TEXAS WORKFORCE COMMISSION

esc6
Dedicated to Serve

DIGITAL LITERACY for the
CONSTRUCTION INDUSTRY

Student Workbook

Table of Contents

Introduction

There are many tools used in the construction industry. These include the basics, such as hammers, tape measures, and specialized tools for different types of work, but they also include technology-based tools.

On a job site, you might see different tools with technology components, like digital measuring devices or even helmets that take photos and videos. But before you get the job, you may need to have digital literacy skills, which allow you to locate, evaluate, and communicate information.

This course will use hands-on activities to teach you the basic digital skills needed for working in the construction field, with a focus on computer-based skills, like writing emails and creating documents and spreadsheets.

By the end of this course, you will be able to:

1 - **Perform basic functions on a computer**
2 - **Explain what digital literacy means**
3 - **Compose and send an email with an attachment**
4 - **Create a document**
5 - **Create a spreadsheet**

1. Basic Computer Skills

Computers come in many different shapes, sizes, colors, and speeds, but they all essentially perform the same tasks. It is important to understand the basic functions of computers and other devices so that you can perform technology-based job tasks at your workplace.

For example, your boss may ask you to complete a safety training course online or digitally sign a document. The activities within this lesson will provide you with a basic understanding of computers, which will build the foundation needed to complete the activities in future lessons.

After completing this lesson, you will be able to:

1 - **Identify different technology devices and tools**
2 - **Identify the parts of a computer**
3 - **Demonstrate knowledge of keyboard keys**
4 - **Identify icons and symbols on a desktop**
5 - **Identify file and storage types**

Activity 1: Technology Devices

In the workplace, you might see various technology devices and tools. Using the word bank below, identify each technology device or tool.

Word Bank				
Desktop	Tablet	Webcam	Flash Drive	Keyboard
Mouse	Phone	Laptop	Monitor	Touchpad

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Activity 2: Parts of a Computer

Now that you have had an opportunity to identify various technology tools in the workplace, let's take a closer look at the parts of a computer.

Label the computer parts by filling in the blanks below.	
1	6
2	7
3	8
4	9
5	10

Activity 3: Keys on a Keyboard

It is important to familiarize yourself with the various keys on a keyboard. In this activity, you will locate the keys shown on the keyboard below and on your classroom computer. Understanding the functions and locations of the keys will assist you when completing word processing tasks.

Keyboard Functions

The descriptions provided below will remind you of what each key does.

Control: Used together with other keys to complete certain actions (for example: copying, pasting, and cutting text)

Shift: Used to make a letter capital or to access the characters on the top line of some keys (for example: &, ?, or +)

Enter: Starts a new line at the cursor position

Delete: Used to remove the character to the right of the cursor
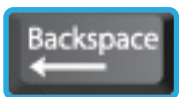
Backspace: Used to remove the character to the left of the cursor

Tab: Used to advance the cursor to the next tab stop
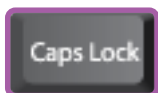
Caps Lock: Used to type capital letters or in ALL CAPS

Number Lock: Allows the number keypad to be used

Arrow Keys: Used to move the text cursor to the right, left, previous line, or next line

Space Bar: Used to enter a space between words

Activity 4: Icons on a Desktop/Phone

Icons are used on computers, tablets, and phones to represent items, like programs and folders.
Clicking or tapping the icon opens the program or folder.

The icons below represent some of the software programs and internet browsers you will be working with throughout this course.

Word Processing	Email

Spreadsheets	Web Browsers

Activity 5: File and Storage Types

Computers have many different types of files on them. Each type of file has an extension, which is a three- or four-letter identifier found at the end of the file name, after the period.

Files can be saved in many places on the computer hard drive, on an external drive, or online.
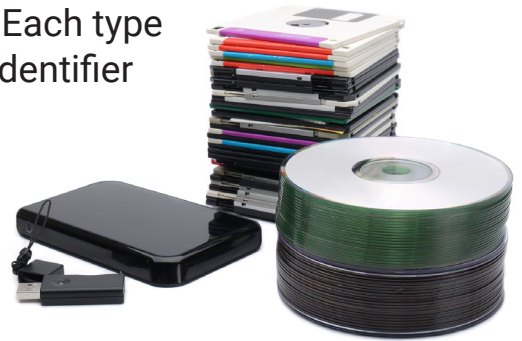
Matching

Match each icon below to its file type.

W (Word)	.gsheet
X (Excel)	.docx
(Google Docs)	.gdoc
(Google Sheets)	.xlsx

Reflection

Do you feel comfortable saving files on a hard drive, flash drive, and online?

Use the space below to write your file name down, and describe where you saved the file.

_____

_____

_____

Activity 6: Accessibility Settings

It is possible to change settings to make your computer more user-friendly to enhance your experience. Use the spaces below to take notes on each type of *Ease of Access* setting. What can you change, and will any of these settings be useful for you?

VISION

HEARING

INTERACTION

Vocabulary

Some of the vocabulary words you learned in this lesson are listed below.
Refer back to this page if you need help remembering.

Vocab Word	Definition
Cloud-based Storage	Storage space which can be accessed from the internet.
CPU	Central Processing Unit; the brain of the computer system.
Cursor	The indicator on a screen showing the point that will be affected by input from the user, such as where typed text will be inserted.
Desktop	The first screen you see on the monitor when the computer starts up.
Email	Electronic messages sent from one user to another.
Flash Drive	A small, portable file storage device.
Hard Drive	A hardware component that stores all of your digital content.
Hardware	The parts of the computer system that you can touch (like the CPU).
Icon	A graphical representation of a program or file.
Keyboard	Input device used to communicate with the computer — composed of keys that send a signal to the computer to complete processes.
Laptop	A small, portable computer with a screen and keyboard.
Monitor	The part of the computer that visually communicates with the user; also known as the screen.
Mouse	A tool that is used to communicate with the computer; it is used to move the cursor and perform other tasks.
Printer	A device that takes information from the computer and prints it on paper.
Power Button	A button used to turn the computer on and off.
Software	Programs used on the computer; also called applications.
Tablet	A touch-screen device that resembles a large smart phone.
Touchpad	A computer input device used like a mouse.
USB Port	A port on a computer used to plug in devices and tools like flash drives and keyboards.
Webcam	A camera that attaches to a computer to stream video in real time.

Check Your Understanding

In this lesson, you learned basic computer skills. You should now be able to identify types of devices, parts of a computer, keyboard functions, icons, and file and storage types. You should also understand accessibility settings, which are called *Ease of Access* settings.

1: Technology Devices

Label each device below.

....

2: Parts of a Computer

Fill in the blanks within the statements below.

A _____ is made up of many different keys, and it allows the user to communicate with the computer.

The button used to turn on a computer or device is called a _____.

_____ are commonly used to plug in devices and tools, like flash drives, to the computer.

3: Keys on a Keyboard

What are these keys called, and what do they do?

_____

_____

_____
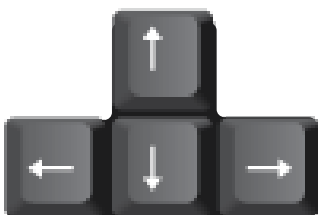
Check Your Understanding

4: Icons on a Desktop

In your own words, explain what an icon is. Then inside the box, draw the icon of an internet browser of your choice.

An Icon is:

_____

_____

_____

5: File and Storage Types

Write the name of the Microsoft application next to its file type.

.docx   _____

.xsls   _____

Which hardware device could you use to store files externally (in a place outside of your computer)?

_____

6: Accessibility Settings

What are the three main types of accessibility settings on a computer?

1. _____

2. _____

3. _____

2. Digital Literacy Overview

In today's world, technology is seen and used everywhere: in public, at home, and in the workplace. Having digital literacy means having the ability to work in a place where technology is used, not only to perform tasks on a job site but also to communicate with your boss and co-workers.

This lesson will give you an overview of digital literacy and explain why having digital skills will make you even more valuable as an employee.

After completing this lesson, you will be able to:

1 - **Define digital literacy**
2 - **Demonstrate an understanding of the importance of digital literacy in the workplace**
3 - **Understand and describe your digital footprint**
4 - **Describe digital citizenship**
5 - **Describe digital security and identify ways to keep your information safe**
6 - **Create a Google account with a strong password**

Activity 1: Defining Digital Literacy

Digital literacy is a person's ability to use information and communication technologies to find, evaluate, use, create, and share information and content.

In other words, it means having the skills you need to work in a society where access to information is largely through digital technologies like internet platforms, mobile devices, and social media.

Reflection

Digital literacy incorporates a wide range of skills needed to succeed in a workforce where many forms of technology are used. Think about digital literacy skills that may be needed in your workplace. **In your own words, what does having digital literacy in the workplace mean to you?**

_____

_____

_____

_____

Why is digital literacy an important skill?

_____

_____

_____

_____

Activity 2: Your Digital Footprint

Your digital footprint is the information about you that exists on the internet. It shows where you have been, the data you have shared, and the traces you have left behind.

The footprint consists of many types of information. Some sources include browsing, job searching, shopping online, financial activities, and social activities.
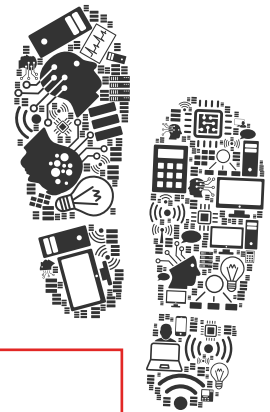
? What's in a footprint?

Circle or highlight each action that can show up in your digital footprint.

- Buying something online

- Viewing articles on a news app

- Reading a paper magazine

- Signing up for a newsletter online

- Opening a credit card account

- Using a banking app

- Using a digital tape measure

- Subscribing to a newsletter

- Reposting articles you read

- Joining a dating website or app

- Using a fitness app to track workouts

- Playing games on social media

- Shopping at a cell phone store

- Sharing photos on social media

Tips for Protecting Your Digital Footprint

1. Use privacy settings when available.
2. Don't overshare information online, including on social media.
3. Be aware of being tagged in posts and photos on social media, and un-tag yourself when needed.
4. Keep a list of accounts, and delete accounts you no longer use.
5. Unsubscribe from emails and newsletters you no longer need.
6. Don't enter personal information when using public Wi-Fi.
7. Don't log into third-party websites or apps using your Facebook account.

Activity 3: Digital Citizenship

Digital citizenship is the ability to safely and responsibly access digital technologies and also to be a respectful member of society. As people who use and communicate with others through digital technologies, we are digital citizens.

Digital Citizenship Basics

The tips below will help you to be a good digital citizen.
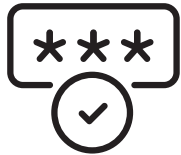
Passwords:
Be sure to create strong passwords, and don't use the same password for every account or website.

Private Information:
Be sure to protect your private information, like your address, email address, and phone number.

Personal Information:
Be careful about sharing personal information, like information about your family and pets.

Photographs:
Be careful sharing photos, and check photos for private details (like license plates or street signs) before posting them online.

Property & Permission:
Be sure you have permission to use someone else's work (property), such as images, before using them in your own projects.

Protection:
Beware of viruses, phishing, and identity theft. Protect your information.
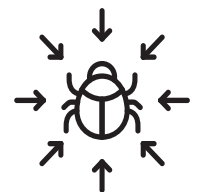
Professionalism:
Be respectful of others when communicating online.
Use professional language when talking with your supervisor and co-workers digitally, such as through email.

Activity 4: Digital Security

Digital security means protecting your online identity and your computer (and any other internet-connected devices) from people meaning to do harm.

Security & Online Safety Tips

The tips below will help you protect yourself and your devices as you navigate the internet and communicate online.

To protect your identity and devices:

- Make sure your computer has updated virus and malware protection software installed.
- Avoid suspicious or untrustworthy websites.
- Watch out for fake antivirus messages and pop-ups online.
- Make sure a website is secure before using your credit or debit card.
- Create strong passwords and change them often.
- Use different passwords for each online account you create.
- Never post your driver's license number, social security number, or other sensitive information online.
- Be careful what you send via chat, instant message, or email.
- Do not reply to strangers asking you to submit personal or account information.

To make sure your security has not already been compromised:

- Scan your computer using antivirus software to check for issues.
- Frequently check your bank and credit accounts for unusual activity.
- Check your credit score often to make sure no accounts have been opened in your name without your permission.

Activity 5: Creating a Google Account

Your Google account will allow you to access many of Google's online apps and tools, including Docs (word processing), Sheets (spreadsheets), and Drive (file storage). When you sign up for a Google account, you can create a Gmail (email) address at the same time. That email address will then be your Google username.

Basic steps to sign up for a Google account

Your instructor will walk you through creating an account, but the basic steps are provided here to remind you in the future.

1. Use an internet browser to navigate to www.google.com.
2. Click the *Sign in* button at the top of the page.
3. Click the *Create account* link.
4. Enter your first name, last name, and a username.
   - Remember that your username will become your email address.
5. Enter a password, then confirm the password (type the same thing). Be sure to choose something with at least 8 characters, with a mix of letters, numbers, and symbols, so no one can guess what you selected.
6. Click the *Next* button.

Did you choose a professional username and strong password?

Write your username and password below if you need help remembering them. You will use the account you created for future activities.

Username: _____

Password: _____

Remember:

Being professional online (including choosing an appropriate email address and choosing a strong password) helps ensure you are a good digital citizen and helps keep your digital information secure.

Vocabulary

Some of the vocabulary words you learned in this lesson are listed below.
Refer back to this page if you need help remembering.

Vocab Word	Definition
Antivirus Software	A type of computer program used to prevent, detect, and remove viruses and other harmful programs from a computer.
Digital Citizenship	The responsible use of technology by anyone who uses computers, the internet, and digital devices to engage with people.
Digital Footprint	The trail of information left behind when a person has been online.
Digital Literacy	The ability to use information and communication technologies to find, evaluate, use, create, and share information and content.
Digital Security	A broad term that describes resources used to protect a person's online identity and information. *This includes tools such as antivirus software.*
Identity Theft	A crime in which someone pretends to be someone else by stealing their information, such as their social security number, driver's license number, or account numbers.
Malware	Malicious (harmful) software that is typically delivered over a network, that infects a computer, steals information, or otherwise harms a computer or other device.
Phishing	A form of fraud where an attacker pretends to be someone they are not, often via email, in order to send harmful internet links or email attachments that can damage a device or lead to identity theft.
Username	A name given to, or selected by, a user (person) to identify that person on a computer, website, or anywhere online requiring a unique identifier.
Virus	A type of harmful software that causes damage to data and software on a computer.

Check Your Understanding

In this lesson, you learned a lot about what it means to live and work in a world where technology is everywhere. Think about how being a digitally literate citizen will help you in your job in the construction field.

What's in your footprint?

Think of one or two examples of information that may be found in your digital footprint, and explain how that information might affect either your current job or a job you plan to apply for in the future. **Write your response on the lines below.**

_____

_____

_____

_____

_____

How will you protect yourself?

What can you do to protect your device and your personal information as you navigate through the digital world? **Discuss one or two safety tips on the lines below.**

_____

_____

_____

_____

3. Email

Electronic mail, commonly called email, is a way to send messages between people using digital devices, like computers, tablets, and mobile phones. In the workplace, you may receive emails from your supervisor, from the human resources department, or from other employees.

This lesson will prepare you to receive and respond to those emails, as well as compose messages of your own.

After completing this lesson, you will be able to:

1 - **Explain what email is**
2 - **Identify common email products and apps**
3 - **Identify the parts of an email**
4 - **Understand safety tips for using email**
5 - **Compose an email using text-formatting options**
6 - **Create an email signature**

Activity 1: Parts of an Email

Email is a popular way to communicate in many workplaces, so knowing how to format and send an email is an important skill.

To boss@job.com ✕ **(1)**

Cc officemanager@job.com ✕ **(2)**   **(3)** Bcc

Request for Time Off **(4)**

Good Morning, **(5)**

I would like to request to use sick time on Monday, October 13 from 1pm to 4pm to attend an appointment. **(6)**

Thank you, **(7)**
Michael

Michael White
Assistant Project Manager **(8)**
ABC Construction
(123)456-7890

↶ ↷ | Sans Serif **(10)** T ▾ | B I U A ▾ | ≡ ▾ ≔ ≔ ⧉ ⧉ 🙶 S X̶ **(9)**

Send ▾ | A 📎 🔗 ☺ △ 🖼 🕐 ✏ ⋮ 🗑
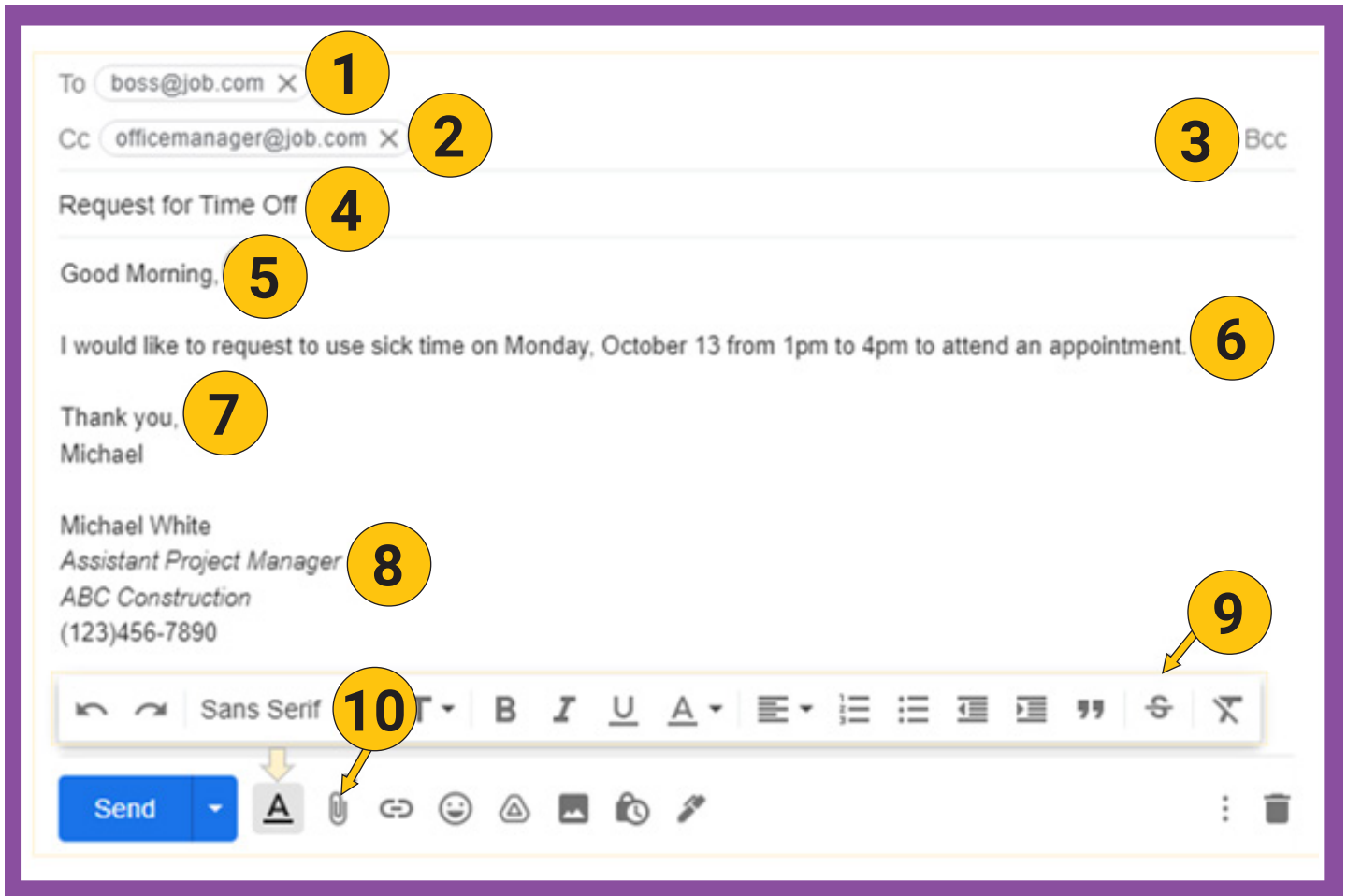
Label the parts of the email by filling in the blanks below.

(1) _____   **(6)** _____

(2) _____   **(7)** _____

(3) _____   **(8)** _____

(4) _____   **(9)** _____

(5) _____   **(10)** _____

Activity 2: Email Safety

The following tips will help you remember how to stay safe when writing and receiving emails.

Safety Tips for Email Use

Work Use Only
Do not use your work device or work email for personal use. Avoid connecting to free Wi-Fi connections.

Passwords
Keep passwords secure. Change passwords frequently. Do not reuse passwords for multiple devices. Do not share your passwords with others.
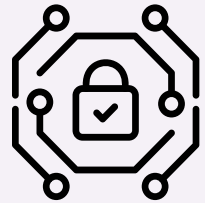
Trust Your Source
Do not open emails from someone you do not know or trust. Emails from an untrusted source may contain a virus or malware and could damage your device. Think before you open. Do not share your email address with untrusted sites.

Sensitive Information
Try to avoid sending sensitive information through email. Be mindful that email is not a secure source of communication.

Attachments Bring Viruses
Before opening an attachment, ensure the sender is a known source. Many times malicious emails will appear to be from a known source. Check the email address - is it a trustable email address?

Activity 3: Composing an Email

Email is a method of exchanging messages between people using electronic devices, like computers, tablets, and mobile phones. In this activity, you composed an email using formatting options, an attachment, and a signature.

Was your email formatted professionally?

Sometimes, it may be appropriate to send a quick, casual email to a co-worker without including a greeting or professional language. However, if you are sending a resume to apply for a job, or if you are sending a formal message to someone, remember to follow the tips below.

☑ **Font:** Make sure to use a readable font that looks professional.
   · For Outlook, Arial and Calibri are commonly used fonts in that are acceptable. For Gmail, the default (Sans Serif) is fine.

☑ **Font size:** Make sure the text is large enough (at least 10 or 12 points).

☑ **Email length:** Include all of the necessary information, but keep the email as brief as possible.

☑ **Subject:** Include a subject that summarizes the purpose of your email
   · Example: Application for Electrician - John Smith

☑ **Greeting (Salutation):** If you know who the contact person is, address the person directly (for example, "Mr. Smith"). If you do not know who the hiring manager is for a job application, address the email, "Dear Hiring Manager."

☑ **Message body:** Be sure to state who you are and why you are writing, along with thanking them for their time or consideration.

☑ **Closing:** Use a formal closing line, such as "Sincerely" or "Regards."

☑ **Signature:** Include your full name, email address, and phone number so the person you are messaging knows how to contact you.

☑ **Attachments:** Don't forget to attach your resume or other documents.

Activity 3: Tips to Composing an Email

The following tips will help you remember how to compose a professional email.

Composing a Professional Email

Email Structure

- Be direct, clear, and concise.
- Maintain professionalism throughout the email.
- Be sure to include a proper greeting.
- Include a brief but descriptive subject line.
- The email body should quickly address the main point of the email.
- If an attachment is included, it should be mentioned within the body of the email.

Email Greeting

Address the recipient with either Mrs., Ms., or Mr. along with his or her last name.

Recipient name: Jennifer Gonzales
Proper Greeting: Dear Ms. Gonzales,

Email Body

The email body is where you include the main point of the email.

I have completed our department's inventory list. Attached is the inventory list for review. Please let me know if you need any further information.

Email Closing

The email closing should be brief and offer a quick goodbye. Be sure to include your contact information.

Sincerely,
Johnathan Doe
JohnDoe@fakeaddress.com

Professional Elements

- Keep language professional but personable.
- Use carbon copy (cc) when you want to include others without an expected response.
- Be sure to check spelling, grammar, and accuracy of facts, links, and attachments before sending emails.

Activity 3: Email Assessment

Use the space below to handwrite your professional email to your employer.

Professional Email Draft:

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Vocabulary

Some of the vocabulary words you learned in this lesson are listed below.
Refer back to this page if you need help remembering.

Vocab Word	Definition
Attachment	A file that is sent along with an email. This could be a document, photo, etc.
Blind Carbon Copy (Bbc)	Used to send an exact copy of an email to one or more people without allowing any of the recipients to see the address of anyone who has been blind carbon copied.
Carbon Copy (Cc)	Used to send an exact copy of an email to one or more people. Other recipients can see who has been carbon copied.
Closing	The phrase used to close the message.
Email	Electronic messages sent from one user to another.
Font	A collection of letters and characters with a similar design. Changing the font alters the look and feel of the text.
Formatting Options	Options that allow text to be altered and displayed in a special style. For example, words can be made bold or underlined.
Greeting	The first part of an email message, used to address (greet) the recipient. Also called a salutation.
Message Body	The main content of an email message.
Recipient	The person the email is intended for (the email address of the person you are sending a message to).
Salutation	Also known as the greeting.
Signature	A block of text used at the end of an email that includes contact information (and often company information and job title if the sender is employed).
Subject Line	The line of text that tells the recipient what the message is about.

Check Your Understanding

As a digital citizen, and as an employee in a workplace that uses technology, you will need to know how to send an email from a computer, tablet, or mobile phone.

Reflection

What are two things you learned about email?

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How might you use email in the workplace or when trying to find a job?

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Discuss formatting options you can use to highlight important information.

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4. Word Processing

Word processing is the act of using a computer to create, edit, save, and print documents. In this lesson, you will learn about two of the common software applications used to create documents: Microsoft Word and Google Docs. You can use these applications to create and edit a resume to send to potential employers.

In the workplace, you may need to use Microsoft Word or Google Docs to create reports, letters, or other documents.

After completing this lesson, you will be able to:

1 - Demonstrate an understanding of word processing terminology

2 - Open, create, edit, save, and print documents

3 - Modify the page layout of a document

4 - Format text and insert objects

5 - Manipulate documents using functions

6 - Use spelling and grammar checks

7 - Attach a Word document to an email

Activity 1: Intro to Word Processing

In the workplace, word processing is used to create and edit documents, such as letters, resumes, and reports.

Word vs. Docs

One of the main differences between Microsoft Word and Google Docs is that a paid subscription is required for the full version of Word. However, you can use Google Docs for free, from any device connected to the internet.

What are some other differences? ....

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WORD INTERFACE

In the next activity, you will explore Word.

Part of the interface is shown here.
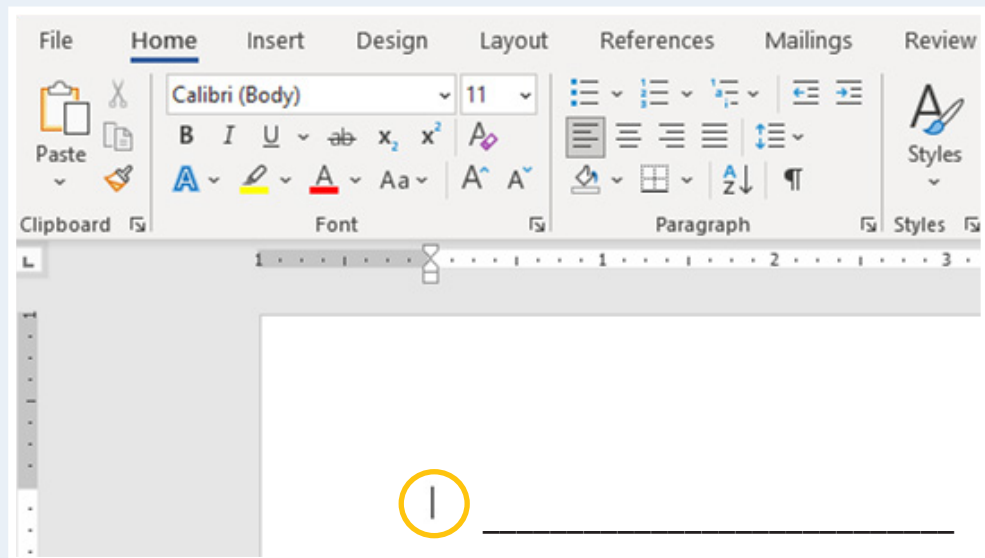
Do you remember what the circled item is called?
Hint: This is where you will begin typing text.

Activity 2: Exploring Word

Word is a word processing application developed by Microsoft. It is used to create documents in a variety of formats, such as letters, resumes, and reports.

In this activity, you created a new Word document. Using the word bank below, identify the labeled font and paragraph options.

Word Bank				
Underline	Shading	Borders	Italic	Font
Numbering	Font Color	Bullets	Font Size	Bold

1 _____   6 _____

2 _____   7 _____

3 _____   8 _____

4 _____   9 _____
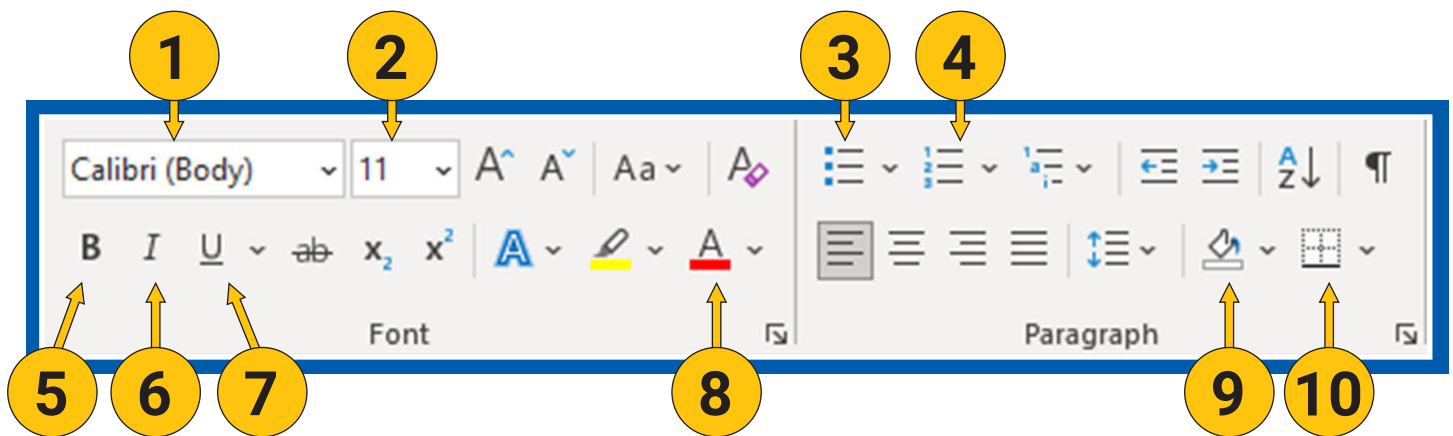
5 _____   10 _____

Activity 3: Exploring Docs

Docs is a word processing application developed by Google. It is used in the same way as Microsoft Word: to create documents in a variety of formats. In this activity, you created and shared a Google Doc.

Matching

Match each keyboard shortcut below to its function.

Ctr + C		Paste
Ctr + V		Cut
Ctr + X		Print
Ctr + Z		Copy
Ctr + P		Undo

Reflection

Do you feel comfortable using both Word and Docs? Which do you like using more? Is one more difficult to use than the other? If so, why?

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Activity 4: Exploring Templates

A template is a type of document that creates a copy of itself when you open it. Microsoft Word and Google Docs both have template options. In this activity, you searched for and selected a resume template and input your information.

What's in a resume?

A basic resume includes your first and last name, contact information, job experience, and education information. Some employers may ask for references, so it is okay to include them on your resume if there is space.

Tip: Include all of your job-related skills and experience, but try to keep the resume short (one or two pages.)

Setting Goals

What is your ultimate goal in the construction industry? Do you have any skills or experience you need to gain before applying for your next job? What can you do to work toward your goals?

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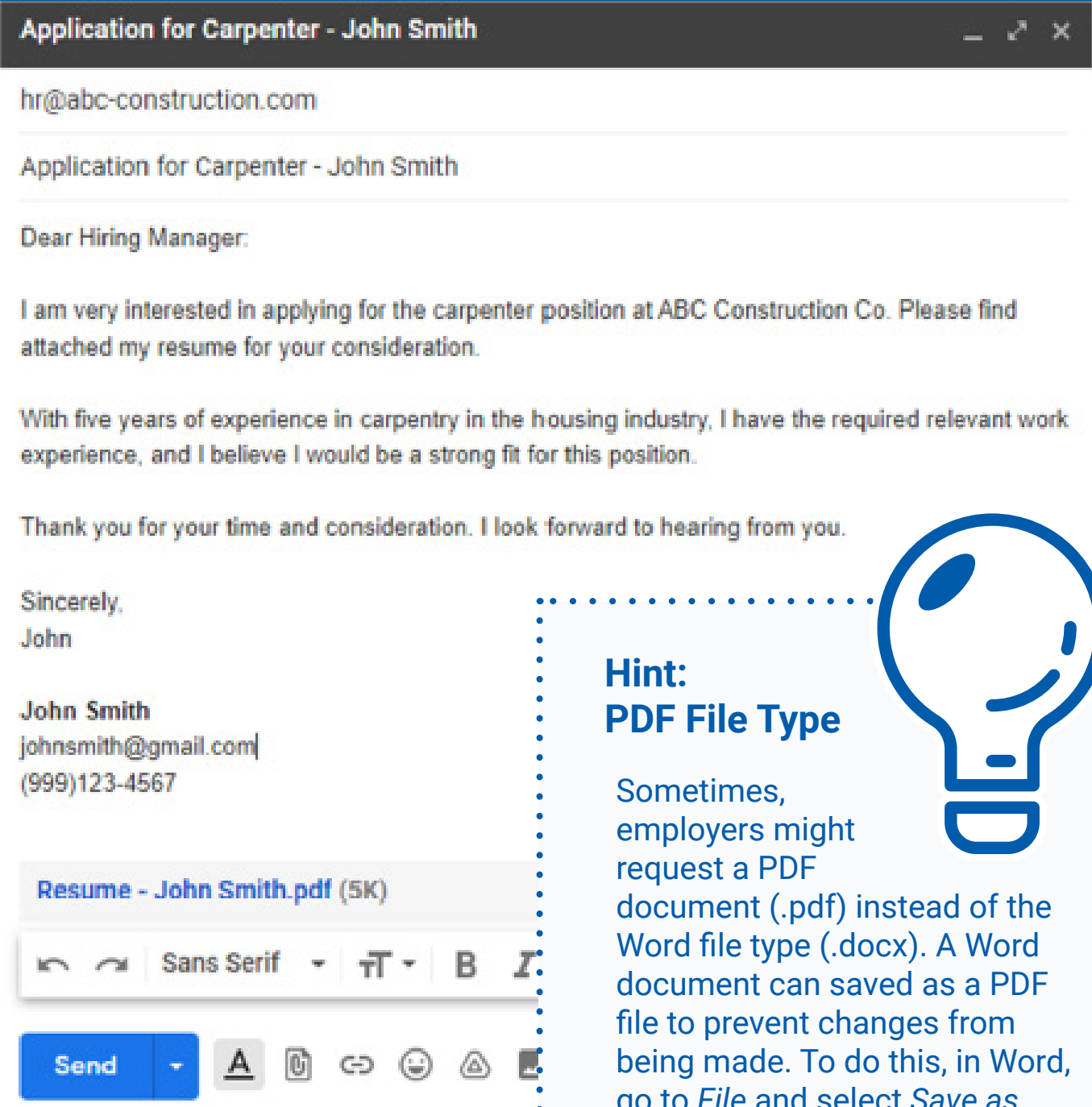
Remember:

Both Microsoft Word and Google Docs have templates you can use to create a resume, cover letter, business letter, or report. You can even find templates for documents such as fax covers, newsletters, brochures, meeting notes, calendars, and greeting cards.

Assessment: Emailing a Resume

For this assessment, you will use the email account you created in an earlier lesson to create a professional email and attach the resume you created.

Use the example below as a guide.

Application for Carpenter - John Smith

hr@abc-construction.com

Application for Carpenter - John Smith

Dear Hiring Manager:

I am very interested in applying for the carpenter position at ABC Construction Co. Please find attached my resume for your consideration.

With five years of experience in carpentry in the housing industry, I have the required relevant work experience, and I believe I would be a strong fit for this position.

Thank you for your time and consideration. I look forward to hearing from you.

Sincerely,
John

John Smith
johnsmith@gmail.com
(999)123-4567

Resume - John Smith.pdf (5K)

Sans Serif B I

Send

Hint:
PDF File Type

Sometimes, employers might request a PDF document (.pdf) instead of the Word file type (.docx). A Word document can saved as a PDF file to prevent changes from being made. To do this, in Word, go to *File* and select *Save as Adobe PDF.*

Vocabulary

Some of the vocabulary words you learned in this lesson are listed below. Refer back to this page if you need help remembering.

Vocab Word	Definition
Bold	A font option that makes characters darker and heavier than normal.
Borders	A formatting option that allows you to create a visual outline around an object, such as a table or text box.
Bullets	A formatting option that allows you to create a bulleted list of text.
Document	In word processing, a text-based file that looks the same way whether it is viewed on a computer or printed out.
Font	A collection of letters and characters with a similar design. Changing the font alters the look and feel of the text. *Hint: Many aspects of the font can be changed, such as size and color.*
Insert	An option that allows you to add a variety of objects to a document, such as pictures/images and tables.
Italic	A font option that makes the text *slant to the right*.
Keyboard Shortcut	Keys used together to perform a function, such as copy (Ctrl + C) and paste (Ctrl + V).
Numbering	A formatting option that allows you to create a numbered list of text.
Resume	A document used by a person to present their background and job experience.
Shading	A formatting option that lets you change the color behind text or in the cell of a table.
Template	A sample document that already has some details in place. This type of document creates a copy of itself when you open it.
Underline	A font option that draws a line under a word or phrase.
Word Processing	The act of using a computer to create, edit, save, and print documents.

Check Your Understanding

In the construction field, you might not use word processing every day, but it is a useful skill to have. Use the questions below to reflect on why it is important.

Reflection

What are two things you learned about word processing?

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Why or how might someone use word processing in the workplace?

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Discuss formatting options you might use when creating a resume.

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5. Spreadsheets

Spreadsheets are electronic documents used to store, sort, organize, and calculate data. In this lesson, you will learn about two of the common software applications used to create spreadsheets: Microsoft Excel and Google Sheets.

Construction project managers might use Excel to keep track of supplies, cost estimates, daily reports, work orders, or employee work hours.

After completing this lesson, you will be able to:

1 - Demonstrate an understanding of spreadsheet terminology
2 - Open, create, save, and share workbooks
3 - Edit and format cell contents
4 - Insert, resize, and delete rows and columns
5 - Sort and filter data
6 - Attach an Excel file to an email

Activity 1: Intro to Spreadsheets

In the workplace, spreadsheets are used to store, sort, organize, and calculate data.

Excel vs. Sheets

Similar to Word vs. Docs, one of the main differences between Microsoft Excel and Google Sheets is that a paid subscription is required for the full version of Excel. However, you can use Google Sheets for free, from any device connected to the internet.
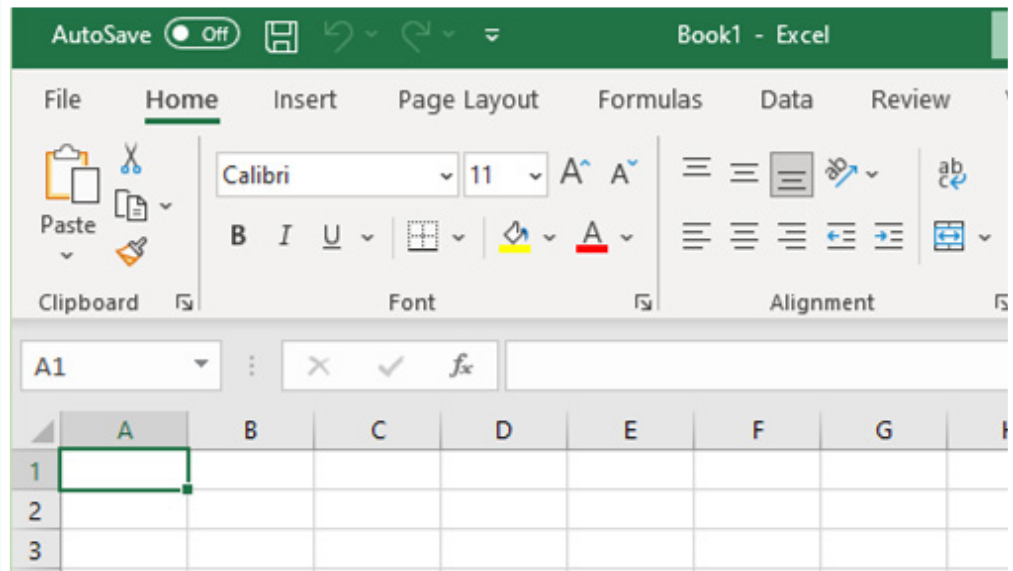
What are some other differences? ....

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EXCEL INTERFACE

In the next activity, you will explore Excel.

Part of the interface is shown here.

Do you recognize any options that are also available in Word?
Hint: font, font size, etc.

Activity 2: Exploring Excel

Excel is a spreadsheet application developed by Microsoft. It is used to store, sort, organize, and calculate data.

In this activity, you created a new Excel workbook. Using the word bank below, identify the labeled parts of the Excel interface.

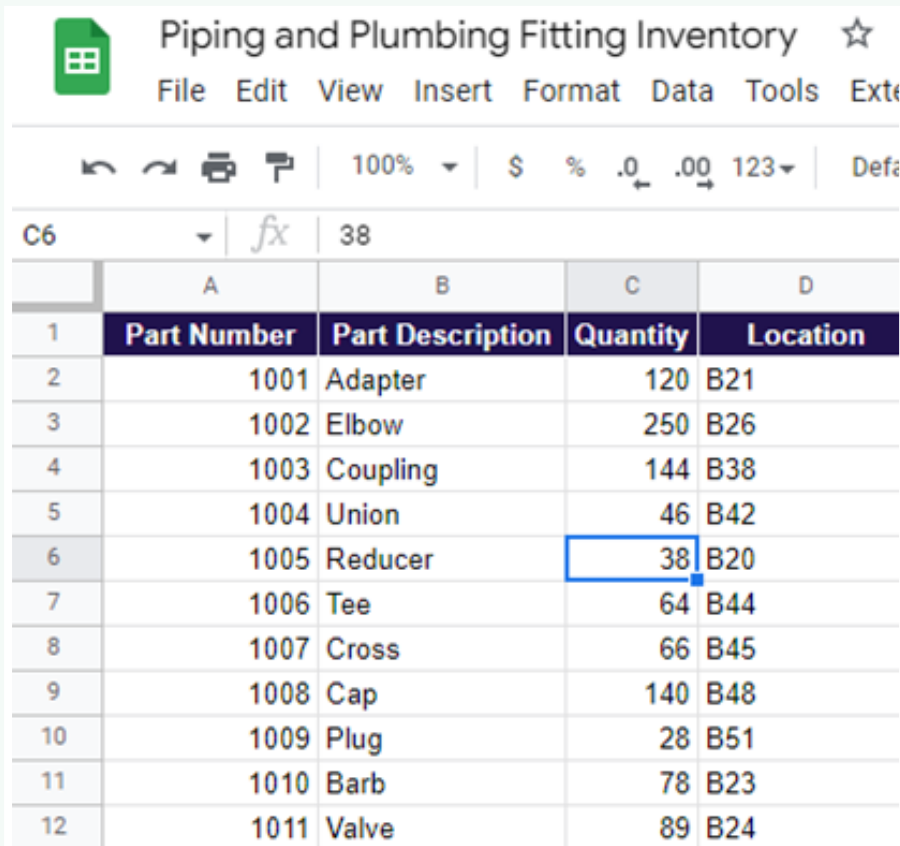| Word Bank			
Fill Handle	Row	Cell	Formula Bar
Name Box	Borders	Column	Active Cell
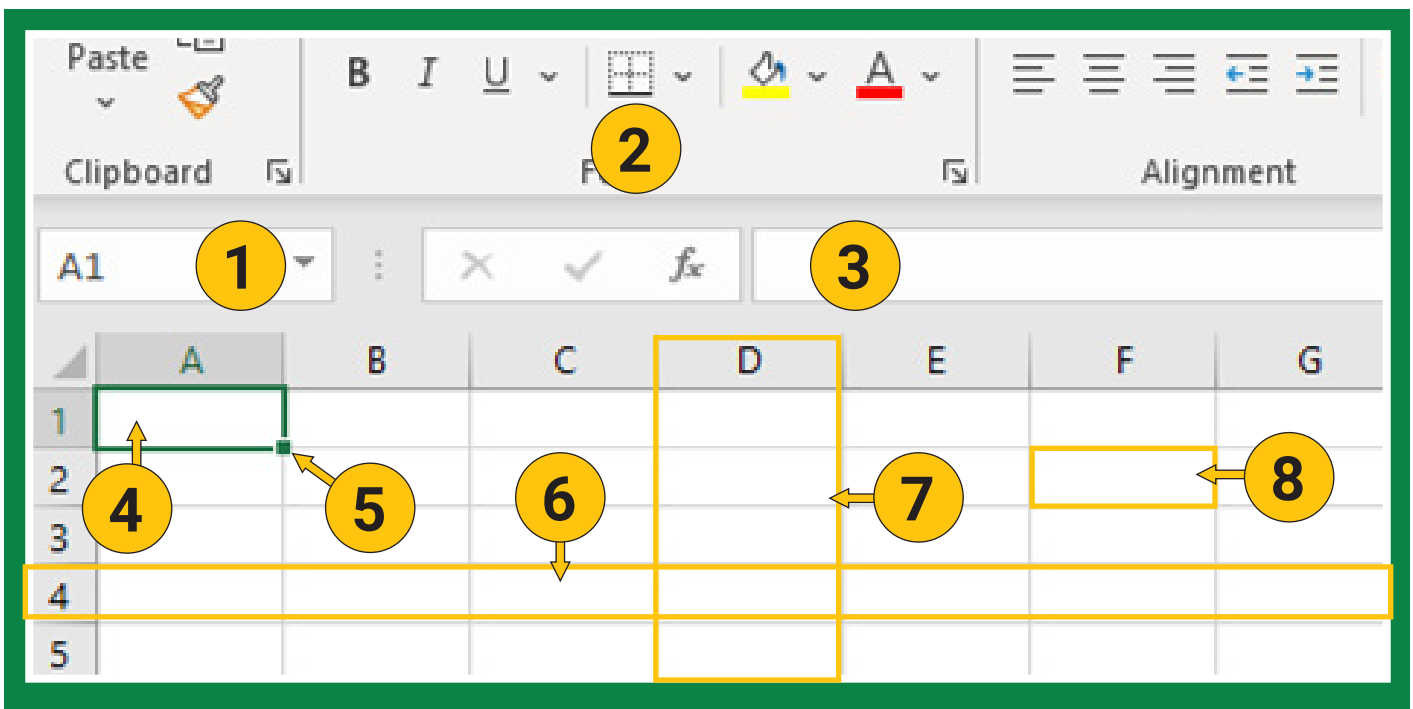
1 _____

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

Activity 3: Exploring Sheets

Sheets is a spreadsheet application developed by Google. It is used in the same way as Microsoft Excel: to store a variety of data (information). In this activity, you created and shared a Google Sheet.

Example Sheet - Piping and Plumbing Fitting Inventory

In this example, a plumber has used Sheets to create an inventory list of piping and plumbing fittings.

The part number, part description, quantity, and location is listed for each part. The location "B" refers to bins the parts are stored in.

Using the inventory list, answer the questions below.

1. What is the active cell? _____

2. How many plugs are in stock? _____

3. What is the location of the plugs? _____

4. What is the part number for a valve? _____

5. Which item has the lowest quantity? _____

Activity 4: Creating a Table

You have now explored two spreadsheet applications: Excel and Sheets. Some employers use Excel to keep track of supplies. Select a sample inventory list from the options below and create a table in Excel. Use font options to make the column titles bold and add a border around the table.

CARPENTRY SUPPLY INVENTORY
Item, Quantity, Location

- Hammer, 13, Workshop
- Tape Measure, 21, Supply Closet
- Chalk Line, 33, Supply Closet
- Pencil, 120, Supply Closet
- Tin Snips, 15, Supply Closet
- Framing Square, 17, Workshop
- Wood Chisel 1", 38, Workshop
- Level, 13, Workshop
- Circular Saw, 4, Workshop
- Extension Cord, 16, Supply Closet

PLUMBING HAND TOOL INVENTORY
Item, Quantity, Location

- Tubing Cutter, 5, Warehouse
- Hacksaw, 7, Warehouse
- Torch, 8, Warehouse
- Thread Sealing Tape, 9, Supply Closet
- Pliers, 12, Supply Closet
- Flashlight, 15, Supply Closet
- Bucket, 22, Warehouse
- Pipe Wrench, 23, Warehouse
- Faucet Key, 24, Warehouse
- Sink Wrench, 20, Warehouse

ELECTRICIAN TOOL INVENTORY
Item, Quantity, Location

- Pliers, 14, Supply Closet
- Tape Measure, 13, Supply Closet
- Electric Drill, 6, Warehouse
- Wire Strippers, 17, Supply Closet
- Fish Tape, 43, Supply Closet
- Voltage Tester, 21, Warehouse
- Flashlight, 33, Supply Closet
- Conduit Bender, 12, Warehouse
- Reaming Bit, 18, Supply Closet
- Insulated Gloves, 22, Supply Closet

? *Did you know?*

You can use formulas and functions in spreadsheets to perform basic math tasks, like adding the data in a column to calculate a total. This will be covered in a later module, but if you want to get a head start, find the *Insert Function* icon in Excel and explore the options.

Assessment: Emailing an Inventory List

For this assessment, you will use the email account you created earlier to write a professional email and attach the spreadsheet you made.

Use the example below as a guide.

Carpentry Inventory List

boss@abc-construction.com

Carpentry Inventory List

Mr. Jackson,

I have attached the inventory list you requested. Please let me know if you have any questions.

Thank you,
John

John Smith
johnsmith@gmail.com
(999)123-4567

Carpentry Inventory List.xlsx (10K)

Sans Serif | B | I | U | A

Send
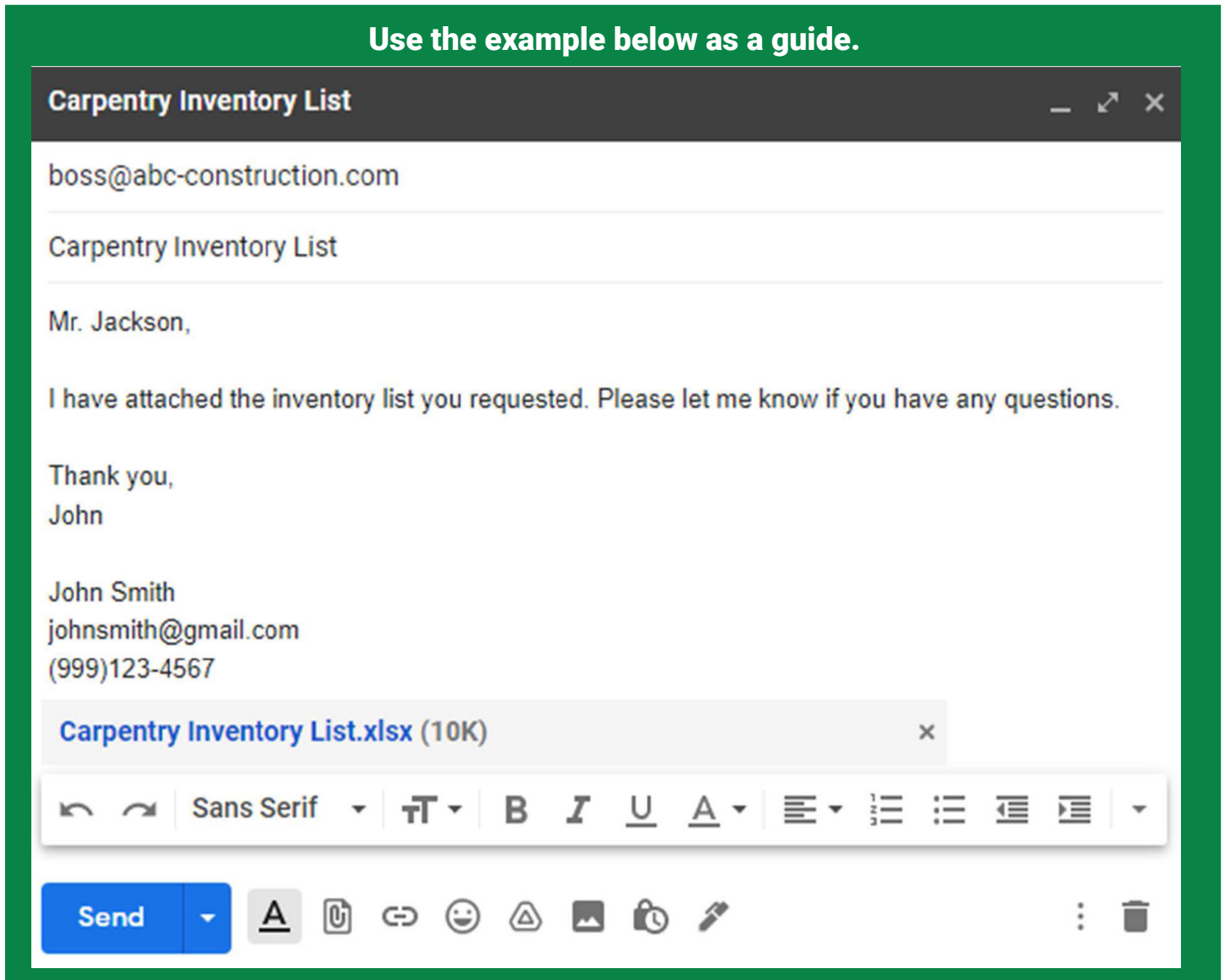
Remember:

You can use the keyboard shortcuts you learned in almost any software application. For example, you can press *Ctrl + C* to copy information in a cell and *Ctrl + V* to paste it into another cell. If you type the wrong information into a cell, you can press *Ctrl + Z* to undo, which will clear the information.

Vocabulary

Some of the vocabulary words you learned in this lesson are listed below.
Refer back to this page if you need help remembering.

Vocab Word	Definition
Active Cell	The cell that is currently selected.
Borders	A formatting option that allows you to create a visual outline around an object, such as a table or text box.
Cell	The building block of a spreadsheet; a single data point.
Column	A vertical set of cells. The column number is seen at the top of the worksheet.
Fill Handle	A small box that appears on the active cell that allows you to fill information into other cells.
Filter	A function that helps display relevant data by temporarily hiding the data you do not want to see.
Formula Bar	The bar that shows the contents of the selected cell.
Name Box	The box that displays the cell that is currently selected.
Row	A horizontal set of cells. The row number is seen on the left side of the worksheet.
Sheet Tab	A control used to display the worksheet name and show which worksheet is currently being edited.
Sort	A function that helps organize data (for example, arranging a numerical column from smallest to largest).
Spreadsheet	An electronic document used to store, sort, organize, and calculate data. This is a general term, and it may be used to refer to both Microsoft Excel files and Google Sheets.
Workbook	Another name for an Excel file.
Worksheet	A sheet, or page, within a spreadsheet file.

Check Your Understanding

In the construction field, you might not use word processing every day, but it is a useful skill to have. Use the questions below to reflect on why it is important.

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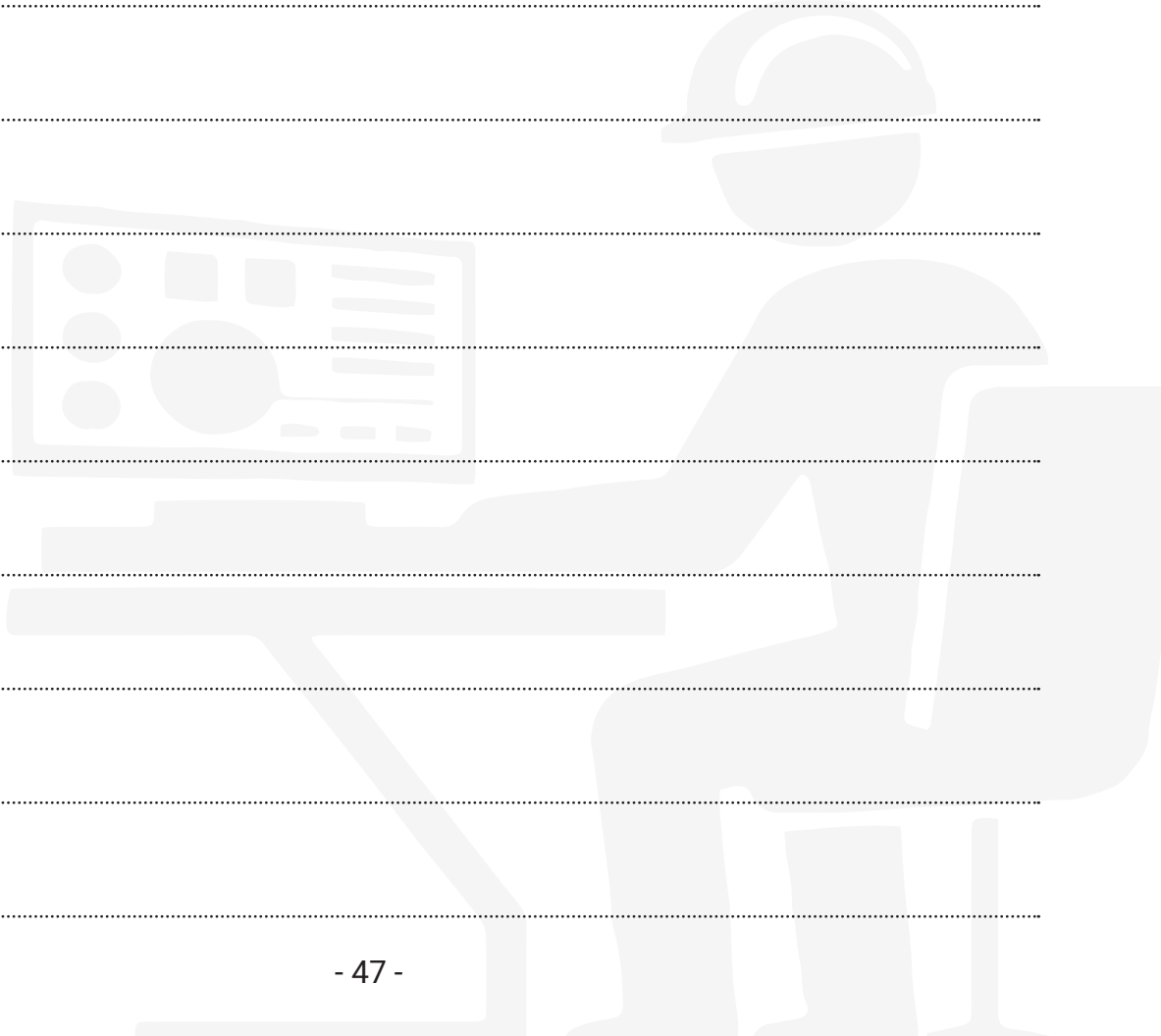..

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Notes

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