

Scheme of Work

Cambridge Primary

Digital Literacy 0072

Stage 1

For use with the curriculum framework published in 2019



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# Introduction

This document is a scheme of work created by Cambridge Assessment International Education for Cambridge Primary Digital Literacy Stage 1.

It contains:

* suggested units showing how the learning objectives in the curriculum framework can be grouped and ordered
* at least one suggested teaching activity for each learning objective
* a suggested project at the end of each unit that will consolidate the learning
* a list of subject-specific language that will be useful for your learners
* sample lesson plans.

You do not need to use the ideas in this scheme of work to teach Cambridge Primary Digital Literacy Stage 1. It is designed to indicate the types of activities you might use, and the intended depth and breadth of each learning objective. You may choose to use other activities with a similar level of difficulty, in order to suit your local context and the resources that you have available. You may also choose to adapt the suggested activities and the projects so that they can be embedded within the teaching of other subjects.

The accompanying teacher guide for Cambridge Primary Digital Literacy will support you to plan and deliver lessons using effective teaching and learning approaches. You can use this scheme of work as a starting point for your planning, adapting it to suit the requirements of your school and needs of your learners.

Long-term plan

This long-term plan shows the units in this scheme of work and a suggestion of how long to spend teaching each one. The suggested teaching time is based on 30 hours of teaching for Cambridge Primary Digital Literacy Stage 1. You can adapt the time, units and order of the units based on the requirements of your school and the needs of your learners.

| Unit | Suggested teaching time |
| --- | --- |
| **Unit 1.1 Safe and secure** | **10 hours** |
| **Unit 1.2 What is a computer?** | **10 hours** |
| **Unit 1.3 How a computer can help us** | **10 hours** |
| **Total** | **30 hours** |

Sample lesson plans

You will find two sample lesson plans at the end of this scheme of work. They are designed to illustrate how the suggested activities in this document can be turned into lessons. They are written in more detail than you would use for your own lesson plans. The Cambridge Primary Digital Literacy Teacher Guide has information on creating lesson plans.

Other support for teaching Cambridge Primary Digital Literacy Stage 1

Cambridge Primary centres receive access to a range of resources when they register. The Cambridge Primary support site at [**https://primary.cambridgeinternational.org**](https://primary.cambridgeinternational.org) is a password-protected website that is the source of the majority of Cambridge-produced resources for the programme. Ask the Cambridge Coordinator or Exams Officer in your school if you do not already have a login for this support site.

Included on this support site are:

* the Cambridge Primary Digital Literacy Curriculum Framework, which contains the learning objectives that provide a structure for your teaching and learning
* grids showing the progression of learning objectives across stages
* the Cambridge Primary Digital Literacy Teacher Guide, which will help you to implement Cambridge Primary Digital Literacy in your school
* templates for planning
* worksheets for short teacher training activities that link to the teacher guide
* assessment guidance (to support classroom assessment)
* links to online communities of Cambridge Primary teachers.

Resources for the activities in this scheme of work

We have assumed that you will have access to these resources:

* paper, pens and pencils for learners to use
* digital devices, such as desktop/laptop computers, handheld devices and other hardware such as video and audio recording equipment
* software that will enable learners to:
* create and save digital artefacts
* communicate online
* digitally search for information.

Other suggested resources for individual units and/or activities are described in the rest of this document. You can swap these for other resources that are available in your school.

Websites

There are many excellent online resources suitable for teaching Cambridge Primary Digital Literacy. Since these are updated frequently, and many are only available in some countries, we recommend that you and your colleagues identify and share resources that you have found to be effective for your learners.

Approaches to teaching Cambridge Primary Digital Literacy Stage 1

Cambridge Primary Digital Literacy can be used flexibly as a standalone subject, integrated within other subjects or used as the basis for activities outside of the formal curriculum. During your planning you will need to decide which approach, or mix of approaches, will enable you to address each learning objective most effectively. The activities that are presented within this scheme of work are based upon Digital Literacy being taught as a standalone subject but they can be adapted to suit an integrated approach. As an example, learners could complete the project to make a model of a computer within their Art & Design lessons.

The order of the units in Stage 1 has been designed so that learners understand some of the important safety aspects, such as the need for passwords and to tell an adult about concerning content, before they actually sit down to use a computer in an educational setting. You may decide that it is more beneficial to your own learners to experience using computers, and develop their reading and writing skills, before these messages are delivered. We therefore recommend that you read the content of all three units before deciding the order that will be most effective for your context. It will be beneficial if learners are able to write simple words before they begin this curriculum, as this will enable them to create passwords and text documents. Therefore you will need to plan the activities so that you are able to offer guidance and examples to your learners to support them with entering simple words into their devices.

# Unit 1.1 Safe and secure

| Unit 1.1 Safe and secure |
| --- |
| Outline of unit: |
| Before learners begin to understand what a computer is, it is important that they know how to use them safely. Prior to using computers in an educational setting they will most likely have used them at home, as a source of entertainment, but they may have no appreciation of how powerful digital devices can be. In this unit, learners will be introduced to the importance of passwords as this will help them to understand the need to treat digital technology with respect. If learners know about, and understand, the importance of strong passwords at this stage, they are also more likely to develop other good digital habits in the future.  Learners will also begin to understand what they should do if they feel unsafe when accessing material on an internet-enabled digital device so that they feel supported and are equipped to identify potential issues before they become exposed to them in school.  They will also be introduced to what a website is and will begin to understand how the internet works. |
| Knowledge, understanding and skills progression: |
| Some learners will have experience of using internet-enabled devices before entering school. This may or may not have been in a safe and secure environment, so it is important to establish a common understanding of how to use these devices safely and what to do if learners feel unsafe at any time. This unit lays the foundations for later work on understanding how to use digital devices safely for sharing work and for communicating with others. |
| Language: | |
| * password/passcode * log on * log off/shut down * website * internet * menu/navigate * trusted adult * report | |

| Learning objectives | Suggested teaching activities and resources | Teaching notes |
| --- | --- | --- |
| **1SW.01** Know what a password is and describe why passwords are useful. | Introduce this unit with a discussion about real-world experiences that require us to keep our personal belongings safe and secure. Where possible draw on the learners’ own experiences, such as locking their bicycle at school or having a lock on their suitcase when they travel somewhere.  *How do we make sure no one takes our toys from the classroom at night when there is no one here?*  *How do I make sure no one steals my car when I park it on the street?*  *How do your parents keep their money safe and secure?*  Establish that we all have valuable possessions and that we need to take responsibility for making sure that these are kept secure.  Explain that information like photographs, mobile telephone numbers and addresses are also valuable possessions that need to be kept safe. Also, explain that many people store this information on their mobile devices.  Ask learners to list some of the mobile devices that they are aware of, such as phones and tablets, but don’t spend much time on this at this stage.  *Can we use a lock and key to keep this information safe and secure?* Illustrate this idea with a padlock and chain or combination lock wrapped around a mobile device.  *How do we make sure information on our computers and mobile devices is kept safe and secure?*  Elicit that we should lock our devices when we are not using them.  Display examples of lock screens on different devices, particularly those that contain padlock or key icons. Discuss whether any learners have seen anything like this before and know what they are.  If learners have not heard of ‘passwords’, introduce this vocabulary and compare a password to a lock and key in everyday life. It would be helpful to have this word written on a large piece of card with an image of a padlock next to it so learners can refer to it throughout this unit and in future units.  *What would happen if I lost the key to my car when it was locked?*  *So what would happen if I forgot my password to access my mobile device?*  Elicit that losing or forgetting keys and passwords is inconvenient, so we have to take steps to help us remember our passwords. Explain that this must not involve sharing them with others or writing them down for others to see.  Explain that one strategy that can help us remember a password is to use picture symbols. Display a diagram that shows a simple eye, a heart and two fish for learners to guess what the password is – ‘Ilike2fish’.  Give learners a selection of picture symbols, cut out on separate pieces of paper, and ask them to use these to create a number of simple passwords of their own.  This activity can be extended by giving learners greater freedom to create their own passwords and then drawing a sequence of images that will help them to remember that password.  Learners share their work with the class and examples, such as those where two learners have produced similar passwords or where the passwords were easy to guess, are discussed further. It should become clear to learners that each password should be unique and that it should be difficult to guess.  *What other strategies could you use to help you remember a password?*  Explain to learners that, as they get older, they should develop strategies that will help them to remember their passwords without the need for written clues or for sharing them with a trusted person. At this stage, however, it is important that they focus on creating passwords that are secure rather than using passwords that are easy to remember without creating clues for themselves.  End this activity by checking learner understanding by asking the following questions:  *What is a password?*  *Why are passwords useful?*  *What should you think about when setting your password?*  *What should you think about when trying to memorise your password?*  **Resources:**   * A padlock and chain or combination lock wrapped around a mobile device. * Examples of lock screens on different devices, particularly those that contain padlock or key icons. * ‘Password’ written on a large piece of card with an image of a padlock. * A diagram showing a simple eye, a heart and two fish for learners to guess the password ‘Ilike2fish’. * Selection of simple picture symbols on pieces of paper that learners can use to make up password reminders. | Sensitivity is needed when introducing this topic to young learners as they could become unnecessarily worried about someone breaking into their house at night. Reassure them that it is unlikely anyone will steal their toys, but state that stealing does unfortunately sometimes happen.  Make sure that learners are not tempted to share any passwords that they are currently aware of during this discussion.  Young learners can be encouraged to create shorter, simple passwords, but they should understand that older users need longer more complex passwords.  It is important to remind learners that they should not share real passwords with their friends.  Other strategies might include:   * telling your most trusted adult your password * making up a physical action, or series of actions, to go with your password. |
| **1TC.01** Know how to switch on and log onto a computer using their own password. | Introduce this activity by asking learners to list devices that have a button or switch to turn them on.  *To make our computer work, do we just have to turn it on?*  Refer back to the previous work about passwords, using the vocabulary card, and explain that to make our computers work we need to ‘log on’ with our username and password. It would be helpful to have ‘log on’ written on a large piece of card with an image of a power switch next to it so learners can refer to it throughout this unit and in future units.  Explain that when we turn the computer on, we need to let it know that we are a trusted user and that we are allowed to use it. We do this by entering our username and password.  Demonstrate how to do this, using the school network.  Ask learners to help you write or draw a set of step-by-step instructions for logging onto the school network. The instructions should include the location of the power switch. Record and display these instructions so that the learners can refer back to them when they log on themselves.  Learners practise logging on to a computer using their username and password. Help them to navigate to a short fun and familiar activity as a reward for logging on independently. The activity could be accessed by clicking a shortcut on the desktop.  Demonstrate how to ‘log off’ a digital device to leave it ready for the next user. Explain the difference between logging off and shutting down a device. Elicit some scenarios where it is appropriate to just log off and others when the device should be shut down.  Add the instructions for logging off to the guide that will be displayed in the classroom for reference during future activities.  **Resources:**   * Selection of images of everyday devices that have power switches to turn them on. * ‘Log on’ written on a large piece of card with an image of a power switch. | It might be useful to have some images of everyday devices to support this discussion, such as a kettle, a television, a favourite toy, a hairdryer, a washing machine, etc..  Some networks or devices may not require a username. It may therefore useful to discuss the reasons for this. This could include the fact that a mobile phone should only be used by its owner and they should not, therefore, need to identify themselves before entering the password to unlock it.  Learners will need regular opportunities to log on to computers using a password. Therefore, once they have been taught how to do this, they should be encouraged to do it independently every time they access a device, even if this is a slow process to start with.  This could be supported with an activity where a learner ‘races’ another to access the application that was used previously. One learner would need to only log in, while the other will need to also switch on their device. |
| **1SW.02** Know how to report digital content, or activity, that makes them feel unsafe or uncomfortable. | Introduce this activity by establishing the following rules:   * names are not to be used when telling personal stories * be respectful of the feelings of others.   *Can you think of a time when you felt unsafe or uncomfortable?*  Learners will most likely identify times when they have fallen and hurt themselves or times when they felt lonely or sad. This is useful, but prompt them to consider times when they went on a scary fairground ride or climbed a bit higher up a tree than usual. This will enable them to identify the physical feelings they get when they feel unsafe or uncomfortable.  *What did it feel like in your stomach/arms/legs/hands/head?*  Support learners to identify those physical feelings of anxiety and stress that come with feeling unsafe or uncomfortable. Record some of the words they use to display later.  *What can you do when you feel unsafe or uncomfortable?*  Elicit that talking to a trusted adult is important when you feel unsafe or uncomfortable. Explain that it is important to have a network of people that learners can trust when they need to talk to someone about something that makes them feel unsafe or uncomfortable.  Explain that although digital devices are convenient to use and help us in lots of ways, sometimes learners might see, hear or do things that make them feel unsafe or uncomfortable when they are using them.  *What should you do when you see or hear something on your digital device that makes you feel unsafe or uncomfortable?*  Listen and respond to all learner responses to this question so that any misconceptions can be identified. Then establish that the correct course of action should be for them to:  *Switch off the screen and tell a trusted adult*.  It would be helpful to have this statement written on a large piece of paper, with an appropriate accompanying image, so that learners can refer to it whenever they are using digital devices. Learners should also be asked to repeat this advice at regular intervals whenever they are using a digital device.  Use the fingers on your own hand to count a list of people that you can talk to about any problems. Then draw around your hand on a piece of paper and write one of the names in each finger. Describe this as your network of trusted adults.  Learners draw around their own hand, cut it out and write the name or title of a trusted adult on each finger to whom they could report digital content that makes them feel unsafe or uncomfortable. If they are unable to write the names, learners could draw pictures of their trusted adults here and then explain who those adults are, so that the names can be added later.  These network hands could be displayed near the digital devices in your classroom with an explanation about what learners do if they come across digital content which makes them feel unsafe or uncomfortable.  **Resources:**   * A large piece of paper displaying the statement ‘*Switch off the screen and tell a trusted adult*’, with an approporiate accompanying image. * A range of digital devices you can use to demonstrate switching off the screen. | Sensitivity and discretion are strongly advised when asking questions like this. It is important that learners do not name those who have made them feel unsafe or uncomfortable and do not go into too much detail in this context. It may become necessary to seek further information from certain learners during a private conversation at the end of a lesson if concern arises, however.  It is also important to reassure learners that sometimes it is fine to feel unsafe or uncomfortable as long as it is clear that the feeling will come to an end. An example of this would be the feeling of watching an exciting moment in a film.  Suitable examples might include the screen freezing or buffering, a new window or an advert ‘popping up’ unexpectedly, an image of an animal eating its prey and so on.  Be sure to include people at work and at home so that learners understand the importance of having trusted adults in the different places where they might use a digital device.  Discourage learners from limiting their circle of responsible adults to their parents and teacher because these people might not be around when they need help. It might be helpful to list examples of other responsible adults from within the school.  Learners also need to know that switching off, or locking, the screen is not the same as logging off or shutting down a device. Switching off the screen is important because the adult needs to be able to see what was on it in order to resolve the issue. |
| **1DW.01** Understand that online content is presented on interconnected websites and pages.  **1TC.01** Know how to switch on and log onto a computer using their own password.  **1SW.02** Know how to report digital content, or activity, that makes them feel unsafe or uncomfortable. | Create a list of websites that learners are familiar with. This should include those that they visit at home and at school.  *If someone had never used a website before, how would you explain what a website is?*  List the learner responses in two columns, one for accurate and one for not accurate. Extend the ideas by challenging learners to explain what they mean.  *Do you have a favourite website?*  *What makes it a good website to visit?*  List the criteria that learners identify about what makes a website interesting to them. Retain this list so that it can be added to later.  Explain that learners are now going to explore a website to find out if it is a good site to visit, using the criteria they have identified.  *What should you do when you see or hear something on your digital device that makes you feel unsafe or uncomfortable?*  Check that they have remembered to:  *Switch off the screen and tell a trusted adult.*  Learners switch on and log in to their digital device, while referring to the instructions that were created earlier in this unit.  Allow time for them to explore the chosen website. They should consider the quality of the website by referring to the criteria that the class created earlier but should also consider questions such as:   * *Is it easy to find what you want?* * *Is there a menu to help you navigate to different pages?* * *Is it colourful?* * *Is there too much information for you to read?* * *Is there something that helps you to read all the information?*   Once learners have completed their review of the website, ask:  *Is there anything else that we should add to our criteria for what makes a good website?*  Learners repeat this activity with another website but, this time, the chosen site should link to a particular topic that is currently being studied. This will enable them to understand the value of the information that is available online.  Learners then visit other websites that contain information about other, but still relevant, topics. This will help them to understand the range of information that is available on the World Wide Web. The learners can then rank these websites from their most to least favourite.  This activity could be extended by asking learners to write a review of one of the websites that they have viewed, using the agreed criteria. Alternatively, a template, with tick boxes and stars to colour in, for completing the review could be provided.  End by explaining that learners have looked at a range of completely different websites but that they were able to access all of them because the device that they were using is connected to the internet. The internet is made up of computers that are connected to each other around the world and it enables words and pictures to be sent from one computer to another.  **Resources:**   * ‘Website’ written on a large piece of card with an image of a website icon. * A website that is familiar to learners and other websites that are relevant to a range of current study topics. * A prepared template for the website review activity. | It would be helpful to have ‘website’ written on a large piece of card with a website icon next to it to add to your collection of vocabulary cards.  Choose a website that:   * is familiar to learners * has a menu * contains a variety of pages * contains some pages with video content * contains some pages with interactive game content.   Also make sure the site is easily accessible, such as through a shortcut icon on the desktop.  This review could also be given verbally. |
| **1DW.01** Understand that online content is presented on interconnected websites and pages.  **1SW.02** Know how to report digital content, or activity, that makes them feel unsafe or uncomfortable.  **1TC.03** Know how to interact with onscreen items through clicking, tapping, dragging, dropping, scrolling, and swiping. | Before beginning this activity, make sure that learners are familiar with a range of websites.  *What is a website?*  *How do we find a website that we want to use?*  *What should you do when you see or hear something on your digital device that makes you feel unsafe or uncomfortable?*  Check that learners have remembered what to do if they encounter anything that makes them feel uncomfortable:  *Switch off the screen and tell a trusted adult****.***  Demonstrate how to navigate to the school’s website.  *Who might use our school’s website?*  Identify the ‘menu’ and explore the information that is displayed on different ‘pages’. If possible, identify text that contains a link to another page and demonstrate how easy it is for the reader to find out more information about an event by clicking on the link.  Explain that the website is a series of pages of information. When you want to make a website you have to decide what goes on each page.  *If you wanted to make a website about our classroom for someone who was new to our school, what would you include?*  Record ideas on sticky notes and arrange these randomly on a board. As learners begin to suggest similar or linked ideas, start moving the sticky notes to be next to each other.  Working in pairs, learners use paper to design a page for the class website. Give each pair a sticky note with the title of their page on it and let them draw or write information that they think would be useful for someone who is joining the class.  Display the work of each pair on a wall with arrows that link related pages to show how the website would be organised.  **Resources:**   * A link to the school’s website. * ‘Menu’ written on a large piece of card with an image of a menu icon. * Sticky notes (or small squares of paper). | There is no requirement at this stage for learners to understand what a search engine or URL is, but they do need to understand that they have to be connected to the internet to access a website.  It would be helpful to have ‘menu’ written on a large piece of card with a menu icon next to it to add to your collection of vocabulary cards.  Ideas might include class rules, who is in the class, what games they play outside, what mathematics resources they have, their timetable, a list of favourite stories, photos of artwork and displays, etc.  This idea would also work for any other topic that learners are currently studying, so they could create a website about something related to a class trip, for example. |

| Example project – Unit 1.1 | | |
| --- | --- | --- |
| Learning objectives | Project outline and resources | Teaching notes |
| **1SW.01** Know what a password is and describe why passwords are useful.  **1SW.02** Know how to report digital content, or activity, that makes them feel unsafe or uncomfortable.  **1DW.01** Understand that online content is presented on interconnected websites and pages. | This project will enable learners to demonstrate their understanding of the importance of passwords and reinforce the idea of pages on a website being linked.  Display examples of online posters that encourage people not to share passwords and to keep passwords safe and secure.  Working individually, learners design two connected web pages, on paper, for the school website.  The first web page should explain:   * why passwords are important * strategies for creating passwords * strategies for remembering passwords * why it is important not to share passwords.   The designs for this web page could include examples of good and bad passwords. These examples could be based upon a theme that is given to learners to make sure that the examples they use are not personal to them.  Learners then design a second web page which explains what to do if digital content or activity makes them feel unsafe or uncomfortable. They should include the phrase ‘Switch off the screen and tell a trusted adult’.  The two pages are then placed alongside each other and, if appropriate, can be linked, using arrows, to a print-out of an appropriate page from the school website, such as the acceptable use policy.  **Resources:**   * Examples of online password security posters. | There are a number of posters available that make use of the well-known quote “Treat your password like your toothbrush…” that may be useful here.  Providing an external audience for learners to showcase their understanding and learning is a great way to encourage them to achieve their best.  There are also websites that show how quickly a password can be guessed by a computer. It is great fun for learners to experiment with different passwords and they could use this resource when creating their lists of good and bad passwords.  It might be necessary to support learners with their writing during this project, for example by writing out words that they sound out or by providing cards with keywords written on them. |

# Unit 1.2 What is a computer?

| Unit 1.2 What is a computer? |
| --- |
| Outline of unit: |
| In this unit, learners will be introduced to the idea that computers come in many different shapes and sizes, but that they have important components which make them a computer. They will learn that sometimes these components are physical (and touchable) and sometimes they are virtual such as an onscreen keyboard (touch pad). They will also learn that the components can be integral to the device or separate, meaning that have to be connected somehow, such as a microphone.  Learners will become familiar with different ways of interacting with computers, and build up a common vocabulary for talking about what they are doing when they are using a computer. |
| Knowledge, understanding and skills progression: |
| Having established a secure understanding of the need to use computers safely and responsibly in Unit 1.1, learners now need to establish what a computer is and, in doing this, they will add to the vocabulary that they learned in the last unit. It is recommended that they are regularly reminded of this vocabulary.  It is also important for learners to recognise that computers can only respond to the user’s commands and if the user does not give the right commands, the computer will not do what the user wants or expects. Learners will need to be encouraged to think about what they have forgotten to do when the device that they are using appears not to be working as they expected it to.  As learners will be typing simple words during this unit, it will be helpful if they are able to write certain words, such as their own name. |
| Language: | |
| * personal computer (pc)/laptop/tablet * mobile telephone * power * keyboard/touchpad * mouse * screen/monitor * headphones/microphone/speaker * volume/mute * camera/webcam * Shift/Caps Lock/Backspace/Space bar/Enter/Num Lock * click/tap/scroll/swipe * drag and drop | |

| Learning objectives | Suggested teaching activities and resources | Teaching notes |
| --- | --- | --- |
| **1DW.02** Know there are a range of devices that are all computers, including: personal computers, laptops, tablets and mobile telephones. | Introduce this unit with a discussion that determines what learners currently consider a computer to be. The discussion can be facilitated with a photographic display of various computers and other electrical devices that are not computers, such as a toaster or hairdryer. (Although these devices often have computing components inside them to make them work, they are not computers.)  *What is a computer?*  *How do you know it is a computer?*  *What activities do we use computers for?*  Summarise the discussion by listing the components and activities that learners have identified as being part of what makes a device a computer.  Consolidate learners’ understanding of the activities that computers are used for by asking the following questions:  *Can you take a photograph with a computer?*  *Can you record and play music on a computer?*  *Can you visit a website on a computer?*  *Can you communicate with other people elsewhere in the world on a computer?*  Conclude the discussion by eliciting that PCs, laptops, tablets and mobile phones are all computers because of the range of activities that they have in common. Also elicit the common features, such as a screen and the ability to connect to the internet.  Take learners on a trail around the school, possibly in small groups, and ask them to count the number of PCs, laptops, tablets and mobile phones that they see. They can take photographs of the devices that they see and build these into a picture bank that can be displayed in the classroom.  Learners continue this activity by finding out how many different computers they have in their house.  The activity can be extended by learners carrying out a survey about the preferred type of computer that people like to use.  **Resources:**   * Images of PCs, laptops, tablets and mobile phones (alongside other electrical devices). * Clipboards and paper to record results of the computer trail/survey. * Vocabulary cards with ‘PC’, ‘laptop’, ‘tablet’ and ‘mobile telephone’ written on them with a simple icon next to each word as a visual prompt. | Depending on what the learners say, you will need to prompt them to explain their ideas a little further. For example, if they say “it’s a computer because you can play a game on it,” you could hold up a chessboard and say “I can play a game on this – does that make it a computer?” This should then prompt them to talk about a ‘screen’ or a ‘controller’ so that you can begin to build up their definition of what a computer is.  These questions will help learners to broaden their understanding of what a computer is.  The discussion can be extended to develop an understanding of what is meant by ‘mobile devices’, for example they are handheld computers with a touchpad (or touchscreen).  Be prepared to provide support and demonstrate the taking of photographs, as appropriate.  A survey about people’s preferred types of computer to use could also lead into a discussion about different types of computer being useful for different purposes, giving learners a better understanding of why we have different types of computers. |
| **1DW.03** Identify the visible components of computing systems, including: computer, keyboard, mouse, screen, touch pad, headphones, speaker, camera and microphone. | Once learners understand that computers come in different shapes and sizes, and have different names, they need to be able to identify what it is that all these devices have in common. Some of these features will already have been identified in the previous activity, so the objective of this activity is to make sure that learners can explain what each of the visible components of a computer does.  Display an image of a PC, a laptop, a tablet and a mobile telephone. Check learners have remembered what each one is.  *What do these four things have in common?*  As learners identify visible components, record these as a list with a simple icon drawing next to the word to remind learners what it says. You could also record the words as labels on an image of a PC, making sure learners are aware of where these components are on the other three devices.  Encourage discussion about what each component does and ask learners to share examples of where they have seen them, for example, “my dad uses headphones to listen to music when he is at home.”  Demonstrate the inbuilt microphone on a tablet, or a microphone that plugs into a laptop, by recording and playing back sounds from within the classroom.  *What do tablets and smartphones use instead of a mouse?*  Elicit that they use a touchscreen instead. Demonstrate that a regular PC or laptop screen does not respond to touch input.  Learners can then complete their own labelled diagrams by placing or gluing the remaining labels on their pictures of the devices.  **Resources:**   * Vocabulary cards with ‘screen’, ‘keyboard’, ‘mouse’, ‘touchpad’, ‘headphones’, ‘speaker’, ‘camera’ and ‘microphone’ written on them with a simple icon next to each word as a visual prompt. * Images of a PC, laptop, tablet and mobile telephone. * Outline of a PC with key components clearly visible and blank labels pointing to each component for learners to write in the missing words. | Hopefully, learners will identify that they are all computers. Then they can go on to identify that they all have the following visible components:   * SCREEN – some devices have a touchscreen, so they do not need a mouse, as your finger is the mouse. * KEYBOARD – even if not a physical keyboard as on a PC or laptop, there is an onscreen keyboard so you can input information. * MOUSE – sometimes this is separate (PCs) and sometimes it is a touchpad (laptops) but a laptop can also have a separate mouse attached to it. * CAMERA – sometimes called a ‘webcam’. * SPEAKER – where the sound comes out. * MICROPHONE – where the sound goes in. * HEADPHONES – these may or may not be visible on your devices, but it is useful for learners to know that headphones can be attached to a computer to stop everyone hearing the sound coming out. It may be helpful to have different examples of headphones available for learners to compare. |
| **1TC.04** Enter familiar words, using a physical or digital keyboard, into a word processor.  **1TC.05** Identify, locate and use modifier keys on a physical or digital keyboard, for example by using Shift and Caps Lock.  **1TC.01** Know how to switch on and log onto a computer using their own password. | Begin this activity by giving the class a simple instruction, such as “stand up and clap your hands”.  *How did I make you all stand up and clap your hands?*  Elicit that the learners heard the instruction, using their ears, and they then did as they were asked.  *So how do we get a computer to follow our instructions?*  Elicit the learners’ personal experiences, such as being able to give spoken instructions to certain devices, but also that the instructions are most often given using either the touchpad or keyboard.  Provide laminated paper copies of a typical keyboard.  *What do you see?*  Learners share what they notice about the keyboard with a partner, and then with the whole group.  Using the printed keyboards, set learners tasks, such as:  *Can you find a number 5?*  *Can you find the first letter of your name?*  *Can you find any other letters from your name?*  *What do you notice about the letters on the keyboard?*  Elicit that all of the letters are capitals.  Demonstrate what happens on the screen when you press the letter key ‘H’ – draw attention to the fact that you do not have a capital H displayed on the screen.  *So how can we get a capital H if the H key doesn’t give us one?*  *Can you find the SHIFT key?*  Demonstrate what happens when the Shift key is pressed down and the H key is pressed again, or invite a learner up to do this. Repeat this for a few other letters.  *Can you find the CAPS LOCK key?*  Demonstrate what happens when this key is pressed, identifying that a light has been switched on, if appropriate, and letter keys are used.  *Why do you think there are both SHIFT and CAPS LOCK keys that do the same sort of thing?*  Elicit that sometimes you might want to have lots of capitals and that keeping your finger on the Shift key isn’t easy. Emphasise the importance of using the Shift key unless learners intend to write an entire word or more in capital letters.  Recap what learners need to do to log on to the network with their username and password. Also, demonstrate how to load the text processing software.  Ask learners to type their name onto the computer using:   * all lower case letters * all capitals * a capital letter at the beginning.   It is very likely that learners will want to know how to remove errors and so it is worth stopping the group and demonstrating the use of Backspace, which makes letters disappear when it is instructed to do so.  **Resources:**   * Laminated paper copies of the keyboard most commonly used in your establishment – enough for one per learner. * Text processing software. * Vocabulary cards with ‘Shift’ ‘Caps Lock’ and ‘Backspace’ written on and an example image of the key alongside it. | As learners become more familiar with speaking their commands to a computer and voice-to-text recognition improves, so the keyboard functionality will be considerably reduced, but for the foreseeable future learners will still need to understand the function of the keys on a keyboard.  Learners may comment on:   * letters they recognise * the presence of numbers * the fact that some keys are bigger than others, for example the ‘long’ key (Space bar).   Most keyboards only have capital letters displayed, although there are some keyboards to support early learners with both lower and upper case letters displayed on each key.  It is useful at this point to have the font size set to larger than normal so learners can see clearly what is being typed.  Some learners may need an alphabet with upper and lower case letters identified so they can find the letters in their name on the keyboard. They can also practise doing this virtually on their paper keyboard. Some learners may also need support with spelling their name.  Printed onto colour paper, the output from this activity can make an attractive display to demonstrate how the class have learned to use the keyboard. |
| **1TC.05** Identify, locate and use modifier keys on a physical or digital keyboard, for example by using Shift and Caps Lock. | Begin this activity with a game of ‘Fastest Fingers’ where learners are challenged to find a particular key on their laminated paper keyboard. Learners have their keyboard in front of them and hold their ‘fastest finger’ high in the air. When the teacher calls out a key, they place their finger on that key as quickly as possible. Look around the class to see who is accurately finding the keys.  Use the ‘Shift’ ‘Caps Lock’ and ‘Backspace’ vocabulary cards to recap on what was taught previously and ask learners to tell a partner what each key does.  Go through the same process as in the previous activity to teach the use of the Num Lock key and the Space bar. Learners find each key on their paper keyboard, have their use demonstrated, and then have an opportunity to use them on a real keyboard.  With the Enter key, learners may already have had to use it to enter their username and password into the computer, so they may already be familiar with one of its uses. It is also worth teaching learners at an early stage that the Enter key also moves their writing onto the next line. So now ask them to repeat the name writing task from the previous activity, but this time have each version of their name on a different line.  Regular opportunities should now be introduced for learners to practise using the keyboard to enter single words or captions. Examples include:   * making labels for the models that they will produce in the project at the end of this unit * a message to go in a birthday card * a warning sign to KEEP OUT * a reminder to water the plants * a favourite food for a party.   As well as using a physical keyboard, learners should also have the opportunity to use an onscreen keyboard on a tablet so they can begin to identify how it is different and know how to dismiss it when they have finished using it.  **Resources:**   * Laminated paper copies of the keyboard most commonly used in your establishment – enough for one per learner. * Text processing software that the learners are to become familiar with. * Vocabulary cards with ‘Num Lock’, ‘Space bar’ and ‘Enter’ written on and an example image of the key alongside it. | This game can be played at different times of the day and in different lessons, including in Mathematics for number recognition.  The Num Lock key may not be applicable for all keyboards or devices.  Before teaching what the Enter key does, learners could be challenged to find out what happens when it is pressed while they are typing letters or numbers. This type of open-ended investigation can be used to support learning, especially if it takes them by surprise when their letters appear on another line. |
| **1TC.03** Know how to interact with onscreen items through clicking, tapping, dragging, dropping, scrolling, and swiping. | *What is a mouse?*  *How do you use it?*  Elicit that the mouse is used to move around the screen and to select a position within a document or menu.  Allow time for learners to explore the mouse, making sure that they do not shine the light of an optical mouse directly into their eyes.  Explain and demonstrate the features of the mouse and allow learners to practise ‘clicking’ it just with their index finger.  Ask learners to think about the times that they have used a mouse before, both in school and at home. They may have used it to click in the box where they have to enter their password to log on to the school network, draw attention to this and elicit that this click of the mouse enabled them to select the part of the screen where they needed to type.  Display the word ‘cursor’ and draw learners’ attention to the fact that the writing appears wherever the cursor is positioned on the screen.  Ask learners to recall what they already know about websites. Give them access to websites where they can practise dragging and dropping items, scrolling to the bottom of a web page and clicking certain on items. They could even access the sites by clicking on a link that you provide, but it isn’t necessary to explain hyperlinks at this stage.  As learners use the mouse in different ways ask them to identify if they are clicking, dragging, dropping or scrolling to check they have understood what they are doing.  Provide learners with a list, or vocabulary cards, of the terms that explain what they have been doing with the mouse, for example clicking, dragging, dropping, and scrolling.  Learners work in pairs to complete each of the actions. One learner carries out the action while their partner checks that they have done it correctly. Each pair should swap roles regularly. This could be repeated several times throughout the remainder of this unit to enable learners to become increasingly familiar with the use of the mouse.  **Resources:**   * A list or vocabulary cards with ‘click’, ‘drag and drop’ and ‘scroll’ written on. * Websites that enable learners to practise mouse skills. | Mouse designs vary considerably. There may be one, two or three separate buttons and there may be a scroll wheel. The shape also varies and some are easier to use than others. Young learners will notice this and will enjoy talking about it.  Two quick clicks are challenging for younger learners and they will need lots of practice to use this function to load a program.  There are a number of sites for young learners where mouse skills can be developed through activities such as dragging and dropping different clothes on to a character, matching familiar story characters to their homes or changing the weather symbols on a calendar each day.  A drawing package where different coloured pens can be ‘picked up’ and used to draw images across the screen can also be very good for developing mouse control skills.  A right-click on a mouse usually displays a menu that can be used to select other actions/controls for the computer which young learners do not need to know about at this stage. However, as they will often open this menu by mistake, it is worth demonstrating it to them so that they do not become concerned by it and are aware of how to close it. |
| **1TC.03** Know how to interact with onscreen items through clicking, tapping, dragging, dropping, scrolling, and swiping.  **1DW.01** Understand that online content is presented on interconnected websites and pages. | Allow time for learners to use applications, such as an appropriate game, on a touchscreen device. Observe them while they play and identify if they are tapping, dragging and dropping, scrolling and swiping, and note when they are doing these actions.  *What does a mouse do on a computer?*  This question will recap the learning from the previous activity. Elicit answers such as:   * it controls and moves items on the screen * it allows you to drag and drop items * you can double-click to load a program * you can scroll down to the bottom of a web page.   *What about mobile devices like tablets and mobile phones that do not have a mouse – how do they work without a mouse?*  Identify the operations that you have seen the learners carry out on the tablets and ask them to remember or demonstrate how they operated this device.  *How do you open an application on the tablet?*  *How do you move an object on the screen?*  *How do you get to the bottom of a web page?*  Use the vocabulary cards you have already made for this unit to reinforce this vocabulary. The only new one that will be required for tablets is likely to be ‘swipe’. You can decide with the learners if ‘tap’ and ‘click’ are the same operation but in different contexts, for example that ‘clicking’ the mouse on a PC produces the same outcome as tapping the screen on a tablet.  Display the tablet screen and demonstrate how ‘swiping’ works, then add this to the collection of vocabulary cards.  Revisit the familiar websites that learners have used on a PC and encourage them to compare how they make things happen when they are using a tablet or mobile device with a touchscreen. Discuss similarities and differences, supporting learners to use the new vocabulary that has been taught.  Learners work in pairs using a tablet. One of the pair completes an onscreen activity, such as a game, while their partner observes and calls out the appropriate action that is being performed, such as ‘tap’, ‘swipe’, ‘scroll’ or ‘drag’, whenever the player performs one of these actions.  **Resources:**   * A touchscreen tablet that the learners are familiar with. * A suitable game or activity on that tablet which requires learners to control onscreen items. * Vocabulary cards with ‘click', ‘drag and drop’, ‘scroll’ and ‘swipe’ written on. | This activity will provide an opportunity to explain that an application is a program for the device and that clicking or tapping gives instruction for the device to run that program.  Primary-aged learners are often very capable of making things happen on a touchscreen device, but they are not always able to articulate what it is they did to make it happen. It is therefore important to make the learning explicit so they are able to apply it in different contexts.  This can become quite a lively interactive activity that reinforces to learners just how often they are using the controls that exist within the screen on the tablet. |

| Example project – Unit 1.2 | | |
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| Learning objectives | Project outline and resources | Teaching notes |
| **1DW.02** Know there are a range of devices that are all computers, including: personal computers, laptops, tablets and mobile telephones.  **1DW.03** Identify the visible components of computing systems, including: computer, keyboard, mouse, screen, touch pad, headphones, speaker, camera and microphone.  **1TC.05** Identify, locate and use modifier keys on a physical or digital keyboard, for example by using Shift and Caps Lock. | This project enables learners to demonstrate their understanding of the different visible components that make up a computer, including some of the finer details on a keyboard.  Look back at the paper diagrams learners annotated at the beginning of the unit and use the vocabulary cards to reinforce the learning that has occurred during the unit.  Provide a selection of construction materials including:   * recycled materials (cardboard boxes, tubes, plastic lids and so on) * toy construction bricks (like Lego) * cardboard * string * sticky tape or suitable glue.   Learners select materials and build a large-scale model of any type of computer, but it must have a visible keyboard so they can show that they have learned about some of the special keys.  A blank keyboard template could be provided but learners can also make their own copy of a physical keyboard. Encourage them to talk about what they know about certain keys while they are working on this particular part of their models.  Learners can include extra features, such as:   * a webcam * headphones * a mouse.   The project can also be extended by learners including:   * a speaker for the sound * a power switch * a Wi-Fi symbol that is drawn on their screen.   Learners can also draw a picture to represent their favourite app or game for the screen of their computer.  If time allows, create a film of learners talking about their models. They can describe what type of computer it is and explain the features they have built on their device. | If supplies of materials are limited, learners can work in small groups.  It is often in talking about their models that the learning becomes most evident as what looks like a bottle top or yellow Lego brick to the observer can actually represent something far more complex in the learner’s imagination.  These films can then be shared with parents. |

# Unit 1.3 How a computer can help us

| Unit 1.3 How a computer can help us |
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| Outline of unit: |
| In this unit, learners will begin to understand where and how computers help us in our everyday lives. They will explore ways that a computer can help them with their learning in the classroom and identify other opportunities where using a computer is beneficial. The importance of staying safe and secure when using any digital device will be reinforced and learning will be showcased in a creative display at the end of the unit. |
| Knowledge, understanding and skills progression: |
| As learners become more confident in their use of computers and become able to navigate a range of websites on both touchscreen and traditional PCs, they will become increasingly able to identify the situations where using a computer is beneficial.  It is likely that they have grown up in a world where technology is embedded in their everyday lives and it is therefore easy for them to accept it without questioning how it works. It is important to make the functions of computers explicit to them from an early age so they can begin to question how, and when, they should use technology. This awareness will help equip them to make effective decisions about their use of technology in the future. |
| Language: | |
| * screen * keyboard * memory * open * save * delete/Backspace | |

| Learning objectives | Suggested teaching activities and resources | Teaching notes |
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| **1TC.04** Enter familiar words, using a physical or digital keyboard, into a word processor.  **1TC.02** Know how to save and open documents.  **1TC.01** Know how to switch on and log onto a computer using their own password. | Type a greeting or a question on a screen that all learners can see. Ask them to read it out loud together.  *How did I get these words onto the screen?*  *Are there any other ways to get words onto the screen?*  Discuss what learners know or can recall about ways to get words on the screen, and how they can modify the letters using particular keyboard keys as was taught in Unit 1.2. The vocabulary cards can be used as a prompt if necessary.  Once learners are clear that words appear on the screen when the keyboard keys are pressed, make another message, such as ‘What is your name?’ appear by opening a document that has been created and saved in advance of the activity.  *How did these words get onto the screen*?  Explain to learners that computers are very good at remembering information and keeping it in their ‘memory’ forever if we ask them to.  As a reminder of their work from Unit 1.2, learners could also be asked:  *How do I remove some of these words from the screen?*  *Where do we keep the important documents that you write?*  Identify places where learners keep their writing and how they, or their teachers or families, like to look back at it sometimes. Compare this to writing that is done on a computer and explain how we can ask the computer to ‘save’ our work so we can ‘open’ it on another day to look at it.  This discussion can be extended by talking about computer memory and by comparing it to human memory.  Demonstrate how to open the document containing the question ‘What is your name?’ and model how to get the cursor to appear underneath the question where they can type their answer. This will involve revisiting the ‘click’ action that was introduced when learning about how to use a mouse.  Working individually or in pairs, learners should switch on and log on to the computer. They should then follow your instructions for opening the previously saved message and type their name(s) underneath the question.  Observe learners as they complete this activity and consider if they are able to:   * locate where the document is saved and double-click on it to open it * click or tap where they want their name to appear * type their name with a capital letter at the beginning.   Conclude the activity by reviewing what has been learned and by discussing anything that learners found particularly difficult. This will enable you to focus on supporting problematic areas, or particular learners, in later activities.  **Resources:**   * Text processing software that learners are familiar with. * A document containing the message ‘What is your name?’ saved centrally so it can be opened by learners. * Vocabulary cards displaying names of keyboard keys learners have been taught to use. * Vocabulary cards displaying the words ‘Save’ and ‘Open’ with a familiar icon next to each word as a visual cue. | Learners should be able to identify that the keyboard has been used to enter words from previous work in Unit 1.2. Some learners may be aware of speech-to-text software or handwriting recognition software. If this is available in your school, you may also want to demonstrate how it works.  It is not uncommon for technology to be considered ‘magic’ because we do not understand how something happens. Young learners can be excited by words ‘magically’ appearing on the screen and this excitement can be used to motivate them to want to find out how it is done. It is, therefore, a good idea to make this initial saved document as visually exciting as possible.  It may be useful to have the previously saved message ‘What is your name?’ saved on the desktop or somewhere easy to access, rather than buried within a nest of folders on a computer network. The purpose of this session is to show learners how to ‘open’ a document. Saving is not important for this activity.  Some learners may need extra opportunities to practise opening a document. Opportunities to do this during subsequent activities could be found if photographs or documents containing ‘secret information’ are saved onto the desktop for learners to discover. For example, the person who is chosen to be the leader of the line for the lunch break each day could be revealed by opening a document on the desktop. |
| **1TC.04** Enter familiar words, using a physical or digital keyboard, into a word processor.  **1TC.01** Know how to switch on and log onto a computer using their own password.  **1DW.01** Understand that online content is presented on interconnected websites and pages. | Recap what learners remember about websites and then introduce them to a website that includes a typing game. Explain that this will help them learn to find the letters on the keyboard more quickly.  Remind learners that the internet is full of great websites and useful information, but that there are also some things that may make them feel uncomfortable and that they should ‘switch off the screen and tell a trusted adult’ if this happens.  Demonstrate how to play the selected online typing game. Ask questions such as:  *What did I need to do to score points in the game?*  *Which letters did I find most quickly?*  *How could I get faster at finding letters?*  Working individually or in pairs, learners should switch on and log on to the computer. They should then follow your instructions for accessing the website.  If learners enjoy this activity and it proves useful for their keyboard skills they can be encouraged to continue using it at home.  **Resources:**   * A website that is designed to support learners speed up their use of the keyboard. | There is no requirement for young learners at this stage to begin touch-typing, but familiarity with the positioning of keys on a keyboard is useful. Using websites that support this area of learning through gamification may be helpful in some contexts.  This reminder should be issued every time learners use the internet. |
| **1TC.02** Know how to save and open documents. | Before this activity, choose a topic that is currently being studied, or that interests the learners, and save three or four related images in a document that can be easily accessed.  Introduce the activity by explaining that learners are going to practise using a computer to help them with their writing by making labels for images. Explain that you have saved some great images for them to work with.  *How do we open the images that I have saved?*  Invite one of the learners to open the document for you, or model how to find it and open it.  Encourage learners to look closely at one of the images and talk about what they see with a partner. They share their ideas then collectively decide on a word or caption for the image. Ask them to help you write this on to the document.  *How do I make the words appear in the right place on the screen?*  *How do I get a capital letter at the beginning?*  Working individually or in pairs, learners should switch on and log on to the computer. They should then follow your instructions for opening the document containing the images they have to write a caption for.  *What can you do if you make a mistake?*  This is a good time to recap on the use of Backspace and possibly introduce the Delete key if appropriate.  When the task has been completed, save each document under a different name so that each one can be accessed later for printing or editing. As the documents are being saved, explain the process to learners.  Open each of the saved documents on a large screen and ask the class to explain what they like about each one. It may also be appropriate to demonstrate how easy it is to correct any spelling errors or to add in extra words.  This activity should be repeated for different topics to build up familiarity with the keyboard and with using computers to help with writing.  **Resources:**   * Text processing software that learners are familiar with. * A document containing three or four images saved centrally so it can be opened by learners. * Vocabulary cards to serve as reminders about the modifying keys and what has been learned so far. | Make sure you use your own digital images or those that are labelled ‘for non-commercial reuse’ under the ‘usage rights’ to ensure you are setting a good example and are complying with local copyright law. Make sure that none of the images contain a watermark.  Some learners may be able to type a short caption rather than just one word, but they may need reminding about how to put a space between each word.  Sometimes working in pairs is difficult for young learners, but by making one the ‘driver’ and the other the ‘navigator’ then swapping over at regular intervals, they can be supported to work effectively together. The ‘driver’ operates the mouse and keyboard, while the ‘navigator’ checks what is happening on screen and helps the driver look for the correct letters, but does not touch them.  Your text processing software may have an inbuilt spell-checker or predictive text. This should be disabled as it isn’t necessary for learners to be aware of it at this stage.  If learners are unable to write or type words, they could begin by typing the correct digits to explain the number of items that are in the image. This way they would be able to practise opening a document and positioning the cursor in the correct place on the document to start typing. |
| **1TC.02** Know how to save and open documents.  **1TC.01** Know how to switch on and log onto a computer using their own password. | Once learners are familiar with opening documents and have observed their documents being saved by you a few times, introduce them to saving their work independently.  Hold up a selection of books that have been covered to obscure their front pages. Ask if anyone can remember which one was the class favourite that has been read recently.  *How could we work out which one was our favourite?*  Look inside each book until the class favourite has been found and then write the title on the front so that it can be found more easily next time.  Hold up a selection of unnamed clothing from lost property.  *Why do we put names on things?*  Elicit that name labels are put on the items to make it easier to find them when we want them, and so they do not get lost.  Explain that the same applies to our work on the computer. If we ask the computer to save our work, we have to make sure it has a title or name so that we can find it again.  Demonstrate the steps that are needed to save a document and list these on the board as a step-by-step guide.  Working individually or in pairs, learners should switch on and log on to the computer. They should then open a document for editing and use the step-by-step guide for saving it when they are finished.  Repeat this activity a number of times in different contexts so that all learners are confident with the process. Learners should now be encouraged to save their work independently every time they do something, by using the step-by-step guide.  **Resources:**   * Text processing software that learners are familiar with. * A selection of storybooks that have been recovered with plain paper so there is no way of knowing what the titles are. * Some unnamed clothing from lost property or other unnamed items. * A step-by-step guide (preferably with screenshot images) to saving a document on your establishment’s system. | Some operating systems do not require the user to save their work regularly because it auto-saves as the document is added to, but the naming and storing of documents is still an important part of file management, despite ever-improving ‘search’ capabilities.  It may be necessary to work with your network administrator or technician to make sure that the youngest learners have a simple pathway for saving documents. |
| **1DW.04** Identify the tasks that devices are used for at home.  **1DW.02** Know that there are a range of devices that are all computers, including: personal computers, laptops, tablets and mobile telephones.  **1SW.02** Know how to report digital content, or activity, that makes them feel unsafe or uncomfortable. | In this activity, learners will focus upon the tasks that computers are used for in school, as this will provide the context that will help them to identify the uses in their own homes.  *What have we been using computers to help us do recently?*  Record their ideas in a list. Encourage them to say more than just the name of a website that was visited or an app that was used.  Young learners do not find this form of identification easy. Therefore, it may be helpful at this point to set them off on a task that is specifically designed to help them improve a particular skill, such as addition, so they can understand exactly what we mean by computers ‘helping us’.  It is also worth revisiting the fact that although computers are great for learning, there may be things we come across that make us feel uncomfortable. Make sure that the learners have remembered to ‘switch off the screen and tell a trusted adult’ whenever they encounter anything that makes them feel uncomfortable.  Take small groups on a tour of the school to identify ways that computers can help us. Learners could talk to older learners about what they do on computers and how the computer helps them with their work in school.  Each group should share their findings with the class and these can be added to the list that was started earlier.  This list could then be typed up and printed so that learners can annotate it with drawings of some of their favourite computer-based activities.  **Resources:**   * It may be useful, but not essential, to have some images of computers being used in different ways in your establishment as discussion prompts. | Answers may include: writing, counting, sending messages home, finding out about a caterpillar’s life cycle, photographing examples of our great learning to make a display, filming our musical performances so we can make them better, and so on.  This would be a useful resource to then share with parents or carers in order to involve them in the next part of the unit which involves identifying tasks that devices are used for at home. |
| **1DW.04** Identify the tasks that devices are used for at home.  **1SW.02** Know how to report digital content, or activity, that makes them feel unsafe or uncomfortable. | Revisit the list that was created in the last activity and elicit that it lists the ways in which computers are used in school.  *What do we use computers for at home?*  Encourage learners to talk to a partner about the things they know computers are used for at home. Each pair then shares their ideas with the whole group.  In Unit 1.2, a computer was identified as a PC, laptop, tablet or mobile phone, but this discussion will lead to the identification of other internet-enabled devices, such as smart watches, games consoles, voice-activated virtual assistants and intelligent heating or cooling systems. The name of each device does not matter, it is more important to draw out the way that each helps us in our everyday lives.  Learners consider the computers in their own homes and draw images of different tasks computers are used for at home and write captions to explain them. The completed drawings are then shared and discussed with the whole class. This activity could be extended by learners drawing a map of their own homes and then placing the device and task within the room that it takes place. This will enable learners to give further consideration to the use of tablet devices, for example:   * accessing recipes in the kitchen * booking tickets in a relaxation area * listening to music in a bedroom.   **Resources:**   * A list of the different ways computers are used within the educational establishment to help us in our everyday life. * Images of different internet-enabled computing devices that may be in learners’ homes to use as discussion prompts. | It is often easy for learners to identify games they like to play, but they may not have considered the learning that they are doing when playing them. Help them to identify the skills they are developing through gameplay on computers, such as:   * perseverance when things go wrong * mathematics when comparing scores and aiming for a high score * problem-solving to get to the next level.   If learners are unsure about what might be used at home, use images or your own experience to begin the discussion. For example:  *I use my laptop for internet banking at home because the bank in the High Street is never open when I am not at work. This helps me organise and look after my money.* |

| Example project – Unit 1.3 | | |
| --- | --- | --- |
| Learning objectives | Project outline and resources | Teaching notes |
| **1TC.01** Know how to switch on and log onto a computer using their own password.  **1TC.02** Know how to save and open documents.  **1TC.04** Enter familiar words, using a physical or digital keyboard, into a word processor.  **1DW.04** Identify the tasks that devices are used for at home. | For this project, save at least one digital image in a text editing file for each learner to access before you begin.  The project will enable learners to demonstrate that they can log on to the computer, open a file, edit the document with words and save it again for printing out to create a display.  Ask learners to share what they remember about logging on and passwords.  *How do computers help us in our everyday lives?*  Ask learners to share their ideas with one another before sharing with the whole group.  *How do you open the document that I want you to edit today?*  Ask learners to share what they remember about opening files then demonstrate where they will find the file they need for this session.  Learners then open an individual file that contains an image of someone using a device for a particular purpose. They type a caption for the picture to explain how the device is being used and check their work before saving it for printing later.  Each document is then collated into an informative display of their learning and about how computers are used to help us in many ways.  **Resources:**   * Text processing software that learners are familiar with. * At least one document per learner containing a digital image of someone using a device for a particular purpose, saved centrally so they can be opened by learners. * Key vocabulary cards. | Ideally, these will be images that have been collected through the course of the unit, for example from around the school or even from the learners’ own homes.  The key vocabulary cards can be used or displayed here to support and remind learners to use the correct vocabulary in their answers. |

# Sample lesson 1

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| --- | --- |
| CLASS: | |
| DATE: | |
| **Learning objectives** | **1SW.01** Know what a password is and describe why passwords are useful. |
| **Lesson focus /**  **success criteria** | All learners will be able to explain that a password is similar to a lock for keeping something safe.  Most learners will understand that passwords used on computers need to be kept secret.  Some learners will be able to identify strategies to help them remember passwords. |
| **Prior knowledge / Previous learning** | Learners will need to have seen (and used) physical locking devices such as a bicycle lock or a door that locks with a key. They will also need to understand that computers have lots of valuable information on them. |

**Plan**

| **Lesson** | **Planned activities** | **Notes** |
| --- | --- | --- |
| **Introduction** | As learners get ready for the lesson, you pretend to struggle with opening the combination lock for your suitcase. Explain that you locked it to keep your things safe, but now you have forgotten the code so you cannot access your things.  *Can you think of anything else that is locked up to keep it safe?*  *How do we make sure no one takes our toys from the classroom at night when there is no one here?*  *How do I make sure no one steals my car when I park it on the street?*  *How do your parents keep their money safe and secure?*  Establish that we all have valuable possessions and that we need to take responsibility for making sure that these are kept safe and secure.  *What about my mobile phone?*  *There is lots of information on my mobile phone that I want to keep safe, so should I put a padlock on it too?*  Explain that today we are going to think about how we keep information like photographs, mobile numbers, friends’ details, etc. safe on our computers, tablets and mobile phones using passwords.  Show the word written down on a vocabulary card.  *Does anyone know what a password is?*  *Has anyone used a password before?*  Establish that a password is like a lock to keep all the information on our computers, tablets and mobile phones safe. | You will need:   * a suitcase with a combination lock around it * your mobile phone * a chain and padlock * examples of lock screens from various devices * a vocabulary card with ‘password’ written on it and an image of a person saying ‘shhh’ next to it. |
| **Main activities** | *What should I have done to help me remember my password for my suitcase?*  As learners suggest ways to help remember passwords, identify those that are not a good idea (writing it down, telling everyone) because they do not keep the password secret.  Explain that one strategy that can help us remember a password is to use picture symbols. Draw or show a simple eye, a heart and two fish for learners to guess what the password is – ‘Ilike2fish’.  Learners then work in pairs to create a simple password using a given selection of simple images.  Learners share their work with the class and examples, such as those where two learners have produced similar passwords, are discussed further so that it becomes clear that each password should be unique.  *What other strategies could you use to help you remember a password?*  This activity can be extended by allowing learners to create their own images and symbols for passwords they have created. | You will need:   * Simple images of animals, numbers, symbols and objects printed and cut out so that they can be arranged to make passwords.   Identify and share the work of those learners who are using the images effectively to encrypt their password. For example, the password ‘cat2dog’ that is remembered with a picture of a cat, a number 2 and a picture of a dog is very easy to decode, unlike the ‘Ilike2fish’ example. |
| **End/Close/**  **Reflection/ Summary** | Hold up the vocabulary card with the word ‘password’ on it and ask learners to read it to you.  *Why do you think the person is going ‘shhh’ next to the password?*  Establish that we should keep our passwords secret on our personal devices, but it is a good idea for our parents to know our passwords when we are younger.  *Who can tell us what a password is?*  *Why are passwords useful?*  *Do passwords just have to be words?*  *What do you have to think about when setting your password?*  *How can you help yourself remember your password?* | Sometimes passwords on establishment devices are not individualised. |

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| **Reflection Use the space below to reflect on your lesson. Answer the most relevant questions for your lesson.** |
| *Were the learning objectives and lesson focus realistic? What did the learners learn today? What was the learning atmosphere like? What changes did I make from my plan and why?*  *If I taught this lesson again, what would I change?*  *What two things went really well (consider both teaching and learning)?*  *What two things would have improved the lesson (consider both teaching and learning)?*  *What have I learned from this lesson about the class or individuals that will inform my next lesson?* |
| **Next steps**  **What will I teach next, based on learners’ understanding of this lesson?** |

# Sample lesson 2

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| --- | --- |
| CLASS: | |
| DATE: | |
| **Learning objectives** | * **1DW.04** Identify the tasks that devices are used for at home. * **1DW.02** Know that there are a range of devices that are all computers, including: personal computers, laptops, tablets and mobile telephones. |
| **Lesson focus /**  **success criteria** | All learners will be able to identify at least one task that is carried out on a computer.  Most learners will be able to identify how computers help us in our everyday lives.  Some learners will be able to explain how computers help us solve problems. |
| **Prior knowledge / Previous learning** | Learners will need to have used a range of computers for a range of different tasks. They will also need to have made explicit to them the learning that has occurred when they have been using these devices. |

**Plan**

| **Lesson** | **Planned activities** | **Notes** |
| --- | --- | --- |
| **Introduction** | *What have we been using computers to help us do recently?*  Record ideas in a list, encouraging learners to say more than just the name of a website that was visited or an app that was used, but to be explicit about how the website helped. This may be information you have to provide until they understand what you are expecting.  *What else can computers help us do?*  Young learners do not find this easy and it may be necessary at this point to start them on a task that is specifically designed to help them improve a particular skill, such as addition, so they can understand exactly what we mean by computers ‘helping us’.  Other key questions that may help facilitate this discussion:  *Why do we take photographs?*  *How can we get in contact with someone who lives far away?*  *What did we learn when we filmed/recorded ourselves?*  *Today we are going to begin thinking about just what amazing machines computers really are and how they help us in lots of different ways.* | It may be useful, but not essential, to have some images of computers being used in different ways in your establishment as discussion prompts.  Answers may include: writing, counting, taking the register, sending messages home, finding out about a caterpillar’s life cycle, photographing examples of our great learning to make a display, filming our musical performances so we can make them better, and so on. |
| **Main activities** | *What do you think other children use computers for elsewhere in our establishment?*  *You are going to be investigative journalists today and find out what other people use PCs, laptops, tablets and mobile phones for and then you are going to come back and report your findings to the rest of us.*  An extra adult will be needed here to take small groups on a tour of the establishment to do some more research into the ways computers help us. Learners should be encouraged to talk to older learners about what they do on computers and how the computer helps them. Photographic evidence may also be collected and you can write notes to help learners remember what they have found out.  This activity can be extended by asking the learners to record their findings, using paper attached to a clipboard, rather than you doing the recording. | It may be necessary to check in advance that older learners can be disturbed in this way. It would also be helpful to prepare them with the type of answers you are looking for.  Remember to visit office administrators and school leaders who use computers for many reasons. Ask them to talk about how computers make their jobs more efficient. |
| **End/Close/ Reflection/ Summary** | *What did you find out?*  On returning to the rest of the group, learners can share their findings and these can be added to the list that was started earlier.  *Are you surprised to find out how many different ways computers help us in our everyday lives?*  This list could then be typed up by an adult and learners could annotate it at another time with line drawings of some of their favourite computer-based activities. | This is where you will be able to identify whether all learners have understood how computers help us solve problems. |

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| **Reflection Use the space below to reflect on your lesson. Answer the most relevant questions for your lesson.** |
| *Were the learning objectives and lesson focus realistic? What did the learners learn today? What was the learning atmosphere like? What changes did I make from my plan and why?*  *If I taught this lesson again, what would I change?*  *What two things went really well (consider both teaching and learning)?*  *What two things would have improved the lesson (consider both teaching and learning)?*  *What have I learned from this lesson about the class or individuals that will inform my next lesson?* |
| **Next steps**  **What will I teach next, based on learners’ understanding of this lesson?** |

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