



SUBJECT MEDIUM TERM PLANNING - COMPUTING					
Year Group: 2 TERM: Summer 1 Theme: Digital Photography					
<ul> <li>National Curriculum: <ul> <li>Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions</li> <li>Create and debug simple programs</li> <li>Use logical reasoning to predict the behaviour of simple programs</li> <li>Use technology purposefully to create, organise, store, manipulate and retrieve digital content</li> <li>Recognise common uses of information technology beyond school</li> <li>Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies.</li> </ul> </li> </ul>					
<b>Context:</b> - Pupils will learn to recognise that different devices can be used to capture photographs and will gain experience capturing, editing, and improving photos. Finally, they will use this knowledge to recognise that images they see may not be real.	Concepts: Information Technology – developing their understanding of how technology can be used in different ways to create different types of media. Digital Literacy – developing their understanding of how to be safe online user.	<ul> <li>Vocabulary:</li> <li>photograph – a digital picture that we can take using a camera.</li> <li>capture – to record or take a picture of something using a digital device.</li> <li>editing – when we add, change or remove things to get the result that we want.</li> <li>device – there are many different devices we can use to take a photograph. (tablet, camera, phone)</li> <li>digital - electronic systems and resources that help us learn, communicate, play and more.</li> <li>portrait – when the photograph is higher than it is wide.</li> <li>landscape – when the photograph is wider than it is tall.</li> <li>subject – the main focus point of the photograph focus - the process of adjusting the lens / device / lighting to find maximum detail and sharpness in an image.</li> </ul>			

<ul> <li>Prior Knowledge:</li> <li>Be able to take a photo with a digital camera (FS2, Year 1 &amp; Year 2)</li> <li>Be able to take a photo with an Ipad. (FS2, Year 1 &amp; Year 2)</li> </ul>	<ul> <li>Future Knowledge:</li> <li>select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information (KS2)</li> <li>use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. (KS2)</li> </ul>
<ul> <li>End points /by the end of this unit pupils will</li> <li>Be able to discuss how to take a good photograph.</li> <li>Be able to explain why some photographs look better as landscape / portrait.</li> <li>Be able to identify what is wrong with a photograph.</li> <li>Be able to improve a photograph by retaking it.</li> <li>Be able to explore the effect light has on a photograph.</li> <li>Be able to recognise that images can be changed.</li> <li>Be able to use a tool to achieve a desired effect.</li> <li>Be able to identify which images are real and which have been changed.</li> <li>Be able to explain simple guidance for using technology in different environments and settings.</li> </ul>	Crucial Knowledge: Pupils will need to be able to understand how we can use digital devices such as tablets and cameras in different ways to create different types of media. Pupils will need to be able to understand how we can use a range of devices such as cameras and tablets and apps to take and edit photographs. Pupils will need to be able to take a photograph and explain how they took it, what the subject is and the choices they made when taking the photograph (landscape or portrait, close or far away). Pupils will need to be able to identify key rules/guidance that they can follow when using technology in order to maintain a healthy, balanced lifestyle.

Lesson Number - 1				
<ul> <li>Key learning: To use a digital device to take a photograph</li> <li>Success Criteria: <ul> <li>I can recognise what devices can be used to take photographs</li> </ul> </li> <li>I can talk about how to take a photograph</li> <li>I can explain what I did to capture a digital photo</li> </ul>	Concepts: Information Technology Suggested resources: Flipchart Ipads	Lesson Number - 1         Lesson structure: Introduction, direct teaching, activities, key questions         Engage:         Show pictures of children. Some need to be photographs, some need to be cartoons.         Q – What is the same about these pictures?         Q – What is different about these pictures?         Allow pupils to discuss with a partner then feedback to class. Aiming for pupils to recognise that some are pictures of real people that have been taken with a camera but the others have been drawn.         Introduce:         Show a selection of devices that are information technology (linking back to Autumn 1). Include a range of devices such as desktop computer, laptop Ipad, speed camera, printer, memory stick etc.         Ask pupils to help you sort them into 2 groups on the board.         1) Can take photographs       2) Cannot take photographs         NOTE - You may want to explain that most desktop computers need to have a camera plugged into them (often called a 'webcam'). Without a webcam, desktop computers do not have a camera, unlike most laptops or tablets.		

Q – When is it okay to take someone's photograph? Talk to pupils about the importance of asking permission before taking a photo of someone. It's also good practice to check who is in the background of a photo so you don't accidentally capture them as well. Everyone has the right to say no to their photo being taken if they do not want it taken.
<u>P&amp;C</u>
Q – How do you take a good photograph? Ask pupils to share their ideas first then talk through the steps to taking a good photograph.
<ul> <li>1.Hold the device firmly with both hands.</li> <li>2.Point the camera lens at the subject.</li> <li>3.Look into the viewing window or screen.</li> <li>4.Move the device until you see everything clearly.</li> <li>5.Press the capture button.</li> </ul>
<b>Independent</b> Give pupils a bingo sheet of the different items they need to take a photograph of.
A building A person A close-up of an object
An action shot A selfie Something in the distance
For this activity, pupils are required to take photos of different things, think about what their photo looks like, and work together to figure out how to take a good photograph using that device. Some of the items on the sheet may need explaining. For example: A selfie is a photograph that a person takes of themselves. An action shot is a photo taken of a movement, such as jumping or waving.

<b>NOTE:</b> Extend pupils thinking by asking the following questions: Why did they take the photo from that angle? Is this one better than another? Could they look at three photos of the same object and suggest which one they liked more?
Deepen
Share their best photos with a partner.
Q – Why do you like this one the best? Q – What did you have to do to take this photo?
Reflection
Use thumbs up (3 $-$ confident), thumbs middle (2 $-$ unsure), thumbs down (1 $-$ not confident) to reflect on the three statements.
<ul> <li>I can recognise what devices can be used to take photographs</li> <li>I can talk about how to take a photograph</li> </ul>
• I can explain what I did to capture a digital photo

Device, camera, photograph, capture, image, digital

Lesson Number - 2		
<b>Key learning:</b> To make choices when taking a photograph	<b>Concepts:</b> Information Technology	Lesson structure: Introduction, direct teaching, activities, key questions

### Success Criteria:

- I can explain the process of taking a good photograph
- I can take photos in both landscape and portrait format
- I can explain why a photo looks better in portrait or landscape format

Suggested resources: Flipchart Ipads Worksheet

2.Point the camera lens at the subject. 3.Look into the viewing window or screen.

1.Hold the device firmly with both hands.

4. Move the device until you see everything clearly.

Q - How many of the steps can you remember?

Recap the steps to taking a good photograph from the previous lesson.

5.Press the capture button.

### Introduce:

Engage:

Introduce the concept that photographs can be taken in landscape and portrait formats. If you have a device available, this is a good opportunity to demonstrate taking a photograph in both formats.

Show an example of a portrait photograph and an example of a landscape photograph so that pupils can see the difference.

# P&C

Ask pupils to take four photographs, two in each format.

- 1. A person in portrait format
- 2. A person in landscape format
- 3. A place in portrait format
- 4. A place in landscape format

For the photograph of a place, use somewhere suitable either inside the classroom, through a window, or outside, if this is practical. For the purpose of this activity it is good to choose a subject that is suited to a landscape format.

Before pupils start to take their own photos, remind them of some basic rules, particularly emphasising that they must first ask for permission before taking a photograph of somebody else.

CHECKPOINT
Review the photos that they have taken as a class.
My photograph of a person looks best inbecausebecause
My photograph of a place looks best inbecausebecause
Hopefully pupils will agree that photos taken of a person usually look better in portrait format, whereas photos of places usually look better in landscape format. There are exceptions to this, such as a photo of a tower which suits a portrait composition, or groups of people, which often look better in landscape. <b>Ask pupils to delete the two images that don't look as good in the opposite format</b> .
Independent
Introduce pupils to the term 'Field of view'. It refers to all the things that the viewer can see when they look at the image.
Display the following image and agree that the digital camera here is set up to take the photo in <b>landscape</b> format. Remind pupils that landscape format results in an image that is wider than it is tall. Explain that landscape format is used when taking photos of large areas such as seascapes, mountain ranges, or fields. Explain that a photographer will usually take a photo in landscape format when they want to capture a wide

field of view. Q – Why is this image better in landscape?

Display the following image and agree that it has been taken in **portrait** format. Remind pupils that portrait format results in an image that is taller than it is wide. Explain that photos in portrait format feature a narrower field of view and that the format is widely used when taking photos of people and tall buildings.

Q - Why is this image better in portrait?



	<ul> <li>Similar to the P&amp;C activity, ask pupils to decide on four photos that they will take around the classroom / school. As with the P&amp;C activity, ask pupils to take each photo in each of the two different formats (portrait and landscape). However before doing so, they will first predict which format they think the photo will look best in and then review. After taking these, learners should decide which format the subject is better suited to.</li> <li>Example of objects they could take photos of – classroom door, tree in the playground, classroom display, pencil pot.</li> <li>Give pupils a sheet so they can write down their 4 choices.</li> <li>Have a 'prediction' column (circle whether they think it will look better as portrait / landscape) Have an 'actual' column (circle whether it actually looks better as portrait / landscape)</li> </ul>
	Deepening Ask pupils to choose their favourite photo out of those taken and share it with a partner. Q – What do they like most about it. Q - Why is the photo better in that format and not the other?
	<b><u>Reflection</u></b> Use thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.
Vocabulary:	<ul> <li>I can explain the process of taking a good photograph</li> <li>I can take photos in both landscape and portrait format</li> <li>I can explain why a photo looks better in portrait or landscape format</li> </ul>

Lesson Number - 3				
<b>Key learning:</b> To describe what makes a	Concepts:	Lesson structure: Introduction, direct teaching, activities, key questions		
good photograph	Information Technology	Engage: Show 4 different images.		
<ul> <li>Success Criteria:</li> <li>I can identify what is wrong with a</li> </ul>	<b>Suggested resources:</b> Flipchart	Q – How can you improve this photograph? As this is largely subjective, there could be a range of responses, but some of the more likely are:		
<ul><li>photograph</li><li>I can discuss how to take a good</li></ul>	Ipads			
<ul> <li>photograph</li> <li>I can improve a photograph by retaking it</li> </ul>	Paper frames	<ul> <li>1: The image has been poorly framed: the top of the boy's head is out of shot.</li> <li>2: The background is cluttered, the telephone wires interfere with the main subject, and the angle it's been taken from is low.</li> <li>3: The image is blurry (or out of focus — this is explored further in Lesson 5).</li> <li>4: The main subject is close to the camera, which distorts the image.</li> </ul>		
		<ul> <li>Introduce:</li> <li>Explain that taking a good photograph is a skill, and photographers don't always get it right the first time. Explain that there are steps that can help:</li> <li>Positioning: Is it obvious what the main subject of the photograph is?</li> </ul>		
		<ul> <li>Framing: How well is the subject matter framed?</li> <li>Detail: Are you close enough that you can see the detail?</li> </ul>		

<u>&amp;C</u>
hare pairs of images (can be found in Year 2 – Digital Photography – Slides 8 to 12) and ecide which is better considering the points above.
ossible discussion points include:
<ul> <li>lide 8: The image on the left is well framed, and is suited to landscape format. The cropped nage on the right misses some of the main subjects of the photograph.</li> <li>lide 9: The image on the right is well positioned and is framed with good detail. The framing f the image on the left is not as good.</li> <li>lide 10: The image on the right is framed better, removing the vertical line from the image on the left that detracts from the main subject.</li> <li>lide 11: The image on the right is positioned and framed better, with all of the subject matter sible.</li> <li>lide 12: Both pictures are great. But if you were asked to take a photograph of a butterfly, he image on the left does not include enough detail for the subject of the photo to be clear.</li> </ul>
rdependent
<ul> <li>attroduce the concept of a paper frame.</li> <li>bodel to pupils how they can use this to decide if the best way to the photo is portrait or landscape.</li> <li>can also help to focus in on the 3 main points to consider (as iscussed above.)</li> <li>Positioning: Is it obvious what the main subject of the photograph is?</li> <li>Framing: How well is the subject matter framed?</li> <li>Detail: Are you close enough that you can see the detail?</li> </ul>

	<ul> <li>Ask pupils to take 3 photographs. They can choose between: <ul> <li>A classroom display</li> <li>A view out of the window</li> <li>A plant pot</li> <li>A group of coloured pencils</li> <li>A tree</li> <li>The school</li> </ul> </li> <li>Partner A uses the frame to plan the composition.</li> <li>Partner B takes the photograph.</li> <li>They can then swap roles for each photograph they take.</li> </ul>
	DeepeningAsk pupils to look at the photographs they have taken and review how well they think they have applied the three skills to each of the photographs.Ask pupils to choose one photograph to take again. Q – What will you do differently this time? Ask pupils to retake their chosen photo.
	Pupils can then upload their original photo and their improved photo to their Seesaw profile. <b>NOTE</b> – If there is time, pupils could record a voice over explaining what they did differently the second time around to improve the photograph.
	ReflectionUse thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.I can identify what is wrong with a photographI can discuss how to take a good photographI can improve a photograph by retaking it
Vocabulary:	

## Framing, subject, compose

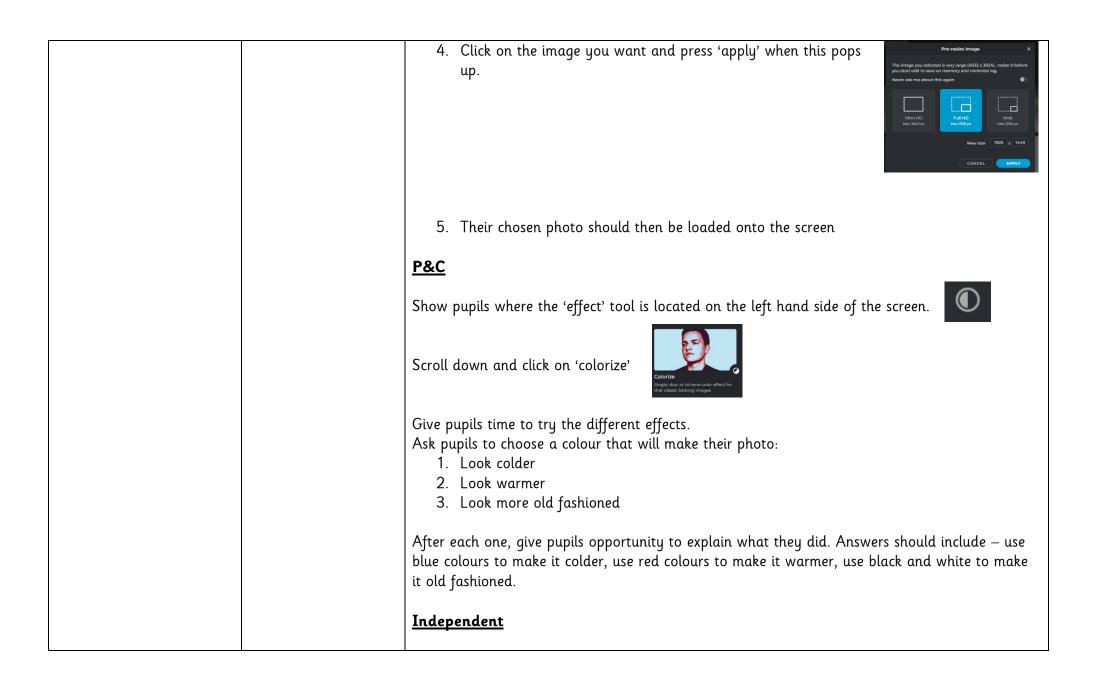
Lesson Number - 4						
Key learning: To decide how photographs can be improved	<b>Concepts:</b> Information Technology	Lesson structure: Introduction, direct teaching, activities, key questions         Engage:       1       2       3				
<ul> <li>Success Criteria:</li> <li>I can explore the effect that light has on a photo</li> <li>I can experiment with different light sources</li> <li>I can explain why a picture may be unclear</li> </ul>	Suggested resources: Flipchart Ipads Torches	Show pupils 6 photographs. Ask them to decide whether they think they should "Keep" (if it is a good quality image) or "Delete" (if it is not a good quality image) Q – Can you explain why? Delete: Images 1 and 5 (too do Keep: Images 2, 4, and 6 NOTE: Some people may have are deleted. At this stage, it doe recognise that we don't need to Introduce: Q – What is wrong with this image	different opinions ab esn't matter too much keep every image th	5 focus)	6 6 Will be kept and which	
		Explain that the image is too da difficult to tell what the photogr Explain that our eyes are better doesn't look dark to us, but the	aph is of. at seeing the world t	than many cameras ai		

turning out too dark, good photographers will check that there is enough light. <b>P&amp;C</b>
Note: For this activity to work, your devices need to have any 'auto flash' options turned off.
<ul> <li>Find locations around the school where there are different levels of light, including a place where there is very little light. Some suggested places are: <ol> <li>On the windowsill (with the blinds open)</li> <li>On the windowsill (with the blinds closed)</li> <li>Under a table</li> <li>On a table</li> <li>In a partially opened cupboard</li> <li>Outside (e.g. in the playground or on the field)</li> <li>In the school hall</li> </ol> </li> </ul>
Pupils can choose one object to be the subject of all of their photos, such as a Lego character, a piece of fruit, or a pencil.
Explain that the photograph should be the same each time, with the only thing changing being the amount of natural light that is present. Ask pupils to record their findings on a worksheet. (Table with 'location' and 'Score out of 10')
CHECKPOINT Ask pupils to feed back the findings that they recorded on their activity sheets. Q - Where were the locations in school that provided good levels of light? Q - What effect did this have on the photograph? Q - Did anybody notice that too much light had a negative impact on their photo (e.g. if it were taken in direct sunlight learners may have found that this caused shadows to be cast on the object, resulting in the object being obscured).
Independent
Tell pupils they are going to retake 1 of their photos that turned out too dark. Q – Why do you think it turned out this way?

Q – What could you do differently next time around?
Share with pupils 3 ways of adding more light:
1. Take the photo again but in a place where there is more natural light present.
2. Activate the camera flash (explain that the camera flash is a tool that provides additional
light when conditions become too dark). Show learners how to use the camera flash.
<b>3.</b> Provide an artificial light source (in this case a torch o). You could explain at this point
that studio photographers will use professional studio lighting. Pupils may remember
seeing this type of light when they've had their school photographs taken.
Allow pupils time to experiment with retaking one of their photos using a torch to light up their
object.
Q – Does the photo change if you shine the torch from different places?
Bring pupils together and share what they found.
Q – Did everyone's photograph improve with the use of a torch?
Now explain to pupils that they may not always have a torch to hand, so instead many cameras
have a 'flash'. The flash lights up the subject of our photo quickly, while the camera takes the
photo.
Show pupils have to turn the flach as that it is always an with the device that they are using
Show pupils how to turn the flash so that it is always on with the device that they are using. Allow pupils time to experiment with retaking their photo again but this time with the flash.
Bring pupils together and share what they have found.
Q - How is using the flash similar or different to when you took photos using the torches?
Deepening
Show pupils a blurry photo.
Q What is wrong with the image? Agree that it looks
blurred and this makes it difficult to tell what it is (it's the
Eiffel Tower).
Ash numils to share any of their images that have ended up
Ask pupils to share any of their images that have ended up
blurry.
Q – Why do you think this has happened?

	Explain that if we move the camera whilst we're taking a picture, it can make it hard for the camera to capture a clear image. To help with this, it's important to take your time when taking photographs and after you've pressed the capture button, count to three before you move. You're also more likely to get blurry photos if they are taken when it is dark, or if you do not have enough light in the photos. This means you have to be even more careful if you know it's dark.
	Pupils each take one final picture focusing on ensuring that the photograph is clear. Suggest that pupils may want to turn the flash off again for this activity.
	Reflection $M$ Use thumbs up (3 – confident), thumbs middle (2 – unsure), thumbs down (1 – not confident) to reflect on the three statements.
	<ul> <li>I can explore the effect that light has on a photo</li> <li>I can say what the best source of lighting is for a photo</li> <li>I can explain why a picture may be unclear</li> </ul>
Vocabulary: Light sources, flash, focus, background	

Lesson Number - 5		
Key learning: To use tools to change an image Success Criteria: • I can recognise that	Concepts: Information Technology Suggested resources: Flipchart	Lesson structure: Introduction, direct teaching, activities, key questions         Engage:         Q – How could you change the appearance of a photo?         Allow pupils time to discuss with a partner then feedback ideas to class (ideas might include lighting, portrait, landscape, effects, distance, filter)
<ul> <li>images can be changed</li> <li>I can use a tool to achieve a desired effect</li> <li>I can explain my choices</li> <li>I can apply a range of photography skills to capture a photo</li> <li>I can recognise which photos have been changed</li> <li>I can identify which photos are real and which have been changed</li> </ul>	Ipads	Introduce:         Q - what does 'editing' mean?         Making changes or corrections to something, usually to make it better.         Today we will be editing some photographs by changing the colour.         Q - How have the colours been changed in photos A B and C?         Model to pupils how to use the <a href="https://pixlr.com/">https://pixlr.com/</a> free software. (Have a QR code on the flipchart to make it easier for pupils to access the website.         Show pupils how to start a project and search for an appropriate 'stock photo' to use:         1. Click on 'start design' project         Start design project         Outled on 'image search' on the left hand side         Image in an appropriate word into the search bar (e.g. dog)



Pupils can then experiment with combining more than one effect. Demonstrate how to use either the 'dispersion' or 'glitch' tools to add an effect as well as a different colour.

For example:

The below pictures show the original image, which has had a green filter applied and then a glitch effect on top of that.







**NOTE** – pupils must press the button 'apply' at the bottom after adding each effect. You may also want to point out the 'undo' and 'redo' buttons at the bottom.

Pupils can then click on the 'save' button and save their work using an appropriate name. Photos could then be uploaded to their seesaw account.

### <u>Deepening</u>

Explain to pupils that sometimes they will see a photo and not know if it has been changed. Q – why might someone change a photo?

Answers could include:

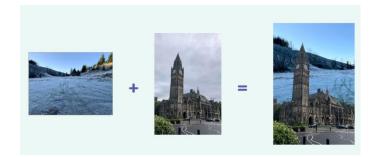
- To change how a photo 'feels', to make it seem spooky or happy, or cold or warm
- To make it more of a piece of art
- To make a picture look more interesting/exciting
- To pretend the picture was taken somewhere that it wasn't e.g. if I made it look like I was on the moon

Show pupils this photo that has been changed.

 ${\bf Q}-$  what clues can you see that help you work out that this photo isn't real?

- There's snow in the background but not on the church or the road
- It looks like spring or summer in the bottom part of the photo and winter in the top part
- It looks like there's a big hill in the background, but the church is taller than it

Show pupils the 2 original photos that have been merged.



Sometimes it is really hard to tell if a photograph has been changed or if it is an original. Whenever you see a photo, you should think "Is this real?". Look for clues, but even adults get it wrong sometimes!

Show a selection of photos. Pupils to decide if they are 'real' or 'fake'.











<ul> <li>A: Real – This is a photo of a dog that befriended a baby giraffe in South Africa.</li> <li>B: Fake – The moon has been copied into this photo so that appears that it is being held up by the building.</li> <li>C: Fake – This is two images combined; the whales are too big relative to the size of the bridge.</li> <li>D: Real – This is a hotel in South Korea that has been built to look like a cruise ship on land.</li> </ul>
Reflection
Complete the Project Evolve Pre-assessment Knowledge Map for Year 2 – Health, Well-being and Lifestyle (link to PSHE topic). Use this to identify any gaps in knowledge and the strand that you would like to focus on in the next lesson.

Editing, filter, format, framing, lighting, focus, filter

Lesson Number - 6		
Key learning: I can explain simple guidance for using technology in different environments and settings e.g. accessing online technologies in public places and the home environment.	<b>Concepts:</b> Information Technology Digital Literacy	<ul> <li>Use results of the knowledge map assessment from the previous lesson to identify any gaps in the pupil's knowledge.</li> <li>As a result, decide which lesson outcome / activities will be most beneficial for your class / year group and plan accordingly.</li> <li>Key Questions Lesson 1 / 2:</li> </ul>
<b>OR</b> I can say how those rules / guides can help anyone accessing online technologies.		What things do you do most at home when you are using technology online? What are the good things you use technology for? What do you enjoy most? Why?

		Which things make you lose patience/get sad/angry/annoying?
		What happens to you when you've used technology for too long?
Success Criteria:	Suggested resources:	What rules do you have at home/ school when using technology?
<ul> <li>Lesson 1:</li> <li>I can identify rules, guidance or conversations around their own use of technology that they think are important.</li> <li>I can identify a range of simple</li> </ul>	Project Evolve knowledge map Flipchart Project Evolve resources for "Year 2 – Health, Wellbeing and Lifestyle"	Let's look at one of those rules (eg timing based rule). Why do you think having that rule in place is important? What sorts of things might that rule help make better? Can you explain how that rule might make things better? Are there certain times (context) when that rule is more important than at other times? (Bedtime? Homework time? Family Meals? Lessons? When someone is talking to you?) Explain
<ul> <li>health/ well-being issues on which technology can impact.</li> <li>I can explain how they can reduce the impact of these issues when using technology.</li> <li>I can explain ways in which they can</li> </ul>		<b>Reflection</b> Complete knowledge map "assess impact" on the lesson outcome that has been taught to identify impact of learning.
self-manage their use of technology or with support from their parent/carer/mentor.		

Lesson 2:	
• I can demonstrate	
simple awareness	
physical health ris	-
around over	
engagement. Eg	
eyes get tired;	
sitting in one plac	e
for a long time;	
missing meals/drir	ıks
etc.	
• I can explain simp	le
well-being	
awareness; eg not	
physically	
socialising; not	
listening to	
parents/carers;	
being bored etc.	
• I can begin to	
recognise that rule	25
and guidance can	
vary by context.	
Vocabulary: technolog	y, health, well-being, rules