-style-type: none"> Block off and block out in a safe location. Block off and block out in a safe location. Block off and block out in a safe location.

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Source: Workplace Safety & Health Services (2012). Lockout [PDF]. Retrieved June 2013. Retrieved from http://www.wsh.ca/WSP/mediasite/ResourceDownloads/WSP_Lockout_2012_Final.pdf. Document adapted from source. Content may not be current.

BOW VALLEY COLLEGE TABLES & LISTS | 4

More on Workplace Activities

There are 54 different Workplace Activities (complete list on the next page).

- Almost all the Workplace Activities are contextualized to the workplace.
- Each Workplace Activity takes approximately 15 minutes to complete. About one half of the 20 instructional hours will be Workplace Activities.
- Workplace Activities are identified by the skill they focus on (reading, document use, numeracy) AND by the content topic (for example, safety data sheet or product recall).
- All Workplace Activities include reference to the Skill Builder(s) that can provide targeted practice if learners struggle with completing the activity.
- While Workplace Activities are identified by primary skill focus, it is useful for learners to understand that workers almost never use just one skill to complete a task. For example, planning a materials delivery takes both document use (map reading) and numeracy (scheduling time). Because of this, secondary skills are also identified for each activity.
- The activity titles are intended to provide a general idea of the content. In some cases, there is also a reference to a specific trade (for example, Finding Information in Codes – Plumbing). It is important that learners understand that the essential skills they are developing are transferable across tasks, occupations and even sectors. Completing an activity that develops skills in deciphering and locating information in building codes, is useful no matter which trade the code is written for.
- All Workplace Activities follow the same pattern for organizing the information.
 - Page 1: Instructor Notes including learning objectives, skill(s) focus, handout list, and talking points specific to the activity.
 - Page 2: Answer Key
 - Pages 3-4/5: Activity sheets for the learners including all required authentic workplace documents.

Workplace Activities

Reading (18)	Document Use (18)	Numeracy (18)
Efficient Reading: Dislocations	Apprenticeship Completion	Door Order Sheet
Efficient Reading: How to Build a Drone	Flowchart: Backhoe Operation	Heating Systems
Efficient Reading: Solar Power	Hazard Assessment	House Front Measurement
Efficient Reading: Sports Story	Incident Report	Invoice ₁
Efficient Reading: White Fang (Fiction)	Invoice ₃	Invoice ₂
Changes in the Electrical Code	Line Drawings	Map Reading: Estimation
Demand for Skilled Trades	Log Book: HEO	Measuring Temperature
Finding Information in Codes: Building	Maintenance Schedule: Sprinkler	Mixing Cement
Finding Information in Codes: Electrical	Mileage Log	Noise Levels
Finding Information in Codes: Plumbing	Project Schedule	On the Job Calculations
Health and Safety Regulations	Product Recall: Chainsaw	Patio Layout
Heat Stress Safety Bulletin	Product Recall: Digital Clamp Meters	Pay Statements
Lockout Procedure	Product Recall: Torch Handles	Product Installation
Navigating Codes	Product Recall: Hot Water Boiler	Rough Openings: Calculation
Project Schedule Emails	SDS: Auto Service Technician	Rough Openings: Conversion
Safety Bulletin: HEO	SDS: Carpenter	Tiny House
Starting Your Own Business	SDS: Heavy Equipment Operator	Volume of Cylinders and Cones
Step by Step Instructions: Millwright	SDS: Welder	Work Schedules

More on Math Practice Worksheets

There are 52 Math Practice Worksheets. Each worksheet is 2 pages plus an answer key. The worksheets are **optional** and are provided for groups or individuals who would benefit from extra practice completing basic calculations and using formulas.

GEOMETRY (10)

- 1: Lines, rays, segments & angles
- 2: Lines, rays, segments & angles
- 3: Parallel lines & transversals
- 4: Triangles
- 5: Triangles
- 6: Quadrilaterals
- 7: Quadrilaterals
- 8: Summary
- 9: Summary
- 10: Summary

CONSTRUCTION GEOMETRY (12)

- 1: Drawing segments & angles
- 2: Drawing circles & sectors
- 3: Drawing circles & sectors
- 4: Constructing bisectors
- 5: Drawing triangles
- 6: Drawing triangles
- 7: Drawing quadrilaterals
- 8: Drawing polygons
- 9: Drawing polygons
- 10: Summary
- 11: Summary
- 12: Summary

ALGEBRA (6)

- 1: Equations
- 2: Equations
- 3: Equations
- 4: Equations
- 5: Polynomials
- 6: Polynomials

TRIGONOMETRY (5)

- 1: Trigonometry
- 2: Trigonometry
- 3: Trigonometry
- 4: Trigonometry
- 5: Trigonometry

MEASUREMENT (4)

- 1: Measurement
- 2: Measurement
- 3: Measurement
- 4: Measurement

PERIMETER, AREA & VOLUME (3)

- 1: Perimeter, area & volume
- 2: Perimeter, area & volume
- 3: Perimeter, area & volume

RATIO & PROPORTION (4)

- 1: Ratio & proportion
- 2: Ratio & proportion
- 3: Ratio & proportion
- 4: Ratio & proportion

PERCENT (4)

- 1: Percent
- 2: Percent
- 3: Percent
- 4: Percent

GRAPHING (4)

- 1: Graphing
- 2: Graphing
- 3: Graphing
- 4: Graphing

SELECTING AND USING THE MATERIALS

Selecting Materials

Success in Apprenticeship works best when the Skill Builders are completed first, and the reading and document use Skill Builders are completed before the numeracy ones. Other than those recommendations, the materials you choose to use and the order you use them in, should be completely dictated by the content of your technical training, the learning needs and interests of your group(s) of learners.

For example, where your training includes information presented in graphs (on any topic), preface it by completing the Charts and Graphs Skill Builder. Where your training involves large amounts of text (on any topic), start by introducing the Key Words & Phrases Skill Builder. The more familiar you are with the content of Success in Apprenticeship, the better you will be able to match that content to your technical training content. This will take some out of classroom time the first time you do it, however, once that matching is done, you will be able to repeat the instruction with no extra preparation with your next cohort of learners.

Once the Skill Builders have been completed you are ready to go on to choosing from the Workplace Activities. By this point in the teaching term you will have a clear understanding of your group of learners and be able to select activities based on their interests (select by activity content) and needs (select by skill focus).

Instructional Strategies

The suggestions described below have been found to improve learner engagement with using essential skills materials.

If you are attempting remote delivery or online instruction of the essential skills training, consider using some of the recommended practices listed on pages 17 and 18 in the Additional Resources section to help with planning and organizing your training plan.

Before beginning any Workplace Activity, review the introduction and instructor talking points provided on page 1.

Begin every Workplace Activity by reviewing the key points of the relevant Skill Builder. Then briefly introduce the topic and what learners will be asked to do. Ask questions to help them consider how they already use the skill or strategy in their work and daily lives.

Useful language may include:

- *The work you are about to complete is focussed on practicing _____ skill.*
- *Pretty much any skill we use gets rusty when it isn't used for a long time and this is the case for many people starting an apprenticeship technical training program.*
- *What examples do you have of times when you have used this skill at work or in your daily life?*
- *Is it something you haven't used for a long time?*

Strategies that can be used with all reading activities include:

- identify and review key words and vocabulary
- read titles and headings together
- individually read the sentence/passage silently
- ask for a volunteer to read the passage aloud
- summarize the passage in their own words to their partner

Look for opportunities to integrate ES into apprenticeship technical training. Choose a skill or two from the Skill Builder list that you can reinforce by highlighting for pre/apprentices when there are opportunities to ally the skill to technical training content.

For example, if the technical training task requires learners to do some reading and perhaps complete some documentation, remind them that checking for key words in the questions or assignment and then skimming and scanning the text can save them time. Rather than reading every word on a page, learners may be able to more quickly find the information relevant to completing their work by using the reading strategies.

Pages 12 through 16 contain specific talking points you can use to help learners understand the importance of developing their reading, document use, and numeracy skills.

Navigating Documents

Navigating documents is an important part of both effective reading and document use skills. When learners navigate documents, they are using the following skills:

1. Understanding the structure or organization of the document.
2. Skimming to gain a general impression.
3. Deciding on questions/Identifying key words and phrases (What am I looking for? /What am I being asked to find?/What words or phrases will tell me that I have found what I am looking for?).
4. Making predictions.
5. Scanning to locate information/cycling through the document to find the information.
6. Synthesizing (combining) and summarizing information to come up with an appropriate response. (comprehension skills).
7. Confirming the correct information has been found.

Encourage learners to spend a minute “navigating” every new document they encounter until it becomes second nature. Reinforce, practice and model these strategies with every reading done in the class. This needs to become a habit so learners will remember to do this at work and away from the classroom.

One way to help learners do this is to copy and distribute the Navigation Checklist on the next page.

Navigational Skills Checklist

- ✓ Look over the material.
- ✓ Think about the organization or structure of the document.
- ✓ Predict content – make connections to previous knowledge and experience.
- ✓ Skim to gain general impressions – think about the “big picture”.
- ✓ Consider: “What am I looking for? What am I being asked to find?”
- ✓ Identify key words/phrases that will indicate the correct information has been located.
- ✓ Make predictions of where the information will be found within the document.
- ✓ Scan through the material looking for key words and phrases – cycle through document.
- ✓ Continue to make predictions – look for clues (titles, sub-titles, headings, graphics, etc.)
- ✓ Think about what is being read – make mental note of details.
- ✓ Monitor comprehension – adjust strategies if necessary.
- ✓ Locate information.
- ✓ Summarize the material in your own words.
- ✓ Consider: “Have I found the information that is needed?”.
- ✓ Re-check if information answers the original question – access additional sources if necessary.

ESSENTIAL SKILLS TALKING POINTS

Much research has been conducted about how literacy and essential skills impact employment and life outcomes. According to findings from international studies:

1. **Skill gaps affect many adults.** Nationally, almost half of adults in Canada have literacy and essential skills below the desired level (Level 3).
2. **Literacy and essential skills are tied workplace success.** Weak skills make it difficult for individuals to learn new tasks and advance their careers. Individuals with skill gaps are much more likely to experience safety incidents at work and may struggle to adapt to workplace change. Productivity and efficiency in the workplace are negatively impacted by skill gaps in the workforce.
3. **Literacy and essential skills are maintained through regular use.** We lose skills unless we continually apply them and engage in continuous learning. This learning can take place through formal channels, or through informal learning opportunities in the workplace and daily life.
4. **Adults with literacy and essential skill gaps may not recognize they have a problem.** Many adults with low literacy and essential skills can read and write at a low level, find jobs and cope in mainstream society. However, their skill gaps act as a substantial barrier to full and successful participation in all aspects of work and life.
5. **High levels of education do not guarantee high levels skill.** The link between literacy and educational attainment is not as clear as once imagined. For example, 22% of university graduates have low literacy and essential skills. Many high-school graduates have literacy gaps that make them less likely to succeed in further education and in their transition to the labour market.
6. **In comparison to other countries, Canada has a larger than average disparity in skill levels between its lowest and highest skilled citizens.** On the surface, Canadians have comparable average skills to other developed nations. However, this paints a misleading picture because Canada has a larger proportion of its population at the highest and lowest levels of literacy when compared with other countries. This further disadvantages those at the low end of the skills spectrum and has a negative impact on GDP.

7. **Literacy is strongly correlated with life chances and use of opportunities.** Employability, earnings potential, and life-long learning are strongly tied to literacy and essential skills. Individuals with desired (Level 3) levels of skills are unemployed for shorter periods of time and are more likely to have higher incomes.
8. **There is little demand in Canada for workers with skills below Level 3.** Almost all occupations in Canada require workers with skills at Level 3. Influences such as globalization and rapid occupational changes brought on by advancements in technology have necessitated a highly skilled workforce. Jobs that traditionally required little education and skill are increasingly impacted by technologies and regulatory requirements; all Canadian workers are now required to find and use complex information accurately and efficiently.

Source: <http://www.towes.com/en/literacy-and-essential-skills/the-importance-of-literacy--essential-skills>

Reading Talking Points

If there is text to be read as part of the work learners are doing, before they begin, briefly review the basics about reading. After leading the review the first couple of times, ask the pre/apprentices to describe the basics, before beginning a task.

Why care about reading?

Working-age individuals, with low level reading skills are twice as likely to be unemployed as individuals who have those skills at levels 3, 4 or 5. Individuals earn more during their working lifetime, if they have the skills to use information from reading text to solve problems and complete tasks.

Reading is the process of reading material in the form of sentences and paragraphs. It commonly involves reading notes, letters, memos, books, reports or journals and the text in manuals, regulations, specifications etc.

Reading text involves solving problems or completing tasks that utilize written materials, at least one paragraph in length, such as:

- forms and labels if they contain at least one paragraph
- print and non-print (electronic) materials
- paragraph-length text in charts, tables and graphs

In many cases at work, we do not need to read an entire document. The more efficient approach is to use reading strategies such as identifying key words/phrases and question words and skimming or scanning text. Once we locate the section of a text that has the information we require we can read just that part in greater depth.

Examples of reading:

- Safety regulations
- Policies
- Assembly instructions
- Company reports
- Rules and standards
- WHMIS and MSDS information

Document Use Talking Points

If there are documents to be reviewed or completed as part of the work they are doing, before they begin, briefly review the basics about documents. After leading the review the first couple of times, ask the pre/apprentices to describe the basics, before beginning a task.

Why care about documents?

- In all the research that has been done on the kinds of reading/writing etc. tasks that workers have to complete in the course of a day, not one workplace in Canada was found that did not use documents. They all relied on them to some degree.
- When documents are not used correctly, it can cost companies significant amounts of money and time to fix errors.
- Employers are interested in having employees who can accurately use documents and employees who have good document use skills are more accurate and efficient on the job.

A Document is a visual display of words, numbers, symbols, and images, etc. in paper or electronic formats (e.g., a computer screen, microfiche documents, equipment gauges, clocks or flags).

Document use refers to the process of reading/interpreting, writing/filling in, and/or creating documents. It is the skill we use to interact with documents.

Documents:

- present information in a compressed and efficient format
- can quickly find needed information without having to longer text
- contain formatting clues such as:
 - bolded text
 - headings
 - sub-headings
 - sections
 - information in columns and rows – read down and across
 - colour, shapes, lines, or arrows
 - may use bullets in lists
 - “fine print”

Using formatting clues is a very effective ways to find information in a document.

Examples of documents:

- lists
- technical drawings
- charts and graphs
- schedules
- entry forms

Numeracy Talking Points

If there are numeracy tasks to be completed as part of the work they are doing, before they begin, briefly review the basics about the main aspect of numeracy they are going to be working on. After leading the review the first couple of times, ask the pre/apprentices to describe the basics, before beginning a task.

Why care about numeracy?

Working-age individuals, with adequate or better numeracy skills are twice as likely to be unemployed as individuals who have skills at levels 3, 4 or 5. Individuals earn more during their working lifetime, if they have the numeracy skills to solve problems and complete tasks.

Numeracy is the ability to use and understand numbers and to think in quantitative terms.

Numeracy:

- Examples of numeracy errors include measurement errors caused by metric-trained employees working in an imperial-measurement environment, and incorrect charges to suppliers and customers because of calculation mistakes.
- While the concept of numeracy is more than “just math”, basic math skills – such as the ability to convert between fractions, decimals and percentages – are a necessary foundation to being able to complete more complex numeracy tasks.

Examples of numeracy:

- measurement and calculation
- money math
- scheduling, budgeting and accounting
- estimation
- data analysis

ADDITIONAL RESOURCES

Considerations for Remote Delivery of Essential Skills Training

Consider the following practices when planning and organizing essential skills training using remote delivery or online instruction.

- **Remember, technology should complement the use of good teaching practices- it cannot replace these on its own.**
- **Maintain a focus on skill building** during online training by incorporating the instructional strategies for teaching essential skills that you are comfortable with or that have worked for you in the past.
- **Set clear expectations.** Letting apprentices know what you expect of them, especially about their engagement with assigned lessons and practice opportunities will help apprentices meet learning objectives. Online learning can be challenging and may involve several moving pieces occurring all at once or in a similar timeframe. *How often do you expect apprentices to engage with materials over a set period and for how long?* Let them know upfront.
- **Offer varied opportunities for engagement and instruction.** Blending synchronous (happening at the same time, usually in real-time) and asynchronous (not happening at the same time or not in real-time, may be any-time) teaching and learning opportunities are likely to engage apprentices in different ways.
 - Live sessions provide opportunities where apprentices can complete activities either individually or in groups, ask questions and receive immediate feedback. For instructors, live sessions provide opportunities to observe progress or offer timely guidance to apprentices, like an in-person environment. Session length does not necessarily guarantee quality and sometimes short sessions can do the trick.
 - Any-time learning can offer additional flexibility during delivery and allow apprentices to work (and re-work) on learning activities based on need. Using electronic handouts, web objects, videos, slide decks, hyperlinks or links to additional practice activities can help to deliver knowledge components and facilitate practice when learning at your own pace.
- **Varying the proportion of each type of engagement opportunity is entirely possible.** Some subjects or topics are likely better suited for engagement using one method over the other and introducing some variance in engagement may keep training delivery from becoming stale or avoid apprentices losing interest.

- **Provide timely and relevant feedback regardless of the type of engagement.**
All apprentices will benefit from knowing what is working and what is not as soon as possible. Send apprentices a short written, audio or video message if live sessions are not possible or not planned in the immediate future. Recognize achievements (even small ones) to keep apprentices motivated and on-track.
- **Generally, be consistent with the pacing and ordering of training activities.**
Being able to anticipate when lessons practice opportunities normally occur during a training program will help with time and workload management.
- **Collaboration and teamwork can still be done at distance** using pre-planned breakout sessions, group discussions, private forums, digital whiteboards or synched documents (for example, Google Docs). Asynchronous collaboration can provide opportunities for effective peer-to-peer mentorship, be more informal and may involve less pressure than similar opportunities provided in real-time.
- Online teaching (and learning) often takes more time than intended and **using the automated tools and functions of your LMS** is advantageous. Most learning management systems (LMS) like Desire2Learn (Brightspace) or Moodle can automate tracking of learner progress, follow-up communications and even the scoring or feedback of certain types of learning activities.
 - Ideal activities to offload to the LMS include the simple reminders to apprentices to get something done or quick recognitions of completion (or incompleteness) of assigned material.
 - Use pre-programmed release conditions to automatically release the content you may be withholding until a certain level of progress or quality is achieved. Release conditions can usually be set for an entire class, groups or individually and are not performed until apprentices meet the instructor-set criteria for release (for example, time-to-task performance, score or submission).
 - Although it will take some additional upfront investment of time to execute, you are likely to have more time for higher impact activities such as providing more detailed or personal feedback, spending additional one-on-one time with struggling learners, addressing or revisiting challenging concepts during training.
 - With additional time, and if needed, you may even be able to adjust your training plan to better suit the learning needs of your apprentices.
 - If uncertain about how to use these features, contact your LMS support team or ask a knowledgeable colleague if they can show you how.

Sources: Khan Academy; Brightspace Community; Bow Valley College- Learning & Innovation

Onlines Resources

More essential skills teaching ideas are available in these free onlines resources.

Essential Skills Profiles <http://www.jobbank.gc.ca/home-eng.do?lang=eng>

- Occupation-specific
- Aligned with NOC codes
- 350+ profiles including all Red Seal
- Based in workplace-based research and observation
- Each profile contains:
 - Brief description of the occupation
 - Examples of tasks that illustrate how essential skills are used in the occupation
 - Complexity ratings that describe the level of difficulty of the tasks

Skills Canada <https://www.skillscompetencescanada.com/en/>

- Includes free downloadable app

Red Seal Trades <http://www.red-seal.ca/resources/.2ss.2nt.3.1l-eng.html>