



TEACHING DIGITAL SKILLS

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PREFACE

LiteHaus International is an Australian charity and NGO which exists to tackle digital inequality and expand educational opportunities for students across Asia-Pacific. Starting in Papua New Guinea (PNG) back in 2017, our digital equity programs have provided digital learning outcomes for over 250,000 people in ten countries, including Australia, PNG, Philippines and the wider Pacific and South-East Asia regions.



To complement the deployment of thousands of computers into schools across the developing world, LiteHaus International has developed this '**Teaching Digital Skills**' Unit with teacher training resources and an 11-week teaching curriculum in the form of a unit plan. This will serve as an invaluable primary resource to guide teachers with no formal training or limited competency in teaching IT and using computers, providing a structured and detailed curriculum for teaching digital technologies.

The plan breaks down the learning objectives, lessons, and helps to create assessments in a clear and strategic manner, making it easy for teachers to follow along and implement in their classrooms for 11 weeks of the teaching year.

Following this unit plan, teachers can gain a better understanding of how to introduce students to fundamental digital skills such as typing, using word processing software, working with spreadsheets, creating presentations, and even basic coding. The plan includes specific lessons and activities that guide teachers on how to teach these concepts effectively, even without prior IT training.

Further, the unit plan covers topics such as e-safety, cyberbullying, misinformation, and being a good digital citizen, which are important for students to learn as they navigate today's digital age. By following this plan, teachers can help students develop essential digital literacy skills and knowledge while also ensuring their safety and well-being in the online world. Teachers will be able to use these resources to train themselves and build greater digital capability.

LiteHaus International's '**Teaching Digital Skills**' Unit is not just a resource; it is a gateway to a world of digital knowledge and empowerment for both teachers and students. In offering a structured and detailed curriculum in the form of a unit plan, LiteHaus International is not only working to bridge the digital divide but also striving for a future where quality education is accessible to all.

We wish all users of this resource every success on your digital learning journey.

Kind Regards,

Jack Growden

Founder & CEO LiteHaus International

INTRODUCTION TO TEACHING DIGITAL SKILLS UNIT

PURPOSE & OBJECTIVES

LiteHaus International has created this 'Teaching Digital Skills' Unit using the Australian Curriculum as a guideline for the descriptors.

LiteHaus International's **'Teaching Digital Skills'** Unit builds on concepts, skills and processes for early digital learning. It focuses on developing foundational skills in computational thinking and an awareness of personal experiences using digital systems.

Students develop understanding and skills in computational thinking, such as categorising and outlining procedures; and developing an increasing awareness of how digital systems are used and could be used at home, in school and the local community.

Students develop understanding and skills in computational thinking such as identifying similarities in different problems and describing smaller components of complex systems. It also focuses on the sustainability of information systems for current and future uses.

Students begin to learn about common digital systems and patterns that exist within data they collect. Students organise, manipulate and present this data, including numerical, categorical, text, image, audio and video data, in creative ways to create meaning.

Students use the concept of abstraction when defining problems, to identify the most important information, such as the significant steps involved in creating a letter in the appropriate format. Students describe how information systems meet information, communication and/or recreational needs.

Through discussion with teachers, students learn to apply safe and ethical practices to protect themselves and others online. Students collect, manipulate, and interpret data, developing an understanding of the characteristics of data and their representation.

When creating solutions, students will give reasoning to show understanding of the problem, the date necessary and the requirements to meet a solution. They will design a solution with thought to how it will affect their environment in a positive manner.



Students develop their skills in applying technical protocols such as devising file naming conventions that are meaningful and determining safe storage locations to protect data and information.

When engaging with others, students take personal and physical safety into account using e-safety and other methods. They will put this into practice with several scenarios that target social differences and privacy for personal information.

LEARNING INTENTIONS

Students will learn:

- 1.To understand the basics of using a computer and its functions.
- 2. How to be proficient in using a keyboard and typing using Typing Master.
- 3.To use Microsoft Word to create documents, forming sentences, paragraphs and inserting images.
- 4.To use Microsoft Excel to collect & input data and to analyse information about theircommunity.
- 5.To use Microsoft PowerPoint to present findings from the data about their community.

6.To understand the basics of coding with Scratch, completing various tutorial activitiesdemonstrating the use of code.

7.To understand the basics of e-safety and how to be good digital citizens.

STUDENT SUCCESS CRITERIA

I can:

- 1.Set up, turn on and use the applications on the computer.
- 2.Use the keyboard and meet the standards set by the teacher in the typing program.
- 3.Use Word documents to write sentences, paragraphs and create documents.
- 4. Input data into Microsoft Excel, then analyse the information to draw valuable insights.
- 5.Use Microsoft PowerPoint to effectively present findings in an appropriate presentationformat.
- 6.Use the fundamentals of coding offered in Scratch to create animations, games andother activities.

7.Be safe online and a good digital citizen.

Lachlan Parker

Training and Development Lead at LiteHaus International



CASE STUDY: AVIAMP PRIMARY SCHOOL

Sly Vii Joan is a teacher at Aviamp Primary School in rural Jiwaka, Papua New Guinea (PNG). When LiteHaus International was founded, few of the 3,500 schools in PNG had quality digital learning infrastructure. Aviamp Primary School was one of them until LiteHaus International stepped in with Deloitte and the Sir Brian Bell Foundation to install a computer lab.

When Aviamp Primary School received the computers, Sly Vii saw this as an opportunity to further her studies and enrolled in a university computer course. Now, she is the IT Teacher at the school.

"I always say to my students, that nowadays mastering computing is a survival skill." - Sly Vii Joan IT teacher at Aviamp Primary School.

Sly Vii has developed a daily schedule for digital classes and graduated Grades 3 to 8, and organises free computer lessons for teachers after hours.

WEEK 1 – FUNDAMENTAL DIGITAL SKILLS

Learning Intention:

To understand the basics of using a computer and its functions.

Student Success Criteria:

I can set up, turn on and use the applications on the computer.

Digital Skills Training Manual Reference:

Pages 18 – 27

Lessons 1-3

Fundamental Digital Skills

Students will learn fundamental digital skills of computing such as:

- How to connect, turn on a computer and use applications.
- Understanding various components of a computer such as the mouse, keyboard, screen, cursor, and their applications.
- How to open applications and begin to familiarise themselves with programs and locations of folders on provided USB.

WEEK 2 – TYPING

Learning Intention:

To develop digital skills with the keyboard and learn to type effectively and efficiently.

Student Success Criteria:

I can use the keyboard and meet the standards set by the teacher in the typing program.

Digital Skills Training Manual Reference:

Pages 28 – 34

Lesson 4

Typing – Extra Courses: Keyboarding, Numbers, Specials, 10-Key

- Students will complete in the Typing Master Extra Courses, splitting into groups to ensure sufficient time for all participants.
- Students will be split into groups, so each will have a go. Once one is finished, the next will have their go.
- Students will start with the Junior Typing Course; this will help them learn the keys.
- Students will use this information to benchmark their abilities and identify areas for improvement.
- Students can repeat this process as many times as needed to build their skills.



Lesson 5

Typing – Games

- Students will complete the Games section of Typing Master, splitting into groups to ensure sufficient time for all participants.
 - These games are designed to help students learn the keys, find them quickly and type words correctly at a comfortable pace.
 - Start students on the letters A-Z, once they become comfortable finding letters, get them to move onto words.
 - Students should practice this as many times as needed, until comfortable. Recommended 2-3 times each at least.
 - If students are done earlier than others or are finding it easier, start a competition to see who can get the highest score.

Lesson 6

Typing – Speed Building Course

• Students will complete the Speed Building section part Typing Master, splitting into groups to ensure sufficient time for all participants.

Students will use the skills they have practiced with the keyboard to improve their typing speed. This will help them to become more comfortable typing and memorising the keyboard, improving the speed in which they can type while minimising errors.

WEEK 3 – TYPING (Continued)

Learning Intention:

To master usage of the keyboard and learn to type effectively and quickly.

Student Success Criteria:

I can use the keyboard and meet the standards set by the teacher in the typing program.

Digital Skills Training Manual Reference:

Pages 28 – 34

Lesson 7 - 9

<u>Typing Tests</u>

- Students will complete typing test activities, curated by the teacher on Typing Master. Typing tests are a good way for students to practice what they have learnt so far.
 - Students can adjust the activity duration and review the results to determine areas of improvement.
 - It is recommended that students start with the following: five-minute duration | 25 WPM (words per minute).
 - As performance improves, students should progress to the 35 WPM activity.

Students can be assessed based upon the words per minute and accuracy.

WEEK 4 – MICROSOFT WORD

Learning Intention:

To use Word documents to write sentences, paragraphs and create documents.

Student Success Criteria:

I can create a letter using Microsoft Word.

Digital Skills Training Manual Reference:

Pages 35 – 41

Lesson 10

Students will use Microsoft Word to create a letter to a pen pal.

This lesson will focus on the layout of the letter.

Students will be creating a template to write to their pen pal. It will need to follow this layout:

Your name School

Topic/Title

Dear Australian Student

Write paragraph and content here

Kind Regards

Your Name

Before instructing the students to write the letter, have a discussion on the following:

- The importance of layout in producing a quality email.
- The importance of formal language in an email.
- Brainstorm some idea about topics that can be included in the letter as a class.

Students should aim for one paragraph on their favourite subject at school and what they have learnt. This will develop further as time goes on.

Lesson 11

- Students will practice the same activity, this time writing a longer letter to a family member (two or three paragraphs to build broader competencies).
 - \circ The topics they must write about are:
 - Friends at school and what they enjoy doing;
 - What they hope to achieve in the future and how they will get there;
 - What they enjoy about the village and what they hope they can help to improve.

Date

Lesson 12

Word Assessment - Writing to a Pen Pal (pg. 37-38)

- Students will be assessed on their ability to write to a pen pal.
 - This must be completed on their own as they are being assessed. They will need to make sure they use the correct template.
 - It must include bolding, underlining, using different coloured text, making lists and the other formatting tools learnt so far.
- They must include the following information to their pen pal:
 - Who they are, what their village is called and who is important in the village.
 - What they are learning at school, what they hope to achieve with an education and how they are finding the digital learning world.
 - Who their friends and family are some interesting facts about them and about the lifestyle of their village/people.
 - What do they want to know about Australia? They should ask the pen pal from overseas some questions.

Finish off with anything else they want to say, something that is not mentioned here that they can think of? We suggest brainstorming as a class for ideas of what you can talk about.

WEEK 5 – MICROSOFT EXCEL

Learning Intention:

To use Microsoft Excel to input data and analyse information about students' home communities.

Student Success Criteria:

I can input data into Microsoft Excel, then analyse the information to draw valuable insights.

Digital Skills Training Manual Reference:

Pages 42 – 54

Lesson 13

Excel – Inputting Data (pg. 42-43)

- Students will learn the capabilities and fundamentals of navigating the Excel program.
- Students will learn to input raw data into appropriate columns and use the basic =sum function to add up results.
- Students will repeat and practice the process.

Lesson 14

Excel – Data Analysis

- Students will master more complex functions such as =if(), =sum(), =count() to draw meaningful insights from the data.
- Students will be shown examples of real world applications for Excel.
- Students will practice sorting the data into categories such as female and male, age groups, etc.

Lesson 15

Excel – Illustrating Data in Graphs

- Students will generate graphs from the data to present the findings in a visual form.
- Students will learn which graphs are best for certain types of data.
 - Students will use bar, line and pie graph as examples.
- Students will learn real world applications for graphs and charts.

Students will explore elements of the graph function such as colour, titles, legends, etc.

WEEK 6 – MICROSOFT EXCEL (Continued)

Learning Intention:

To use Microsoft Excel to input data and analyse information about students' home communities.

Student Success Criteria:

I can input data into Microsoft Excel, then analyse the information to draw valuable insights.

Digital Skills Training Manual Reference:

Pages 42 – 54

Lesson 16 - 19

Excel – Advanced Data Analysis & Presentation

• Students will master more complex and useful commands such as =sumif() and =countif().

Students will continue to practice with different data sets, revisiting areas of difficulty to ensure the learning intentions are met.

WEEK 7 – MICROSOFT EXCEL (Continued)

Learning Intention:

To use Microsoft Excel to input data and analyse information about students' home communities.

Student Success Criteria:

I can input data into Microsoft Excel, then analyse the information to draw valuable insights.

Digital Skills Training Manual Reference:

Pages 58 – 59

Lesson 20 – 22

Excel Assessment (3 lessons)

- Students will complete an Excel assessment,
 - They should be allowed to use the course material provided as well as their own notes from the previous lessons.
- Students should be given new datasets and instructions to test their abilities. They will need to go through the steps and remember how to achieve the outcome asked of them in the assessment.
- Students will be marked on how much they are able to do on their own.

Marking criteria for this exercise will be created during teacher training.

WEEK 8 – MICROSOFT POWERPOINT

Learning Intention:

To use Microsoft PowerPoint to present the information about their community, using word to help write a script and present it as a presentation.

Student Success Criteria:

I can use Microsoft PowerPoint to effectively present findings in an appropriate presentation format.

Digital Skills Training Manual Reference:

Pages 55 – 57 & 62

Lesson 23

PowerPoint – Presenting Findings from Excel Activity

- Students will be learning how to make up a presentable slide using skills such as logos, backgrounds, text break up and other components.
- Students will need to make sure it looks professional by using different slide formats, and correct placement of pictures and text.
- Students will learn how to make the presentation flow effectively, how many words should be per slide, images, layout, etc, following guidelines in the Training Manual.

Lesson 24

PowerPoint – Presenting Findings from Excel Activity

- Students will learn how to present information and findings using slides, incorporating data, explanations and other skills.
- Students will practice these skills using different countries as the examples, creating an informative presentation on the chosen country.
- Students will create questions that will be used a basis for the presentation information, such as what is the food the country is known for? What resources does the country have? What is the population?
- Students will use these skills to create informative slides.

Lesson 25

PowerPoint Assessment - Presentation in Front of Class (pg. 62)

- Students will create slideshow presentation on a topic given by the teacher.
- Students will need to complete this on their own using the steps practiced in previous lessons.
- Students will need to make sure they use the correct formatting and make it presentable to the class.

Students will then present their PowerPoint to the class to show their knowledge and skills.

WEEK 9 – FUNDAMENTALS OF CODING

Learning Intention:

To understand the basics of coding with the scratch program, completing various tutorial activities that show the use of code.

Student Success Criteria:

I can use the fundamentals of coding offered in Scratch to create animations, games and other activities.

Digital Skills Training Manual Reference:

Pages 63 – 67

Lesson 26 – 28

Introduction to Coding for Students (Scratch)

To find coding tutorials, go to the folder titled LiteHaus E-Library English. Locate the ICT folder. Locate the Scratch folder. Inside this folder will be the Scratch installer for the program, as well as video tutorials for the lessons.

- Please note: More lessons can be created using the resources provided to you in the Scratch folder. The aim is to teach students the basics of coding and further develop this throughout the year.
- Video tutorials have been provided in the Scratch folder. Students are encouraged to also play around with the program and try different strategies out on their own as well.

When beginning with scratch you will begin to use an image called a sprite, which can be commanded to do various actions depending on the code. It is encouraged to try out a few commands with the sprite.

Once comfortable with the sprite your creation can be taken further by adding other sprites, objects, backgrounds and much more.

When these skills are mastered projects such as animations and games can be created.

Here are some of the goals you can have the students try to complete for this week using Scratch:

- Create a Character, make it move (Video Tutorial Create a Sprite with Scratch Paint Editor for guidance)
- Make a Background and Scrolling Background (Video Tutorial How to Make a Scrolling Background in Scratch for guidance)
- Create a Jumping Game (Video Tutorial How to Make a Jumping Game in Scratch for guidance)
- Make a Catch Game (Video Tutorial How to Make a Catch Game in Scratch for guidance)

Extra video tutorials have been provided for students to complete throughout the year.

The videos will involve the students developing their skills with basic movements, then adding in other functions such as landscapes, shapes and much more. Eventually creating small animations using what they have learnt.

It is recommended that teachers have a look and play around with Scratch to get the basic idea. Scratch comes with sprites, backgrounds and sounds ready to use. You can choose to create your own later, but there are many available already.

WEEK 10 – E-SAFETY

Learning Intention:

To understand and recognise online threats and be equipped to be a good digital citizen.

Student Success Criteria:

I understand how to be safe online and be a good digital citizen.

Digital Skills Training Manual Reference:

<mark>Pages 63 – 67</mark>

Lesson 29

LiteHaus Module - E-Safety (read presentation prior to teaching)

- Focus of Module:
 - Becoming more aware of online threats and promoting safer and positive online experiences.
 - Tips for staying safe online and what to look out for.
 - Where to find out more information on e-safety.
- Questions to focus on:
 - What can be done to keep students safe?
 - What are the best practices to keeping safe online?
- Points to cover:
 - Be sure to teach from the perspective of, being new to the digital and online world, being safe early is best.
 - Create a list of what students can do, what adults/teachers can do to assist in being safe online.
 - Explore content further with students by participating in class discussions about their own experiences.
 - Conduct activities that reflect upon decisions and discuss possible solutions to problems.

Lesson 30

LiteHaus Module – Cyberbullying (read presentation prior to teaching)

- Focus of Module:
 - What is cyberbullying? How to deal with it effectively.
 - Platforms in which cyberbullying can occur.
 - The impact it has on people and could have on you.
 - What can happen if you are the bully.
- Questions to focus on:

- Start with conversation on what cyberbullying might be? This may be an uncommon topic for students since they are new to technology.
- Why is it important to learn about this issue now?
- How can we avoid the issue in the future?
- What solutions can we use to help us avoid cyberbullying as new users to the digital and online world?
- Points to cover:
 - Cyberbullying, what it is, how we can prevent it and help each other.
 - While going through slides, have discussion on the points, get students involved.
 - Make sure to emphasise the importance of being safe and not being a bully to others online.

Lesson 31

LiteHaus Module - Fake News & Misinformation (read presentation prior to teaching)

- Focus of Module:
 - The difference between fake news, misinformation and disinformation.
 - How to identify fake news.
 - Why it is important to see the signs.
 - \circ $\,$ The impact fake news can have on you and your community.
- Questions to focus on:
 - Start with what is misinformation?
 - Why is it important that we make sure information is correct?
 - What kind of information is available to us right now?
 - Why is online information different?
 - How can we tell if it's correct or trustworthy?
 - Can we believe everything we read from one site?
- Points to cover:
 - Make sure to discuss the ideas of each slide as you over them.
 - Stress the importance of checking information, using multiple sites to verify information.
 - The importance of reading and making decisions yourself from your own research.
 - Teach students how to look for information correctly using the internet.

WEEK 11 – E-SAFETY (Continued)

Learning Intention:

To understand and recognise online threats and be equipped to be a good digital citizen.

Student Success Criteria:

I understand how to be safe online and be a good digital citizen.

Digital Skills Training Manual Reference:

<mark>Pages 63 – 67</mark>

Lesson 32

LiteHaus Module - How to be a Good Digital Citizen. (read presentation prior to teaching)

- Focus of Module:
 - Suggestions on how to be a good digital citizen.
 - The importance of how you represent yourself online.
 - How to protect yourself as a good digital citizen.
- Questions to focus on:
 - What is a good digital citizen?
 - What do you think you need to do to be a good digital citizen?
 - What will you do to help yourself become a good digital citizen?
- Points to cover:
 - Explain the importance of being a good digital citizen in the digital world.
 - Explain they are setting the example not only for themselves, but for their peers and families.
 - Express how it is about creating a positive future for your community and country.
 - Explain the importance of learning and helping each other through this journey.

Lesson 33

<u>LiteHaus Module – Computer Safety and Basic Troubleshooting (read presentation prior to</u> <u>teaching)</u>

- Focus of Module:
 - Suggested web browsers and anti-virus software for the computer.
 - \circ $\;$ How to fix basic problems the computer may have during usage.
 - Parent safety features, firewalls and how to search up issues.
- Questions to focus on:
 - What issue may we run in with our computer?
 - What are some problems you know that are common?
 - How do you think we take care of our computers?
 - Have you seen any of these browsers before? Which do you know? Which do you use?
 - Should we trust any anti-virus software? Why/Why not?
 - Why is it important to know how to fix these computers ourselves?
- Points to cover:
 - \circ $\;$ Students will need to know how to fix basic problems.

- Explain the importance of keeping yourself safe of the computer.
- Explain why it is important to avoid viruses and not trust every site or application.

Lesson 34

LiteHaus Module – Using Digital Technology to Organise Yourself (read presentation prior to teaching)

- Focus of Module:
 - Programs and sites that can help with work and home.
 - \circ $\,$ Programs that are known to work with minimal issues.
 - \circ $\;$ Benefits of the programs and how they can be used.
- Questions to focus on:
 - How do you organise yourself every day?
 - How do you remember things?
 - Do you use your phone for a majority of this?
 - How do you think technology can help you with school, life and future work?
 - What are some things you already use/do?
 - What are some things you will give a go to organise yourself?
 - Why is it important to be organised? How does technology help with this?
 - Do you think this level of organisation will help you in your future?
- Points to cover:
 - Explain why it is important to be organised and punctual in a modern world.
 - Explore how these applications can help someone be on time, not lose information and organise their work and personal life.

Practice using some of the programs to organise classroom days/activities as an example to students.



CASE STUDY: KUNABAU PRIMARY SCHOOL, CHIMBU.

Every 48 hours, we build a new computer lab in a school in Papua New Guinea. 94% of students in PNG do not have regular access to digital learning tools. Many remote schools have empty libraries with less than 50 reading books available to students. This critical shortage of quality learning materials hinders the delivery of quality education. We are changing this. At the **Kunabau Primary School** in Chimbu Province, **digital learning classes are held every day** and the school has successfully integrated digital usage into the daily teaching of other subjects. Students use the comprehensive **Niunet e-library**, which has over 6.2 million educational articles, to assist them in their social sciences, mathematics, and geography projects.

We have partnered with **Chimbu Provincial Department of Education** and its remarkable women leaders to complete **32 digital classrooms since 2022.**

Fundamental Digital Skills

Week 1: Lessons 1-3



STARTING THE COMPUTER

To start the laptop:

- 1. Open the laptop.
- 2. Press the power button once (see Image 1).

Image 1

IMAGE OF POWER BUTTON





COMPONENTS OF THE COMPUTER

There are three main components of a computer:

- 1. Keyboard: where the keys all are. The keyboard is used to type.
- 2. Mouse: the device used to select programs and navigate the screen.
- 3. Screen/Monitor: where the image is displayed

Image 2 shows all of these parts:

1



IMAGE OF THREE COMPONENTS

Image 2

Other parts include:

- 1. Charging cable: this connects the computer to power.
- **2. USB slots:** this is where USB flash drives can be inserted to the computer.
- **3. Alternative mouse:** this can also be used instead of the external mouse but is more difficult to use.

Image 3 shows all of these parts:



IMAGE OF THREE COMPONENTS

Image 3

HOW TO USE THE KEYBOARD

The keyboard is used to type. Begin using one finger to learn where all the different keys are. With practice, you should be able to type with two or more fingers.

The keyboard can be divided into a number of sections:

- Alphabet: pressing one of these keys on its own will type a lowercase letter.
- Numbers: you will see that some of the number keys have symbols like "!,@,£,\$,%,^". To access these, hold down the shift key and press the key you want.
- Shift Keys: Hold one of these down when you press a letter key to make it CAPITALISED.
- Space Bar: This key makes a space in between words. Just press this key (DO NOT HOLD).
- Enter Key: This key moves your typing down to another line on the page (in Microsoft word). Just press this key (DO NOT HOLD)
- Backspace: This key removes typing to undo errors. You may just press this or hold it.

Image 4

IMAGE OF KEYBOARD



HOW TO USE THE MOUSE

The mouse is used to select programs on the screen. Moving the mouse around will move the cursor around. Move the cursor onto an item to select it. The cursor looks like this:

Image 5

IMAGE OF CURSOR



Mouses have three components:

- Left Click: Use this to select things on the screen.
- Right Click: Use this to open a menu of options. We will learn more about this in the Microsoft Word chapter.
- Scroller: Roll this downwards to move the page down. Roll this upwards to move the page up.

Image 6



IMAGE OF MOUSE

STARTING FROM THE DESKTOP

Once you open the computer, you will be on the 'desktop' screen.

IMAGE OF DESKTOP SCREEN

Image 7

On the desktop, you can move the mouse over applications. Double click on the icon to open them. LiteHaus International has put the 'Microsoft Word' application which school and university students use all around the world. This guide will teach you how to use Microsoft Word. This is where you can type documents such as letters and assignments.

Left-click this icon on the desktop twice.



OPENING A PROGRAM

Left-click **twice** the Microsoft Word icon shown on the previous page.

You should see this screen:

σ Word Sign in to get the most out of Office Aa (\mathbf{F}) LiteHa ADS7 Take a tour n P Title An and a second . . 1

Image 9

Before we learn how to use Microsoft Word, we need to learn how to close applications. In the top right corner of all applications there are three buttons.



- The green outlined button is called "Minimise". It moves the application to the bottom left of the screen. (see Page 10, Image 10 & 11)
- The yellow outlined button is called "Restore Down". It makes the application window smaller. (see Page 11, Image 12 & 13)
- The blue outlined button is called "Close". It closes the application.

MINIMISE BUTTON



Image 10 & Image 11

RESTORE DOWN BUTTON

Clicking the restore-down button will make the application smaller.



To make the application large again, press the restore-down Button again.





Typing Master

Week 2 & 3: Lessons 4-9



SETTING UP – TYPING MASTER

Using a LiteHaus International-provided computer means the Typing Master program is available on the desktop. However, if it is not, it can be downloaded. The full version of the program is available for free at this link <u>https://www.typingmaster.com/charity/nations.php</u> follow the prompts to get a free code.

- 1. Click the Typing Master 11 icon on your desktop to start the program.
- 2. Choose whether to create a general school account, or each student can have their own user depending on class size.
- Press enter and go into the program once you have created our account.



Once entered, the following options will be displayed.

TypingMaster		
Choose Course	English	Close 🗙
Fast Touch Typing Course		
In this course, you will learn the position punctuation by heart. After completing t	ns of the letter keys and common the course you will be able to	TYPING METER
type with all ten fingers without looking	at the keyboard.	CUSTOM REVIEW
Duration3:10 - 5:20 hoursLessons12 lessons		III TYPING TEST
Progress Not started	Start Now	GAMES
Speed Building Course	×	STATISTICS
		SETTINGS
Extra Courses: Keyboarding, Nu	imbers, Specials, <u>10-Key</u> ×	ABOUT
		TypingMaster

- 4. To begin with, there is a fast touch-typing course available to start, this can be done at any pace to develop keyboard skills.
- Each student can do this to learn how to effectively use a keyboard with minimal looking at the keyboard to see the keys and errors.

ACTIVITIES/GAME - TYPING MASTER

- Explore the other options within the lessons provided.
- Clicking the games tab in the options on the right-hand side.



- Inside the **games** part, there are three activities.
- The activities listed will help to familiarise students with the keyboard. Each activity can be changed to a-z which is recommended for first getting used to the keyboard. Once comfortable it can be changed to categories which will give you full words. Scores are given in all three games.
 - Scoreboards can be kept in the class if you wish as part of a class competition.



TYPING TESTS - TYPING MASTER

1. Click on the Typing Test Tab located on the right-hand side.



- 2. Inside the Typing Test Tab there are a few options to choose from. First is the Test Text labeled with a number one. Choose a text to use, Scroll down for a larger range.
- 3. Next choose the duration, this is marked by the number two. It is set automatically at 10 minutes, but by clicking down on the tab can be changed to a range of times, from 1 minute to 30 minutes. This has been marked with a red circle.
- 4. Click Start Test to begin. This is placed next to the number three on the picture. This will begin the typing test.

Test Te <u>x</u> t	► <u>Add</u> ► <u>Delete</u>
A Bright Future: Superpower S A Typing Exam - Aiming High: A Typing Exam - Awakening to A Typing Exam - Empowering S Aesop's fables Are Your Typing Skills Hurting Astronauts Behind the scene: Movie credi DNA Research the Human G Girls' Rights Written For Children	Stories of Girls in India (10 minute) Empowering Girls (10 minutes) o Girls' Rights (5 minute, 35 WPM) Super Girls (5 minute, 25 WPM) Your Job Opportunities? its Genome Project
10 min.	Start test
mpleted Tests 07/2024 A Bright Future: Su	

5. Begin the test by typing the first word. On screen is the text and timer are ready to go. Once the first letter H in the sentence is pressed, the timer will begin.

A couple of tips.

- 1. If a mistake is made and noticed after the finished the word, do not try to backspace and go to fix it, just continue along.
- 2. Use space bars for spaces between words and enter for spaces between paragraphs.
- 3. Once finished or when the next button is pressed, the results will be displayed.

TypingMaster		Typing Test Results Test Interrupted The test was interrupted before the time was up.
Hey friends! Did you know that just like superheroes have powers, girls in India have rights that make them super special? Yep, it's true! Let's chat about some cool things that every girl should know. J Every girl has the superpower to go to school for free until she's 14! Thanks to the Right to Education Act, learning is like a fantastic adventure for all. J	Time 10:00	Time Used 1:02 min. Gross Speed 5 wpm Accuracy 80% Net Speed 4 wpm Your Difficult Keys
Type the above text here	Next Cancel	Problematic Difficult e D ! View & Print Results

Since in this example the test was not finished it has stated above "Test Interrupted".

Look at the results of the typing test for some statistics.

- Gross Speed is how fast the typing is being completed. 5 wpm means typing at roughly 5 words per minute.
- Accuracy how well words are being spelt. If the result is 80% of the words being correct, that would mean out of 100 words, 80 words correctly spelt.
- Difficult keys are the keys that were the difficult to find during the test. This is based upon how quickly they are pressed compared to the rest of the letters and words typed out.
- The letters listed are the ones that took longer to find and use compared to the rest of the letters during the test.

Using this information we can set goals to complete for students:

- If the wpm (words per minute) is low, then practice to get it higher.
- If acccuracy is low, work on getting it up by paying more attention to reading and typing.
- If difficulty with keys is the issue, recognise which keys, where they are on the keyboard and practice typing with them.

TARGET RESULTS FOR STUDENTS

Here is a guideline on what students should be aiming for with the testing, most of them should be aiming for beginner levels as they are new to computers and typing, Intermediate if they are comfortable and Expert if they want to challenge themselves. But most students should aim for Intermediate. CPM means Characters Per Minute, but is not shown on typing master, this is individual keys pressed.

Age range	Beginner	Intermediate	Expert
6 to 11 years old	15 wpm	25 wpm	35 wpm
	(75 cpm)	(125 cpm)	(175 cpm)
	80 % accuracy	85% accuracy	90% accuracy
12 to 16 years old	30 wpm	40 wpm	50 wpm
	(150 cpm)	(200 cpm)	(250 cpm)
	85% accuracy	90% accuracy	95 % accuracy
17 years old and over	45 wpm	55 wpm	65 wpm
	(225 cpm)	(275 cpm)	(325 cpm)
	90% accuracy	95% accuracy	100% accuracy

If adults are partaking and learning this (teaching), then the aim should be as below. Aiming for at least the average speed and trying to hit Productive over the next 5 years of teaching.

Targets for an adult	Words per minute (wpm)	Characters per minute (cpm)
Average speed	40 wpm and over	200 cpm and over
Above average speed	50 wpm and over	250 cpm and over
Productive speed	60 wpm and over	300 cpm and over
High speed	70 wpm and over	350 cpm and over
Competitive speed	120 wpm and over	600 cpm and over

Microsoft Word

Week 4: Lessons 10-12



MICROSOFT WORD

On the following page, we have prepared a letter which is addressed to Jack Growden, welcoming him to Papua New Guinea.

Your task is to re-write this letter exactly in the format it is in (including the table, images and fonts), to learn the various functionalities of Microsoft Word.

You will notice that the letter includes the use of a range of text styling techniques, including **bold**, <u>underline</u>, *italics*, change of colour, and text highlight. It also includes a table and two images. The LiteHaus letterhead image can be found on your accompanying USB stick as 'Letterhead'. The 'houses' image can be found on the same USB stick as "PNG Image 1".

Below are your instructions:

- 1. Open a blank Microsoft Word document. Microsoft Word can be found by clicking the Windows Menu button in the bottom left corner of your screen:
- 2. Once Microsoft Word is opened, click 'Blank Document'.
- 3. Begin typing the text, **ignoring the styling, images and table** for now once you have typed the entire text, we will move on with these.
- 4. Create a list for the following: Lush rainforests; towering mountain ranges; pristine beaches; and vibrant coral reefs
 - a. To create a list, space these points out line by line using the Enter key:

lush <u>rainforest;</u>

towering mountain ranges;

pristine beaches;

and vibrant coral reefs

b. Select all lines by left clicking (HOLD) and dragging across the text with your right hand.

lush <u>rainforest;</u>	
towering mountain	ranges;
pristine <u>beaches;</u>	
and vibrant coral r	eefs

- c. Click the list button in the Home tab which looks like this: Ξ ~
- d. The list should now look like this:
 - lush <u>rainforest;</u>
 - towering mountain <u>ranges;</u>
 - pristine beaches;
 - and vibrant coral reefs



Once you have written all of the text, including the list above, it is time to begin styling the letter. Let's start by adding the pictures.

- 1. Insert the USB flash drive provided.
- 2. Click on File Explorer at the bottom of your screen:
- 3. Click on USB Drive (D:): ---- USB Drive (D:)
- 4. In the folder, you should find 'PNG Image 1', click to open it.
- 5. **Right**-click on the image and select *Copy*.
- 6. Return to your Microsoft Word document and click in the appropriate location in the letter where the image will be being placed.
- 7. Right-click and select Paste.
- 8. The image in its current form will be too big for the space provided. Therefore, we need to crop the image. To do this:
 - a. Select the image and click on 'Picture Format' tab at the top of your screen.
 - b. Click on Crop.

Crop

c. The corners of the image will now have black lines click and hold on the top right hand corner of the image and drag it down to cut out the sky. Then click and hold the bottom right hand corner of the image and drag it up to remove most of the grass. The image should now look like this:



- 9. The image should now fit neatly on the bottom of the first page of the letter.
- 10. Now let's add the **letterhead**. Once again, click on File Explorer at the bottom of the screen and open 'Letterhead'
- 11. **Right**-click on the image and select *Copy*.
- 12. Return to your Microsoft Word document and click at the top of the letter where the image will be being placed.
- 13. **Right**-click and select *Paste*.
- 14. You will notice that the image does not stretch exactly to the margins. To fix this, select the image and click on 'Picture Format' tab at the top of your screen.
- 15. Click on Wrap Text and select "Behind Text". This will make the image more flexible and easier to move.
- 16. Now, resize the image and stretch it right to the margins by clicking on the image and then clicking, holding and dragging the image to the corners of the document.
- 17. You may need to enter the text down so that it starts neatly below the letterhead.

Your letter should now have both images neatly included as shown in the example letter. Now, it is time to add the table following these steps:

- Table
- 1. Select the Insert tab. Then click on the Table icon and drop-down menu.
- Pere, you can select the number of rows and columns by clicking on the grid which looks like this:



3. Create a table with **3 columns** and **5 rows**. It will look like this at first:

- 4. Begin adding in the text so that your table looks like the below. To create a number list, go to the Home tab and click on this button: $\left|\frac{1}{2}\right| = |\cdot|$
- 5. Your table should now look like this:

Year levels	Gender	Highest Numbers
Year 5	Males: 57	Males
	Females: 45	
Year 6	Males:35	Females
	Females:46	
Year 7	Males: 75	Males
	Females:50	
Year 8	Males:59	Females
	Females: 60	

- 1. Now, the columns need to be re-aligned. To do that, select the first column, click the Layout tab and the click the Centre Align button which looks like this:
- While you have the first column still selected, click on the **bold** icon in the Home tab. It looks like this:
- 3. Repeat Step 6 for the third column, **but not the second column**.
- 4. Now we need to bold and shade the top row. To do that, select the top row and, firstly, press the bold icon. Secondly, click the Table Design tab in the toolbar, and click on the Shading drop down menu. It looks like this:



5. Your **table** should now look exactly like the example letter template.

Now it is time to style the text throughout the document, following the instructions below:

Bolding Text:

• Select the text, then click on the **bold** icon in the Home tab. It looks like this: **B**

Underlining Text:

• Select the text, then click on the <u>underline</u> icon in the Home tab. It looks like this: <u>U</u> <u>Italicising Text:</u>

• Select the text, then click on the *italics* icon in the Home tab. It looks like this: I

Changing Text Colour:

• Select the text, then click on the dropdown menu next to this icon: <u>A</u>. Select colour.

Highlighting Text:

• Select the text, then click on the dropdown menu next to this icon:

Enlarging Text:

• Select the text, then click on the dropdown menu next to this icon: 11

Now to put the finishing touches on the letter by signing off. You will see in the template that it asks for your name and your title. Amend this to suit you. Create a gap between "Warm Regards," and your name. This is where we will add your signature.

To create your signature:

- 1. Click on the **Draw** tab in your toolbar.
- 2. Select the black pen icon to the right.
- 3. ALERT: Now your mouse is operating as a pen. To use the pen, left click and hold with your left hand. With your right hand, drag the mouse along to make your signature. Be gentle and take your time as the mouse is touchy.
- 4. If you are unhappy with your first attempt, press CTRL+Z to undo.
- 5. Once you are satisfied, be sure to return to the Draw tab and click the mouse icon to deactivate the pen function.

You have now completed the letter. Now save the document by clicking the save icon.



RE: Pen Pal Letter – Learning each other's cultures

Dear Australian Friend,

I hope this letter finds you in great health and high spirits. I would like to tell you a bit about my home country and my Village.

Papua New Guinea, located in the **South Pacific/Oceania**, is a land of incredible diversity and breathtaking landscapes. These include:

- Lush rainforests;
- towering mountain ranges;
- pristine beaches;
- and vibrant coral reefs.

PNG offers a unique blend of natural beauty that is second to none. Whether you're trekking through the rugged terrain of the Kokoda Track, exploring the enchanting Sepik River, or diving into the mesmerizing underwater world of Milne Bay, PNG promises unforgettable adventures.



This is a picture of my home; we use a lot of natural resources and live a good life. We live in a small village, out in our beautiful rainforest. There are a lot of trees, grass and a lot of work. We love our farming and pride ourselves on our food that we grow and enjoy. My favourite food is Kau Kau which is like a sweet potato.

I have a few questions about Australia.

- 1. What is your life like in Australia?
- Do you live similarly to the way we live?
 What is your favourite food from Australia?
- 4. Do you have questions for me about Papau New Guinea?

I hope to receive a response from you soon!

All the best,

Your Name Here

Microsoft Excel

Week 5-7: Lessons 13-22



MICROSOFT EXCEL

On the following page, we have compiled hypothetical student enrolment data from across imaginary schools.

Your task is to enter the data accurately into spreadsheet using Microsoft Excel, and then analyse the data to determine the answers to the following questions:

- 1. Which region has the most schools?
- 2. Which region has the most students in total?
 - a. Express in a bar graph.
 - b. Express this in pie chart.
- 3. Which region has the most female students in total?
- 4. Which region has the highest average number of students per school?
- 5. Which school is the biggest in the country?
- 6. Which school is the biggest in the Southern region by population?

To begin the task:

- 1. Open Microsoft Excel, which can be found by clicking the Windows Menu button in the bottom left corner of your screen:
- 2. Select 'Blank Worksheet'.
- 3. Fill in the sheet like below:

	A	В	C	D	E	F	G	Н	1	J	K	L	M	N	0
1				Grade 9			Grade 10			Grade 11			Grade 12		
2	School Name	Region	м	F	Т	м	F	т	м	F	т	м	F	т	GRAND TOTAL
3	Kilo School	Highlands	144	98	242	432	282	714	76	72	148	62	20	82	1186
4	Lima School	Highlands	136	94	230	408	282	690	74	72	146	66	16	82	1148
5	Juliett School	Highlands	128	96	224	384	288	672	82	66	148	58	24	82	1126
6	Delta School	Islands	73	50	123	58	44	102	37	34	71	29	28	57	353
7	Echo School	Islands	59	46	105	54	40	94	43	36	79	32	35	67	345
8	Golf School	Southern	71	51	122	52	45	97	39	37	76	33	7	40	335
9	Bravo School	Momase	62	47	109	56	42	98	45	38	83	34	9	43	333
10	Hotel School	Southern	63	52	115	60	39	99	42	31	73	35	10	45	332
11	Foxtrot School	Southern	67	48	115	57	43	100	40	33	73	30	12	42	330
12	Charlie School	Momase	68	49	117	53	41	94	41	35	76	31	11	42	329
13	Alpha School	Momase	64	49	113	55	40	95	39	39	78	32	8	40	326
14	India School	Southern	69	47	116	55	42	97	38	32	70	28	13	41	324
15			1004	727	1731	1724	1228	2952	596	525	1121	470	193	663	6467

To do this, you will need to:

- 1. Adjust the size of the columns by left clicking and holding the line that separates column A and column B, for example, and dragging them to fit.
- 2. You will see that Grade 9, Grade 10, Grade 11 and Grade 12 fit neatly across all of the M. F. T columns. To achieve this \leftrightarrow
 - a. Select cell C1, D1, and E1 and press Merge and Centre icon:

You will now be wondering how to get the Total number of students automatically, for each grade as these are not provided in the data.

For this, we will use the first of many Excel Formulas.

Formulas instruct the computer to calculate and measure certain things based on certain variables.

Below is a summary of formulas which we will use to analyse the data:

SUM – To add up numbers.

SUMIF – To add up numbers based on criteria.

SUMIFS – To add up numbers based on multiple criteria.

COUNTIF – To count based on a criteria.

COUNTIFS – To count based on multiple criteria.

MAX – To find the highest value in the list.

AVERAGE – To find the average value of a list.

To add up the total students per grade, per school, we will use the **SUM** function. To do this:

- 1. Click in the blank Total column for Alpha School, Grade 9.
- 2. Enter the following: **=sum(** and then select both D3 and C3. Your formula will now looks like **=sum(C3:D3**. Close the brackets so it looks like this: **=sum(C3:D3**). Press enter.
- 3. To save you from having to write that for every single school's Grade 9 total, click on the Total for Alpha School and **left click, hold and drag** from the bottom right-hand corner of the field all the way down to the last school. Once you release your hold, all the values will automatically appear.
 - a. Repeat Steps 2 & 3 for each of Grades 10, 11 and 12.
- 4. Add in a final column called 'Grand Total' at the end of the sheet and use the **SUM** function to add up all of the Total columns for each school. This will give you the total number of students in the school. To do that:
 - a. Press =sum(and then select E3. Then add a + and then add H3. Then add a + and then add K3. Then add a + and add N3. Then close the brackets. Your formula should now look like this: =sum(E3+H3+K3+N3). Press enter.
 - b. Repeat Step 3 for the Grand Totals column to list all the values down the sheet.
- 5. Repeat Step 4 and then Step 3 to add 'Total Females' and 'Total Males' columns. To Insert Columns (and rows when required) click on Insert in the Home Tab and a dropdown menu will appear. Click on Insert Sheet Columns as below:

🚰 In	sert ~ 🔰 🛛 × A
	Insert Cells
₹	Insert Sheet <u>R</u> ows
.∭	Insert Sheet <u>C</u> olumns
取	In <u>s</u> ert Sheet

Note for reference, that when writing Excel formulas, everything needs to be precise. We have touched on adding numbers together above, but to subtract, multiply and divide them:

- * Multiply in Excel Formula
- / Divide in Excel Formula
- + Add in Excel Formula
- -- Subtract in Excel Formula

Now our spreadsheet will enable us to begin data analysis. To answer **Q1**, we need to create a table below the data like this:

Region	Number of Schools	Students
Momase		
Islands		
Southern		
Highlands		

Now:

1. Click in the Momase/Number of Schools field and press the Formulas tab in the toolbar, then click Insert Function. This is a critical button which will be used throughout the analysis, so please note it on the very left below:

File	Home	Insert	Draw	Pag	je Layo	out	Formulas	Data	Review
fx Insert Function	AutoSum	Recently Used ~	Financial ř	Cogical	A Text ~	Date & Time Y	Q Lookup & Reference ~	θ Math & Trig ~	More Functions ~
Function Library									

- 2. Select **COUNTIF** from the list of formulas. This will instruct Excel to count the number of schools in each region.
- 3. Select the Range by clicking on B3 and dragging it down to B14 to select all regions.
- 4. Add Momase into the Criteria field.
- 5. Press Enter.

Range	B3:B14	1
Criteria	"Momase"	1

6. Repeat these steps for each of the regions: Islands, Southern, Highlands until your table looks like the below. You will see that Southern is the answer to **Q1**.

Region	Number of Schools
Momase	3
Islands	2
Southern	4
Highlands	3

Note: if you are getting zero values, ensure that you are entering the criteria/region in absolutely identical to what you have listed in the data.

To answer **Q2**, we need to use the **SUMIF** function to add up the total number of students per region. To do that:

- 6. Click in the Momase/Students field and press the Formulas tab in the toolbar, then click Insert Function, just like in Step 1.
- 7. Select **SUMIF** from the list of functions. This will instruct Excel to add up the number of students in each region.
- 8. Again, select the Range by clicking on B3 and dragging it down to B14 to select all regions.

9. Again, add Momase as the Criteria.

10. For the Sum Range, go to the Grand Total column and click and drag O3 to O14.

11. Press Enter.

Range	B3:B14	1
Criteria	"Momase"	1
Sum_range	O3:O14	1

12. Repeat the above steps now for each of the regions.

Your table should now look like this:

Region	Number of Schools	Students
Momase	3	988
Islands	2	698
Southern	4	1321
Highlands	3	3460

Now, you can clearly see that the answer to **Q2** is Highlands.

Now, you can express this in both a Bar Chart and a Pie Chart. To create a Bar Chart:

 Select the regions list (Region, Momase, Islands, Southern, Highlands) and then press and hold CTRL and then select the students list (Students, 988, 698, 1321, 3460)

a. You will know that they are selected when they are highlighted in black.

14. Click on the Insert tab in the toolbar, and select the bar chart icon.



15. Select the first 2-D column graph option.

You will notice that your graph looks like this:



Now we need to edit the title. To do that, click on the 'Chart Title' and amend it to 'Total Students by Region in PNG'.

We will now add data labels to each of the bars. To do this:

- 16. Click on the graph.
- 17. Click on the Chart Design tab and then click on **Add Chart Element, Data Labels, Outside End**.



Your graph should now look like this:



18. To create a pie chart, follow the same steps, but instead click on 2-D Pie chart.



Once you add the data labels and change the title by following the previous steps, the pie chart should appear like below:



To answer **Q3**, we have to use the SUMIF function, but instead of adding up the Grand Total, we need to add a new column called **Female Total** and use that.

- 19. Create a Female Total column following the instructions in Step 4 of Page 8.
- 20. Return to your smaller table and click in the Momase/Female Students field.
- 21. Press Insert Function and add in the variables listed below, then press ENTER.

Range	B3:B14	1
Criteria	"Momase"	1
Sum_range	03:014	1

22. Repeat this step for each region.

Your table should look like the below. We can see that the answer to Q3 is Highlands.

Region	Number of Schools	Students	Female
Momase	3	988	408
Islands	2	698	313
Southern	4	1321	542
Highlands	3	3460	1410

You may choose to also express this in a bar or pie chart as an extra activity.

To answer **Q4**, we need to add another column into our smaller analysis table called 'Average Students Per School'. To calculate this, we need to use the **SUM** function again.

- 23. Click in the Momase/Average Students Per School field.
- 24. Type =sum(and then select the total number of students for Momase field. Then type the symbol: / and then select the number of schools for Momase field. Press enter.a. Your formula should be: =sum(Number of students/Number of Schools)
- 25. Repeat this step for each of the regions until your table looks like this:

Region	Number of Schools	Students	Female	Average Per School
Momase	3	988	408	329.3333333
Islands	2	698	313	349
Southern	4	1321	542	330.25
Highlands	3	3460	1410	1153.333333

You will notice that the decimal places are untidy. To fix this:

- 1. Click on the 329.33333333 value.
- 2. Click on the decrease decimal icon in the Home tab.
- 3. Repeat this step for each of the values.

Now, we can clearly see that the answer to **Q4** is again, the Highlands.

To answer **Q5** & **Q6**, we will now learn how to Sort & Filter.

• **Sorting** is the process of manipulating a list so that it is placed in a particular order (i.e. A to Z or Highest to Lowest).

.00)0

• Filtering is the process of removing pieces of information to leave a refined list.

Let's answer **Q5** first by using the Sorting function.

- 4. Go to your Grand Total column and select all values.
- 5. In the Home Tab, click Sort & Filter and then Sort Largest to Smallest.



6. When you click this, it will come up with a 'Sort Warning' – refer the following page. Click Expand the Selection and then Sort.

Sort Warning		?	×
Microsoft Excel found data next to your selection. S will not be sorted.	ince you have not s	elected this	data, it
What do you want to do?			
Expand the selection			
\bigcirc <u>C</u> ontinue with the current selection			
	<u>S</u> ort	Can	cel

You will notice that the schools are now in the list of largest to smallest.

As such, we can see that the answer to **Q5** is Kilo School.

To answer, **Q6**, we have to use the Filtering function.

- 7. Click on cell A2 School Name.
- 8. Click on the Sort & Filter icon again and then press Filter.
- 9. You will notice that next to every heading in that row, a little arrow has appeared. Click on the arrow next to Region.
- 10. You will see this list:
- ✓ (Select All)
 ✓ Highlands
 ✓ Islands
 ✓ Momase
 ✓ Southern
 ✓ (Blanks)
- 11. Untick all of the regions except for Southern and press OK.

Now you should only see the four schools in Southern listed. Therefore, we can see that the answer to **Q6** is Golf School.

To return your data sheet to its original form, re-select all the regions in the Filter function.

SECONDARY SCHOOL ENROLMENT DATA

Alpha School – Momase Region

Grade 9 (64 M | 49 F), Grade 10 (55 M | 40 F), Grade 11 (39 M | 39 F), Grade 12 (32 M | 8 F)

Bravo School – Momase Region Grade 9 (62 M | 47 F), Grade 10 (56 M | 42 F), Grade 11 (45 M | 38 F), Grade 12 (34 M | 9 F)

Charlie School – Momase Region Grade 9 (68 M | 49 F), Grade 10 (53 M | 41 F), Grade 11 (41 M | 35 F), Grade 12 (31 M | 11 F)

Delta School – Islands Region Grade 9 (73 M | 50 F), Grade 10 (58 M | 44 F), Grade 11 (37 M | 34 F), Grade 12 (29 M | 28 F)

Echo School – Islands Region Grade 9 (59 M | 46 F), Grade 10 (54 M | 40 F), Grade 11 (43 M | 36 F), Grade 12 (32 M | 35 F)

Foxtrot School – Southern Region Grade 9 (67 M | 48 F), Grade 10 (57 M | 43 F), Grade 11 (40 M | 33 F), Grade 12 (30 M | 12 F)

Golf School – Southern Region Grade 9 (71 M | 51 F), Grade 10 (52 M | 45 F), Grade 11 (39 M | 37 F), Grade 12 (33 M | 7 F)

Hotel School – Southern Region Grade 9 (63 M | 52 F), Grade 10 (60 M | 39 F), Grade 11 (42 M | 31 F), Grade 12 (35 M | 10 F)

India School – Southern Region Grade 9 (69 M | 47 F), Grade 10 (55 M | 42 F), Grade 11 (38 M | 32 F), Grade 12 (28 M | 13 F) Juliett School – Highlands Region

Grade 9 (128 M | 96 F), Grade 10 (384 M | 288 F), Grade 11 (82 M | 66 F), Grade 12 (58 M | 24 F)

Kilo School – Highlands Region

Grade 9 (144 M | 98 F), Grade 10 (432 M | 282 F), Grade 11 (76 M | 72 F), Grade 12 (62 M | 20 F)

Lima School - Highlands Region

Grade 9 (136 M | 94 F), Grade 10 (408 M | 282 F), Grade 11 (74 M | 72 F), Grade 12 (66 M | 16 F)

FORMULAS FOR EXCEL

Dates and Time Excel Formulas

- <u>=EDATE</u> add a specified number of months to a date in Excel
- =EOMONTH convert a date to the last day of the month (e.g., 18/7/2018 to 31/7/2018)
- =DATE Returns a number that represents the date (yyyy/mm/dd) in Excel. This formula is useful when working with Excel functions that have a date as an argument.
- <u>=TODAY</u> insert and display today's date in a cell
- =NETWORKDAYS Returns the number of whole workdays between two specified dates.
- =YEAR extracts and displays the year from a date (e.g., 18/7/2018 to 2018) in Excel
- =YEARFRAC expresses the fraction of a year between two dates (e.g., 1/1/2018 3/31/2018 = 0.25)

Lookup Formulas

- =VLOOKUP a lookup function that searches vertically in a table
- =HLOOKUP a lookup function that searches horizontally in a table
- =INDEX a lookup function that searches vertically and horizontally in a table
- =MATCH returns the position of a value in a series
- =OFFSET moves the reference of a cell by the number of rows and/or columns specified

Math Functions Excel Formulas

- =SUM add the total of a series of numbers
- =AVERAGE calculates the average of a series of numbers
- =MEDIAN returns the median average number of a series
- =SUMPRODUCT calculates the weighted average, very useful for financial analysis
- =PRODUCT multiplies all of a series of numbers
- <u>=ROUNDDOWN</u> rounds a number to the specified number of digits
- <u>=ROUNDUP</u> the formula rounds a number to the specific number of digits
- <u>AutoSum</u> a shortcut to quickly sum a series of numbers
- =ABS returns the absolute value of a number
- =PI Returns the value of pi, accurate to 15 digits
- =SUMIF sum values in a range that are specified by a condition
- =SUMQ Returns the sum of the squares of the arguments

Financial Formulas

- <u>=NPV</u> calculates the net present value of cash flows based on a discount rate
- =XNPV calculates the NPV of cash flows based on a discount rate and specific dates
- =IRR this formula calculates the internal rate of return (discount rate that sets the NPV to zero)
- <u>=XIRR</u> calculates the internal rate of return (discount rate that sets the NPV to zero) with specified dates
- =YIELD returns the yield of a security based on maturity, face value, and interest rate
- =FV calculates the future value of an investment with constant periodic payments and a constant interest rate
- =PV calculates the present value of an investment
- =<u>INTRATE</u> the interest rate on a fully invested security
- =IPMT this formula returns the interest payments on a debt security
- =PMT this function returns the total payment (debt and interest) on a debt security
- =PRICE calculates the price per \$100 face value of a periodic coupon bond
- =DB calculates depreciation based on the fixed-declining balance method
- =DDB calculates depreciation based on the double-declining balance method
- =SLN calculates depreciation based on the straight-line method

Conditional Functions

- =IF checks if a condition is met and returns a value if yes and if no
- =OR checks if any conditions are met and returns only "TRUE" or "FALSE"
- =XOR the "exclusive or" statement returns true if the number of TRUE statements is odd
- =AND checks if all conditions are met and returns only "TRUE" or "FALSE"
- =NOT changes "TRUE" to "FALSE", and "FALSE" to "TRUE"
- IF AND combine IF with AND to have multiple conditions
- =IFERROR if a cell contains an error, you can tell Excel to display an alternative result

Microsoft PowerPoint

Week 8: Lessons 20-22



MICROSOFT POWERPOINT

In the previous exercise, we analysed student data to create various graphs and tables. However, this is not a neat format for presenting to large groups at formal events. Instead, Microsoft PowerPoint is the best option.

In this task, we will create a PowerPoint presentation titled "Analysis of Student Data in PNG" and include our key findings and graphs.

To begin the task:

- 1. Open Microsoft PowerPoint, which can be found by clicking the Windows Menu button in the bottom left corner of your screen:
- 2. Select 'Blank Presentation'.
- 3. Click on the Design tab and select a design. We recommend the third option (in green below).

File	Home	Insert	Draw	Design	Transitions	Animations	Slide Show	Record	Review	View	Help	Acrobat
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4. Change the Title to "Analysis of Student Data in PNG" and the Subtitle to "Provincial Department of Education".



- 5. Insert a new slide by clicking **New Slide**. Be sure to select 'Title & Content' as the format.
- 6. Change the title to 'Key Findings'.
- 7. In the textbox below, you will see that it has automatically started a list. Go ahead and write six dotpoints listing the following from the data in your Excel sheet:
 - a. The total number of students in PNG is XXXX
 - b. The total number of schools in PNG is XXXX
 - c. The region with the largest number of schools is XXXX
 - d. The region with the largest number of students is XXXX
 - e. The average number of students per school is XXXX
 - f. The largest school in PNG is XXXX
- 8. Insert a new slide by clicking **New Slide**. Be sure to select "Title Only" as the format.
- 9. Change the title to 'Regions of PNG'.
- 10. Copy (CTRL-C) and Paste (CTRL-V) the graph titled Total Students By Region from the Excel sheet into the vacant space on this slide.
- 11. Repeat these steps for each graph that was produced in the Excel sheet, inserting new slides when required.
- 12. Add a new slide by clicking New Slide. Be sure to select "Blank" as the format. Then copy and paste the image 'PNG Image 1' on the page. This will be our end page.

To add artistic transitions into the slideshow, click on the Transitions tab and select from the options below. We recommend 'Wipe'.



To ensure that this is consistent throughout the presentation, press Apply to All on the right hand side of the toolbar (see above).



To enter Presentation Mode (which will make your slideshow full screen), click the Slide Show tab and then the From Beginning icon. Now your slideshow will be full screen. To click through your slides, press the Space Bar.

BEST PRACTICE – PRESENTATION TIPS

- Less is best adding too much text to the screen can confuse the viewer.
 - You can always say more in your speech. The PowerPoint should just be there to re-enforce what you have to say.
- Less is best (again!) be sure to limit the variety of transitions and colours used.
 Random movements on the screen can distract the viewer.
 - Always use an existing 'Design' to improve professionalism of style.
- Make sure all images and text boxes are neatly aligned to each other.
- Use a simple, professional font. Remember it is the content of the presentation that the audience is interested in.
- Always use Presentation Mode when presenting.

Assessment Materials

Weeks 7, 8, 9



EXCEL ASSESSMENT

You have been asked to check the ability of the schools in the area to teach students. The government has asked that you check that each school meets the following criteria:

- 1. 1 classroom for every 30 students
- Make another column. Use ratios (refer to page 13) to calculate students per classroom
- 2. 1 Teacher for every 30 students
 - Make another column. Use ratios (refer to page 13) to calculate students per teacher.
- The government also wants to know the overall numbers of students and teachers.
 Use SUM function to calculate (Refer to page 13)
- 4. How many places do not meet 1 Classroom, 1 Teacher for every 30 students.
 - Refer to page 13 to help you to find the ratios.
- 5. Which needs the immediate attention? For every 1 classroom and 1 teacher under per 30 students
 - Use filter function to find this answer (refer to page 13-14)
- 6. Rank from top priority to less necessary, based on your results.
 - Use the filter function to help you rank this (refer to page 13-14)
- Make a graph of the <u>number of students in each region, the numbers of schools, Teachers</u> (one pie graph and one bar chart required) use the data from countif to help complete (refer to page 9-12)

MAKE SURE TO USE SUMIF AND COUNTIF TO HELP YOU WITH CALCULATIONS.

Wood School (Northern Region) - 68 Students, 1 Teacher, 1 Classroom John School (Western Region) - 90 students, 2 Teachers, 2 Classrooms Oak School (Eastern Region) - 150 Students, 7 Teachers, 6 Classrooms Oil School (Southern Region) - 100 Students, 2 Teachers, 2 Classrooms Rock School – (Northern Region) 88 Students, 2 Teachers, 1 Classroom Tree School – (Northern Region)125 Students, 2 Teachers, 2 Classrooms Fish school – (Western Region) 190 Students, 5 Teachers, 4 Classrooms Lone School – (Western Region) 190 Students, 5 Teachers, 4 Classrooms Cart School – (Western Region) 79 Students, 2 Teachers, 3 Classrooms Care School – (Western Region) 142 students, 4 Teachers, 5 Classrooms Friend School – (Northern Region) 135 Students, 3 Teachers, 3 Classrooms Thursday School – (Eastern Region) 99 Students, 3 Teachers, 3 Classrooms Coral School – (Western Region) 83 Students, 3 Teachers, 3 Classrooms Coral School – (Southern Region) 177 Students, 4 Teachers, 5 Classrooms

Your table should include the following **columns** in your excel spreadsheet with these **titles**: schools, region, students, teachers, classrooms.

WORD ASSESSMENT

Based upon your findings in the Excel assessment, write to the government with your results, explaining what schools are in dire need of attention and what the solutions are to solve the numbers issues for students, to teachers, to classroom numbers. You will need to provide an idea of how much time you expect these projects to take and a timeframe you believe this needs to be completed by.

Example of Template On Following Page



28th February 2024

Jack Growden LiteHaus International Founder & CEO

RE: Official Review of Schools in Papua New Guinea

Dear Jack,

At your request, a formal investigation of each school was conducted in order to find out the following information. The **number** of **students**, **teachers**, and **classrooms** in each **region** of Papua New Guinea. With this information we have collected, we have <u>created graphs to</u> <u>show the following data</u> for out education system:

- Number of teachers per 30 students
- Number of classrooms per 30 students
- How many schools meet the required number of teachers and classrooms

With this data, I have been able to see which ones are in <u>dire need of attention to have enough</u> <u>classrooms and teachers per 30 students</u>. I have completed a **table** to show the data **below**:

Region	Schools	Number of students/teachers/classrooms
Northern		
Southern		
Western		
Eastern		

With this data shown in the table, I have identified the schools needing more classrooms and teachers. I have provided some **solutions** including:

- Which schools should be completed first
- What method I suggest to increase the number of teachers and classrooms

TALK ABOUT SOLUTIONS HERE

I am available from the 15th February – 20th June, *after which I will be taking a well-deserved break for 2 weeks*. Please contact Jienelle to negotiate a time to meet.

Warm regards,

YOUR NAME

POWERPOINT ASSESSMENT

The government has asked you to present your finding to the team at their offices, you have the script ready for what you will say. But you need a PowerPoint presentation to assist you during the talking. You will need to grab the key points from your letter and Spreadsheet, place them into slides and make them grab the viewers' attention. Make sure to not use too many words and use images to help make it appealing.

Use the template provided below to help you:



• Choose a background/slide you like

Title

- Information in dot points
 - Image can be used if you wish
 - Slideshow animations kept to appear and fade



Scratch

Week 8: Lessons 26-28



Scratch

Scratch is a free to use software that allows you to start practicing coding, simple coding that makes animations & games.



This guide will not have as much information on the actual activities for the program, as they have been provided in video format for you in the Scratch Coding folder, in the ICT Folder located inside the provvded LiteHaus E-Library English folder provided.

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Bring Your Drawings Into Scratch _ Tutorial.mp4	Conditional Statements_ Make Interactive Projects (Part 1	Conditional Statements_ Nesting, Debugging, an	Create a Sprite with the Scratch Paint Editor_ Tutorial.mp4	Create Your Own Asset Pack Device The State Asset Pack, Part 1_ What Is a Scratch Asset P	Create Your Own Asset Pack, Part 2_ Tips and Tricks for Creating an	Create Your Own Asset Pack, Part 3_ Remixing and Using Assets in	How to Draw Backdrops in Scratch _ Tutorial.mp4	How to Make a Catch Game in Scratch_ Tutorial.mp4	How to Make a Character Designer in Scratch_Tuto	How to Make a Clicker Game in Scratch_ Tutorial.mp4
How to Make a Jumping Game in Scratch_ Tutorial.mp4	How to Make a Mouse Trail in Scratch _ Tutorial.mp4	How to Make a Pong Game in Scratch_ Tutorial.mp4	How to Make a Scrolling Background in Scratch _ Tuto	How to Make a Story in Scratch _ Tutorial.mp4	How to Make a Virtual Pet in Scratch_ Tutorial.mp4	How to Make a Virtual Town in Scratch _ RPG _ Tutorial.mp4	How to Make an About Me Project in Scratch _ Tutorial.mp4	Remix and Remix and Re-imagine Scratch Sprites Tutorial.mp4	Scratch 3.29.1 Setup.exe	yBocks; state Mudous Scratch My Blocks, Part 1_ Create Custom Blocks _ Tutor
s and Tricks scratch My Blocks, Part 2_ Tips and Tricks_ Tutorial.mp4	y Biocks stom Biocks tit Parameters Scratch My Blocks, Part 3_ Custom Blocks with Paramete	Sounds in Scratch_Add, Record, and Use Text to Speech	Turtle Graphics_ Using Pur Blocks in Scratch_ Turtorial.mp4	Using Variables and Lists in Scratch (Part 2)_ Tutorial.mp4	What Are Variables and Lists in Scratch_ (Part 1)_Tutori					

Inside the Scratch folder as shown above, is the Scratch installer. Within the same area is also several tutorials we have provided. Go through these as a class together with the program.

Within the Unit plan and curriculum are some of the videos it is recommended the class to look at first.

This is a very basic introduction to Scratch. The videos provided will assist with the rest of the training.

1. Open Scratch to see the screen displayed.

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- 2. This will be the default screen that comes up each time. There are several actions that can be made from here.
 - Start an individual project.
 - Look at the costumes, sounds and other actions available.
 - Open any past project and continue to work on it.
- 3. Begin by exploring the functions on the scratch screen.
 - The Green circle is where a sprite can be chosen, which can be a different character to the one on screen.
 - The Red circle is where a background for the character can be chosen.
 - The <u>Yellow</u> circle is where sounds can be recorded, as well as a number of sounds can be chosen from that are provided.
 - The Pink circle is where changes to the characters can be made, such as giving the cat a hat or wings. A unique character can be created as well.

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- 4. Time to explore what can be done with Scratch, on the left-hand side is a number of colours and tabs. This will help with coding the sprite.
 - Go to the left which currently has motion open. Click and drag one of the commands onto the screen as shown below.
 - Click on the blue piece placed, it will now move the sprite.



5. If pressed enough times the character will move across the small screen to the right.

Before



After

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• Notice that the sprite has moved to the edge of the space that it has available to it. This is a basic movement and the beginning of what can be achieved.

There are many more commands and functions to try. It is recommended to begin with the video **How to Make a Story in Scratch** _ **Tutorial** as it will show the basics of using characters, backgrounds and movements.



Once comfortable with this, start to explore and use other videos available to you in the folder. Have fun trying different commands with Scratch as it is meant to be played with and for students to have a go and learn. Remember that mistakes are natural in order to figure out what went wrong, then fix them. Errors are a part of coding and learning. Mistakes will be made many times and that is ok.

E-Safety Modules

Week 10 & 11: Lessons 29-34



LiteHaus International E-Safety Modules

On your device, eleven e-safety modules have been provided which will be useful for teaching students about online safety and much more. These are located in the LiteHaus Modules folder as shown below.

📊 LiteHaus Modules	9/07/2024 3:42 PM	File folder	
🚾 Chapter 1 - eSafety - Making good choic	9/07/2024 3:42 PM	Microsoft Edge P	21,470 KB
🚾 Chapter 2 - Scam Awareness.pdf	9/07/2024 3:42 PM	Microsoft Edge P	6,208 KB
🚾 Chapter 3 - Cyberbullying.pdf	9/07/2024 3:42 PM	Microsoft Edge P	13,958 KB
📴 Chapter 4 - Misinformation.pdf	9/07/2024 3:42 PM	Microsoft Edge P	8,520 KB
📴 Chapter 5 -How to be a good digital citiz	9/07/2024 3:42 PM	Microsoft Edge P	11,706 KB
📴 Chapter 7 - Employability & applying for	9/07/2024 3:43 PM	Microsoft Edge P	12,319 KB
📴 Chapter 8 - E-commerce - Safely Navigat	9/07/2024 3:43 PM	Microsoft Edge P	16,720 KB
📴 Chapter 9 - Computer Safety & How to T	9/07/2024 3:43 PM	Microsoft Edge P	16,614 KB
🚾 Chapter 10 - Be safe on social media.pdf	9/07/2024 3:43 PM	Microsoft Edge P	11,621 KB
📴 Chapter 11- Technology - Helping to org	9/07/2024 3:43 PM	Microsoft Edge P	8,545 KB
🚾 Chapter 12 - Useful programs and sites f	9/07/2024 3:43 PM	Microsoft Edge P	9,712 KB

It is recommended going through Chapters 1-5 & Chapter 9 with the students to begin with. Then completing the others throughout the school year. It would also be beneficial for parents to be involved and come learn about it as well.

Notes have been put into the PowerPoints. It is recommended before presenting each one to look at each slide and read the notes located below as pictured here.



Note: This may not always be needed as the slide may provide the information needed already. So, if it is blank, it is because the information is already on the slide that is necessary.

