Pioneer Federation
Medium term plan
Cycle B, Term 5
ICT

Subject: Purple Mash unit 6.6 Networks

Key Concept/ Theme: • To learn about what the Internet consists of. • To find out what a LAN and a WAN are. • To find out how the Internet is accessed in school. • To research and find out about the age of the Internet. • To think about what the future might hold.

Prior Learning links:

	Cycle A	Cycle B
Year 1/2	Unit 1.9 Technology Outside School • Developing ideas about the concept of technology that we are surrounded by and its purpose • Understanding that many devices use computational technology Unit 2.5 Effective Searching • Exploration of what the Internet is and how devices allow connections to access functions and the World Wide Web • Searching and sharing Unit 1.1 Online Safety Understanding of the connections and communications between devices and device capabilities.	Unit 1.1 Online Safety Understanding of the connections and communications between devices and device capabilities. Unit 2.2 Online Safety Understanding of the connections and communications between devices and device capabilities.
Year 3/4	Unit 3.5 Email • Using device functions for 2-way communication via the World Wide Web Unit 3.2 Online Safety Understanding of the connections and communications between devices and device capabilities.	Unit 4.7 Effective Searching • Understanding of the 2- way communication technologies using algorithms that run of the hardware connections Unit 4.8 Hardware Investigators • Understanding of the hardware components that make devices function including those for networking Unit 4.2 Online Safety Understanding of the connections and communications between devices and device capabilities
Year 5/6	Unit 5.2 Online Safety Understanding of the connections and communications between devices and device capabilities.	Unit 6.4 Blogging Online Safety Units Understanding of the connections and communications between devices and device capabilities. • Using device functions for 2-way communication via the World Wide Web

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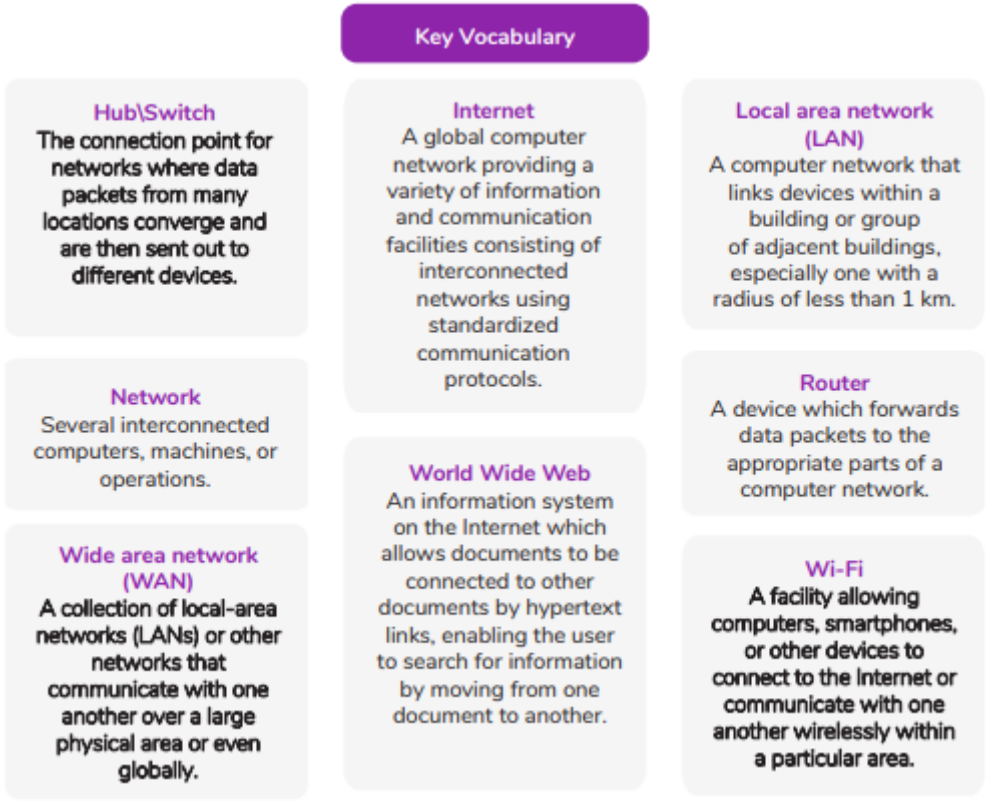
	Unit 6.2 Online Safety Understanding of the connections and communications between devices and device capabilities.	

Vocabulary:



Resources needed for each lesson – 2dos to set.

Lesson 1:

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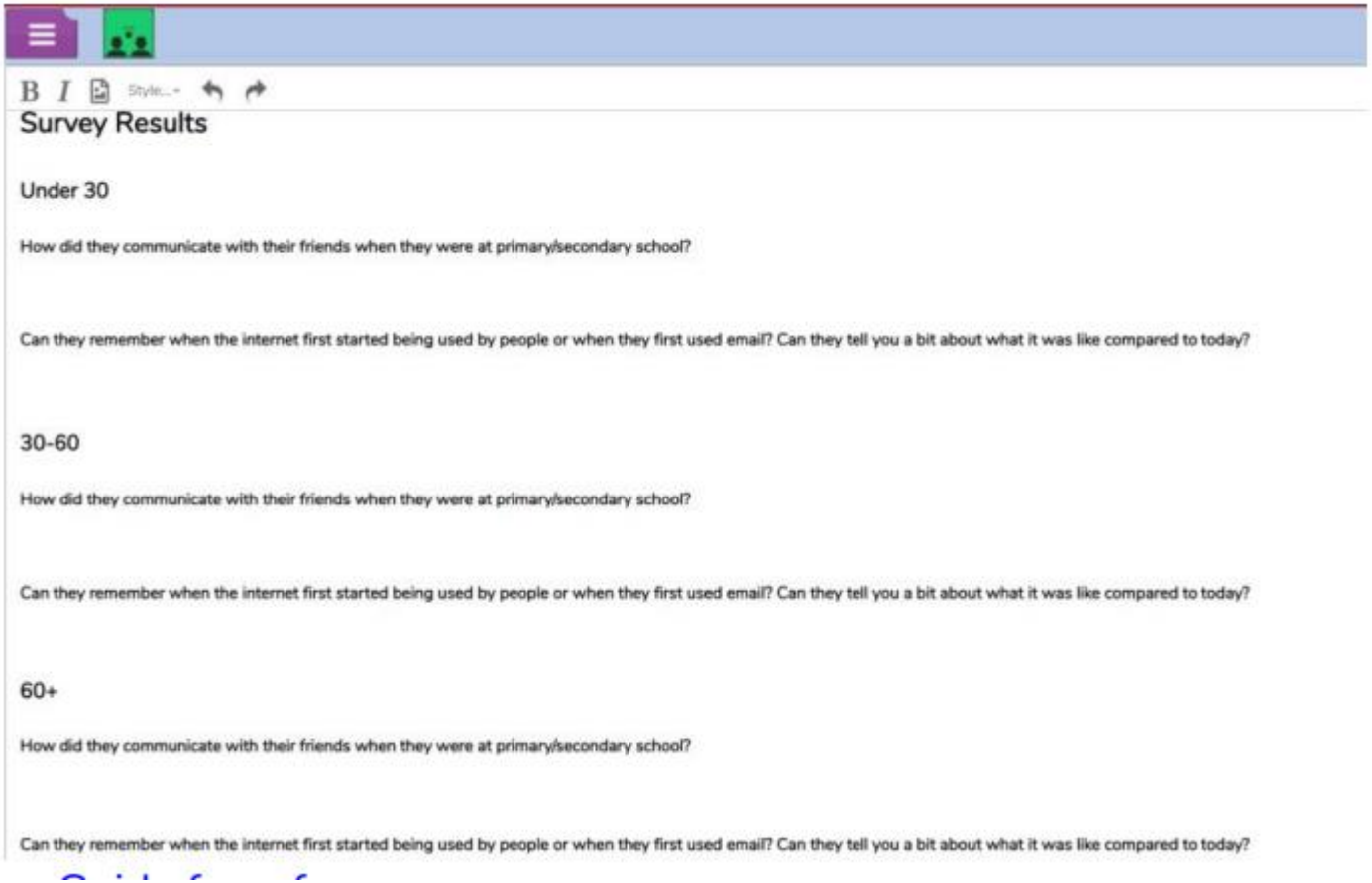
• PLEASE NOTE: Lesson 1 requires children to have completed a questionnaire prior to the lesson. Use this link for the questionnaire so you can ask children to do this in advance.

• Create a collaborative 2Write file called 'Survey Results' and save this in a shared class folder. Set it up to reflect the survey, split into different age groups like this example:



• 2Write User Guide for reference

You can select the following objectives when setting the 2Dos to make future assessment easier:

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Year:	Y6
Subject:	Computing
Strand:	Computer Science

systems; solve problems by decomposing them into smaller parts. ☐

Use sequence, selection and repetition in programs; work with variables and various forms of input and output. ☐

Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. ☐

Understand computer networks, including the Internet; how they can provide multiple services, such as the World Wide Web; and the opportunities they offer for communication and collaboration. ☑

- BBC Bitesize resources

Lesson 2

- It would be useful to have your school technician come into the classroom and talk to the children about the school network.
- A router, network cables, modem.
- Resources within the school network
- 2Connect or 2Chart tool.

Lesson 3

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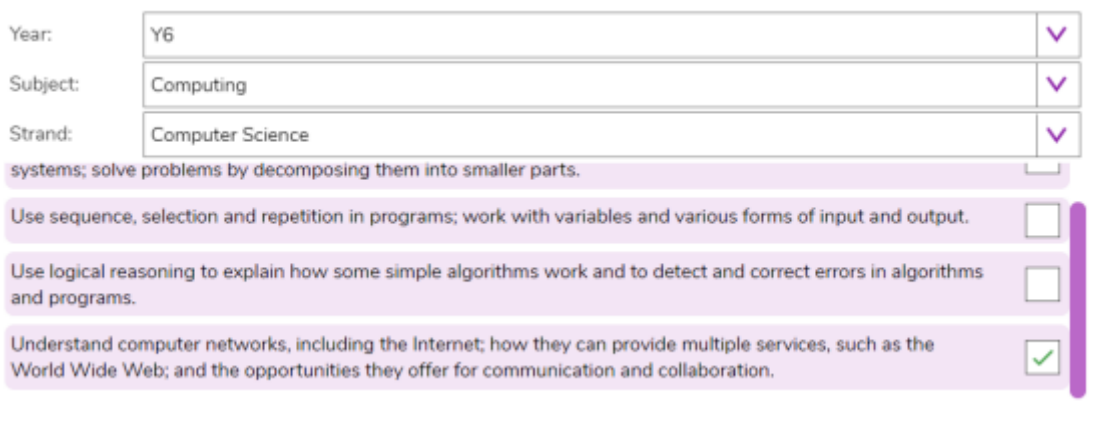
• Access to the internet. • Set the activity Sir Tim Berners-Lee Profile as a 2Do for the class. You can select the following objectives when setting the 2Dos to make future assessment easier



1. Unit 6.6 Lesson 1	**Deeper learning questions** **Reconnection:** Remind children of online safety rules. Go over previous words encountered in previous units. **LO: To discover what the children know about the Internet.** **Activity:** Go over new vocab for lesson Direct children to the activity. Responses should appear real time on the 2Write file, this could be displayed on the whiteboard whilst children work. Responses will be reviewed later in the lesson. Direct the activity. If children have been following the Computing scheme of work, they will have used 2Connect in the past. If they have not, it might be useful to watch the help videos within the tool to provide a quick overview. These can be accessed from within 2Connect using the button on the top right.

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	Let's look at the 2Write file again and think the different responses for each age group. Are there any significant differences in answers between the age groups? What benefits can you think of that the Internet as given us? What negatives things can you think of about the Internet? Click on the image to open the BBC Bitesize page and watch the video. Reflect on what was in the video. Go over vocab and success criteria. **Extension: Where does your Purple Mash work go when you press save? (1)** **How does a tablet play a film without using a DVD? (1)** **How does the school reach your parents with messages? (2)** **How can you watch live television on your computer? (1)** **How could you let your favourite author know that you really like their books? (2**
2. Unit 6.6 Lesson 2	**Deeper learning question**: Do you think everyone, everywhere has access to the internet? **Reconnection:** Remind children of online safety rules. Go over previous words encountered last lesson. **LO**: To find out what a LAN and WAN are. To find out how we access the internet in school **Activity**: Go over previous vocab and new vocab for the lesson. Start thinking about a network in school and what this means. Take the children through the devices that are part of a local area network. If you have examples, show them to the children.. If you have a technician available to talk to the children about the school network and to answer their questions this would be useful. The children could go on a learning walk with the technician around the school to answer the questions in this lesson. Ensure that the technician has a copy of the questions. Upon returning to the classroom direct children in a task. They can choose to use either tool to do this.

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	This could be done individually or as a whole class task. Clicking shows some examples. Consider networks covering more than one geographical site. Go over vocab in the lesson and success criteria. **Extension: Add photos of the devices in your school to the diagram that you created.** **Create a new 2Connect document that shows how the school LAN connects to devices in school, and how a home LAN connects to devices in the home. Colour each LAN a separate colour (edit the node to choose a background colour).** **Show how they both connect to servers that are connected to the Internet. Include the other things that servers connect to the Internet. For example, streaming services, cloud storage, phone providers.** **Colour the WAN (the servers on the Internet) a separate colour.** **Each server on the internet connects to many other servers, not just one. How can you show this?** **Networks can also be built for data storage. Like LANs and WANs, they can be called SANs. What could the S stand for?** **What would happen if one server on the Internet stopped working? How would data still reach its destination?**
3. Unit 6.6 Lesson 3	**Deeper learning question: Why has technology changed so much overtime?** **Reconnection:** Remind children of online safety rules. Go over previous words encountered last lesson. **LO:** To research and find out about the age of the internet. To think about what the future might hold. **Activity:** Go over new vocab for lesson Use the slide, clicking reveals questions and answers.

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	Children who have followed the scheme of work will have learnt in detail about search engines in units 2.5 and 4.7 Introduce this activity. The link is clickable, this could be done using a collaborative 2Connect file. See the 2Connect user guide for more information. Give background to the internet Help the children think about the changes in technology that they have seen so far in their lifetime. Clicking reveals some images to help children remember. Talk to the children about the changes in technology that you have seen as an adult. Go over vocab in lesson. **Extension:**
	End of unit quiz & reflect on gaps from the unit: Unit 6.6 Quiz – found on unit page on PM Questions: Which of these defines what the Internet is? Which of these statements refer to the World Wide Web? Sort statements into the correct categories. What are two types of networks? Fill in the blank paragraph What does a computer network allow computers to share? Match the items to their purpose Put the process of searching the world wide web in order. Which of these are the minimum required for a wired network? Which do you need to add to create a larger network? Which of the following networks is LEAST likely to be a WAN?

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	Click the option that is NOT a web browser?

End Points:

What is the difference between the Internet and the World Wide Web? The Internet is a global network of networks while the Web, also referred formally as the World Wide Web (www) is collection of information which is accessed via the Internet.

What is the difference between a LAN and a WAN? Both are networks that connect computers together. A LAN (Local Area Network) is normally for computers connected less than 1KM distance, whilst a WAN (Wide Area Network) extends over a large geographical area.

Who is Tim BernersLee? Tim Berners-Lee is the inventor of the World Wide Web. The WWW is the system that delivers webpages over the internet.

Evaluation: What have the end of unit quizzes, pupil self-reflections and termly work told you about what the children can remember and recall? What are the gaps? Ensure that the areas that need further reinforcement are documented in the next subject unit MTP. **Plan in time to revisit gaps within units, determined by the quizzes.**

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