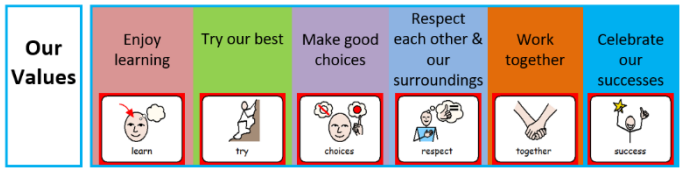

SUBJECT MEDIUM TERM PLANNING - COMPUTING

Year Group: 2	**TERM:** Autumn 1	**Theme:** Information Technology Around Us

National Curriculum:

- Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- Create and debug simple programs
- Use logical reasoning to predict the behaviour of simple programs
- Use technology purposefully to create, organise, store, manipulate and retrieve digital content
- Recognise common uses of information technology beyond school
- 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.

Context: -	**Concepts:**	**Vocabulary:**
Learners will develop their understanding of what information technology (IT) is and will begin to identify examples. They will discuss where they have seen IT in school and beyond, in settings such as shops, hospitals, and libraries. Learners will then investigate how IT improves our world, and they will learn about the importance of using IT responsibly.	Information technology Online Safety	technology, information technology, computer, private, privacy, password, personal information

Prior Knowledge:

- Be able to identify what technology is.
- Be able to identify examples of technology.
- Be able to use technology safely.
- Be able to identify the main parts of a computer.
- Be able to use a mouse and keyboard in different ways.

Future Knowledge:
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)**

End points /by the end of this unit pupils will…

- Be able to explain what information technology is.
- Be able to recognise the uses and features of information technology.
- Be able to identify the uses of information technology in school.
- Be able to identify the uses of information technology beyond school.
- Be able to explain how information technology helps us.
- Be able to explain how to use information technology safely.
- Be able to recognise that choices are made when using information technology.
- Be able to give examples of what is meant by 'private' and keeping things 'private'
- Be able to explain how passwords can be used to protect information, accounts and devices

Lesson Number - 1

Key learning: To recognise the uses and features of information technology.

Concepts:
Information Technology

Success Criteria:

- I can identify examples of computers
- I can describe some uses of computers
- I can identify that a computer is a part of IT

Suggested resources:
Flip chart

Plain paper

Activity sheet – are / are not information technology

Chromebooks

Lesson structure: Introduction, direct teaching, activities, key questions

Engage:
Ask children what computers they have used / seen in school. (laptop, ipad, computer)
Similarities / differences – *touch screen, keyboard, wireless, portable, battery powered, make sound, record sound.*
Q – what is similar about these devices?
Q – what is different about these devices?

Introduce:
Ask children what we can use a computer for. *(writing, games, google maps, reading, creating media e.g. pictures / music)*
Q – what can we use a computer for?

P&C:
"I can use a computer to…" in table groups, ask children to draw / write as many ideas as they can think of.
Pupils could use 'Popplet' to complete this on ipads / chromebooks (popplet.com)

Support – visual cues to help support children to generate ideas.

Challenge - Some activities you can do with / without a computer. Which do you prefer?

Show children images – ask them to provide a name to describe all the objects (e.g. plants, animals, computers)

Show different devices (computer, iwb, USB stick, camera, printer, ipad). Ask children if these are all computers. Explain that they are not, but they ARE all examples of information technology.

Information technology is anything that:

1) Is a computer
2) Has a computer inside
3) Works with computers

CHECKPOINT – Odd one out.

		Which 2 objects are not information technology? **Independent:** Pupils to draw examples of objects that are and are NOT information technology. To be recorded in books. **Deepen:** Pupils to identify whether something is / isn't information technology and explain why. To be recorded in books. **Reflection / Assessment:** Tell your partner 3 things that helps us to identify information technology.
Vocabulary: information technology (IT), computer		

Lesson Number - 2		
Key learning: To identify the use of information technology in school.	**Concepts:** Information Technology	**Lesson structure: Introduction, direct teaching, activities, key questions** **Engage:** Think, pair, share what the term information technology refers to. Show the definition with the 3 characteristics (is a computer, works with a computer or has a computer inside). **Introduce:** Show a series of pictures. Thumbs / thumbs down to say whether it is or isn't IT. ***Challenge –*** *can you explain why?* **P&C:**
Success Criteria: • I can identify examples of IT • I can sort school IT by what it's used for. • I can identify the some IT can be used in more than one way.	**Suggested resources:** Flipchart Chromebooks Google doc for sorting task Whiteboards / paper	

		Give pupils 5 minutes to identify examples of IT they can find in school. Can record on whiteboards / paper if necessary. Share ideas with the rest of the class. Record on the whiteboard. ***Support –*** *have examples of IT accessible to learners.* Show examples of devices. Think, pair, share the names of each device and what it is used for. Q – How do you use these devices? Q – How do they help us? **Independent:** Children to sort devices into the correct box. Tell them that some of the devices might fit into several groups, so they can choose which group they wish to place the device in. TASK to be completed Chromebook using google slide doc. Save a copy of the google slide doc into the "class 2" area. Model how to retrieve the document. Model how to resize the images by clicking on the image and dragging one of the corners. Model how to drag the images into the correct place. **Support -** Ask the learners to think about what tasks they would do with each device. Encourage them to use this knowledge to place the devices into the groups. Model how to save google doc work using a sensible name. **Deepen:** Choose 1 device from the independent. Children to explain what life would be like without this device. To be recorded written in books / electronically on a google doc depending on the needs to the class. Q - What would life be like without the device? Q - Would you miss it? Q - What would you do / use instead? **Reflection / Assessment:** To give examples of IT that is used for communicating, playing on (entertainment), and to help us. Encourage them to think about the devices that they sorted during the activity, as well as other devices.

		Ask the learners whether they think that any of the devices discussed might be found somewhere other than at school, eg at home, shops, libraries, launderettes, cinemas, etc. **HOMEWORK –** children to identify IT at home in preparation for the next lessons. **(Pre-learning support for those that would benefit).**
Vocabulary: information technology (IT), computer		

Lesson Number - 3		
Key learning: To identify information technology beyond school	**Concepts:** Information Technology	**Lesson structure: Introduction, direct teaching, activities, key questions** **Engage:** Ask learners whether they know if their parents/guardians/carers use IT as part of their work. Gather any thoughts about types of IT used and the purpose for which it is used. Q - What type of IT do your family use for work? **Introduce:** Show examples of locations. Thumbs up or thumbs down to show whether they think you would find IT in this location. (Meadowhall, Ecclesall Woods, Millhouses Park, Airport, Beach, Home) Q - Do you think you would find IT here? ***Note:*** *IT could potentially be found in all of these locations, eg a person on the beach with a phone. The discussion should be open and consider where IT is more likely to be found and why.* **P&C:** List 3 types of IT that can be found at home. List 3 types of IT that can be found in the world around us. To be recorded in books. **Support –** have images of IT at home and the world around us to help pupils generate ideas. CHECKPOINT Show examples of IT in the world around us. Q - How do these devices help us?
Success Criteria: • I can find examples of information technology • I can sort IT by where it is found • I can talk about uses of information technology	**Suggested resources:** Flipchart Worksheets	

		Independent: Choose one of the devices they have previously listed. Write 1 or 2 sentences to describe where it is found, what it is used for and how it works. CHECKPOINT: Children to imagine life without information technology. Q - What do you think life was like before information technology? Q - Do you think this much information technology in the world is a good thing? **Deepen:** Children to invent their own piece of Information Technology. (REMEMBER –it needs to be a computer, have a computer inside or work with a computer). **Reflection / Assessment:** Can you think of a job where people might not use IT? (*Most jobs will now use at least 1 piece of technology – even if it's just a phone).*
Vocabulary: information technology (IT), computer		

Lesson Number - 4		
Key learning: To recognise that choices are made when using information technology	**Concepts:** Information Technology Online Safety	**Lesson structure: Introduction, direct teaching, activities, key questions** **Engage:** Ask children what their favourite IT activity is. This could be at home or in school. It could be playing games, watching videos, creating pictures, etc. Q - What is your favourite IT activity?
Success Criteria: • I can identify the choices that I make when using information technology • I can explain simple guidance for using information	**Suggested resources:** Flipchart Mindfulness colouring Chromebooks Ipads	**Introduce:** Ask children what their favourite lesson in school is. Continue with a brief class discussion about why lessons in school aren't just about their favourite thing and that it's important that we do a variety of different activities. Q - What is your favourite subject in school? Q - Does it use IT? Q - Why do we have different lesson styles in school?

technology in different environments and settings • I can enjoy a variety of activities	Equipment for physical activity (hula hoops / skipping rope etc.) Post it notes? (Depending on choice of activity for the carousel).	Introduce the Digital 5 a Day. Talk briefly about each aspect of the 5 a day and give examples of what each aspect may look like, for example:  • **Connect**: messaging someone, talking on a video call, talking face-to-face with someone • **Be active**: time away from using technology, physical play, running, skipping, etc. • **Be creative**: using a computer or tablet to paint a picture, writing a story, etc. • **Give to others**: doing things for other people, doing something kind, etc. • **Be mindful**: taking a break, making space, being away from technology, colouring, drawing, etc. Q - Which activity do you enjoy the most? **Independent:** - CAROUSEL ACTIVITY: Learners should have 5 minutes for each activity. Allow a minute or two to move groups between activities. Ensure that you manage the timing and circulation of groups throughout the activity. **Station 1: Connect** Take a photo of another learner in your group. ***Think about rules when taking phots of other people (e.g. ask for permission, don't show their face if they don't want).*** Photos should be something that could be shared, so the person being photographed needs to be happy with the photo. Learners should also ensure that they don't accidentally take a photo with someone else in the background of the photo. **Station 2: Be active**

		This station should be a simple physical activity which can be done in the classroom. An option for this could be to use a website such as www.gonoodle.com . Alternatively you could use hula hoops, mindfulness yoga, Joe Wicks classroom videos on YouTube. **Station 3: Be creative** This station should have six computers or tablets set up with a painting application (e.g. paintz.app or Seesaw). Given the time constraints, learners should have access to a device each. The painting could be related to a class topic, or the learners could have free choice. **Station 4: Give to others** This station requires a device that can record sound, e.g. a tablet, laptop, or recording microphone. An easy way to do this is to record a 'video' but with the camera covered so that only the learner's voice is heard. Each learner should record a nice message about an adult / pupil in the school. OR Write a kind message about another adult / pupil in school on a post it note / piece of paper? **Station 5: Be mindful** This station should be run without any technology. It could be something like mindful colouring or drawing. *After the children have tried every activity, bring them back together to discuss which activity they liked most, and suggest that they should make sure that they're always doing a mixture of activities in their free time.* **Reflection / Assessment:** metacognition / Kahoot quiz on information technology topic.
Vocabulary: information technology (IT), digital, responsible		

Lesson Number - 5

<table>
<tr><td>Key learning: I can explain how passwords can be used to protect information, accounts and devices. (Project Evolve)</td><td>Concepts:
Online Safety</td><td rowspan="2">Lesson structure: Introduction, direct teaching, activities, key questions

Engage:
Knowledge map assessment from Project Evolve for Year 2 – Privacy & Security

Introduce:
Ask learners the following questions to gauge current understanding about passwords:
• What is a password?
• Where do we use passwords? (games, devices, etc.)
• Do you have any passwords? What are they for?
• Who knows your passwords? Why?

Ask learners if they can think as to why we use passwords on devices and accounts (e.g. stops others from using our device or account, stops someone from seeing/taking our things/information, stops someone from pretending to be us, etc.)
Q – Why do we need passwords?

Explain that passwords are very important to help keep our information and devices safe so we need to make them as strong as possible. A good way to think of passwords is that they are like keys for doors. Explain that keys have very complicated teeth to fit into a lock, and only a key with the exact layout of teeth will successfully fit and turn the lock tumblers.

P&C:
Play hangman type game. Children have to guess the password (using image of keys). Start with 3 letter word, then 5 letter. Ask learners which password was harder to guess?
Then show 9 letter words (combination of three 3 letter words). Once revealed, ask learners what they notice (it's a combination of different words).

Show examples of GOOD and BAD passwords.
Q - What makes these passwords good or bad?

CHECKPOINT – Show example of a bad password (e.g. Mrs Granger) left on a post it note on her desk. What mistakes have been made?</td></tr>
<tr><td>Success Criteria:
• Identify the features of effective passwords.
• Identify why we need passwords for accounts/devices.</td><td>Suggested resources:
Project evolve knowledge map assessment

Flipchart

Seesaw (chromebooks / ipads?) or pictures of keys

Project evolve resources</td></tr>
</table>

		Independent: Pupils use key worksheet to create a weak password and a strong password. Could do this on Seesaw with image of keys or complete on paper – children can then film each other explaining why their passwords are good / bad. **Deepen:** Children play hangman in pairs with their own made up passwords. **Support –** give pupils short words that they could put together to create a strong password. **Reflection:** Q – what are the features of a strong password?
Vocabulary: password, personal information, strong, weak, protect		

Lesson Number - 6		
Key learning: I can explain and give examples of what is meant by 'private' and 'keeping things private'. (Project Evolve)	**Concepts:** Online Safety	**Lesson structure: Introduction, direct teaching, activities, key questions** **Engage:** Recap features of a strong password. Q - Why do we need to use strong passwords? - *Stops others from using our device and account* - *Stops someone from seeing or taking our personal information* - *Stops someone from pretending to be us*
Success Criteria: • I know 'private' means. • I can identify the appropriate types of content that can be shared online and suggest ways to protect this. • I can generate appropriate responses to help keep my personal information private online.	**Suggested resources:** Project Evolve knowledge map assessment results from previous lesson. Project Evolve resources for "Year 2 – Privacy & Security" Printed out scenarios.	**Introduce:** Ask learners what personal information is. Can they give any examples? Record these examples on a large sheet of paper or whiteboard for reference. Q - What is personal information? Ask them to work in talking pairs to think of all the people who know personal information about them (e.g. at least two things from the list of types of personal information that has been recorded). Ask learners to share their suggestions (these will likely consist of family, friends, other trusted adults, teachers, doctors, etc.)

	Ipads? (If recording videos to answer scenarios)	Q - Who knows your personal information? Explain to learners that these people know things about them because they are people who look after or care about them, or have to know certain things about them in order to do their job (e.g. teacher, doctor, etc.). *CHECKPOINT* *Sort information into 2 groups (personal and not personal information).* Explain that personal information should be kept private. Explain that on the internet, people could learn personal things about us (including people we do not know). Discuss how people could find information about us. (messages on a game, profile on a game, photos, videos) Q - Could someone online learn things about you? How? Q - How can you keep things private online? **P&C:** "instead of…" examples. Different examples of what you could say / show to prevent giving away personal information. This gives them some guidance on how to answer a question or provide some detail about yourself in a more private way. (e.g. Instead of giving your full name you could give a nickname / Instead of giving your address you could say Sheffield / England). "Saying NO politely" – reinforce that you can always politely say NO if you're not sure how to answer. **Independent:** Work in pairs to look at scenarios. Children to generate an appropriate response. Could be recorded on sheets / video response (saved to Seesaw). **Deepen:** Share responses with the rest of the class. Q - Did everyone have the same answer? If not, why? **Challenge** - Can learners explain their reasoning to each other?

		Reflection / Assessment: Complete knowledge map "assess impact" on the 2 lesson outcomes that have been taught to identify impact of learning.
Vocabulary: private, information, personal		