

<p>Timing</p> <p>Sessions 1 and 2 are about 45 minutes. Session 3 could take 2 x 45 minutes. Sessions 4 and 5 are optional additional learning opportunities</p>	<p>Children will</p> <ul style="list-style-type: none"> • Build a list of the different services the Internet provides and examples of things we do that are part of each service • Use ‘Is that all that happen?’ to build children’s understanding of how the internet works • Give children the opportunity to present ‘How the Internet works’ • Optional learning about redundancy and tracing where websites are hosted and the route that is taken to obtain information
<p>e-safety links </p> <ul style="list-style-type: none"> • I protect my computer or device from harm on the Internet. 	<p>Objectives</p> <p>Technology in our Lives</p> <ul style="list-style-type: none"> • I can tell you the Internet services I need to use for different purposes. • I can describe how information is transported on the Internet.
<p>Links to other learning</p> <p>Year 6 Programming 2</p> <p>Multimedia (To create a model of the Internet)</p> <p>English: Non-fiction texts</p>	
<p>Resources</p> <p>Is that all that happens?</p>	<p>Preparation</p> <p>Download ‘Is that all that happens?’ which is created based on Helen Greer’s presentation downloaded from Computing at School. ‘Script’ available to download. Make sure you have gone through the presentation so that you are ready to act out a model of the internet with your class – session 2.</p> <p>Collect together</p> <ul style="list-style-type: none"> • Different lengths of string or wool to link between ‘routers’. • 5 hats with images of Client, Router, ISP, DNS, Web Server (Hat badges here) • Sections of the inside of a kitchen roll can be used as the packets of information being transported. • A print out of the front page of a website eg front page of school website. <p>Make sure you have access to YouTube video ‘There and Back Again’</p>

Optional reading for learners during this block to find out more information about the Internet and World Wide Web:

Information for less confident readers <http://www.gcflearnfree.org/internet101/1>

Information for more confident readers <http://www.20thingsilearned.com/en-GB/what-is-the-internet/1>

1	<p>Technology in our Lives</p> <p>I can tell you the Internet services I need to use for different purposes.</p>	<p>How does the Internet work?</p> <ul style="list-style-type: none"> • What do you know about the Internet? How many different services can you name that are parts of the internet? Prompt children to remember the different services that the Internet provides (see year 5 Technology in our Lives X) • Create a class list of the different services available on the internet (email, World Wide Web by using search engines or visiting school website, FTP File Transfer Protocol by sending an attachment, uploading documents to SLP or Dropbox, VOIP Voice Over Internet Protocol using Skype). • Ask children to add different things they do that use each service. 	<p>Gold: Can I recognise and understand the different services that are part of the internet and identify the parts I used for different purposes?</p> <p>Silver: Can I recognise the different services that are part of the internet tell you some examples of what they are used for?</p> <p>Bronze: Can I tell you about some services that are part of the internet?</p>
2	<p>Technology in our lives</p> <p>I can describe how information is transported on the Internet. (6)</p>	<p>What does the Internet look like?</p> <ul style="list-style-type: none"> • Ask learners to draw what they think the Internet looks like – pairs with an A4 sheet of paper / small white boards. • Review how children represented the Internet. You may want to take the children to the hall for next part of the session. • Look at slide 4 of Is that all that happens?. Talk about the Internet as millions of computers linked together by wires and some wirelessly. Ask about the different devices which are computers. You could talk about the ‘Internet of things’. Tell learners that computers talk to each other with their own language TCP/IP - Transmission Control Protocol, Internet Protocol. • Watch a Packet’s Tale. Ask children to talk about what they think happens when we type in a web address NOTE: no-one needs to have the right answer at this point! 	<p>Gold: I can tell you the sequence that information takes leading up to when I see it on a screen.</p> <p>Silver: I can name parts of the Internet, and different spaces and what their jobs are.</p> <p>Bronze: I can tell you what the Internet is, and how computers are linked together.</p>

		<ul style="list-style-type: none"> • Use ‘Is that all that happens?’ (slide 6 to 27) to build up children’s ideas for what the Internet looks like. • Use string to link together each part of the Internet which is represented as a hat. Start with the Client (slide 7) and use a long piece of string to join this to the web server. Have a piece of paper that has an image representing the school’s website. The client types in the web address for the school website. Jiggle the piece of string to show this is going to the web server. The ‘front page of the school website’ is then passed along the piece of string to reach the client. • As each part is added to the picture of the Internet get children to join in to physically create the Internet in the classroom. (‘Script’ available to download). We have found it easiest to have a number of long pieces of string. By the time you get to slide 19 you can get all the children linked together by holding one of the long pieces of string at some point – they don’t need to be wearing a hat. They could have a label that says WAN router. • For slide 22 the piece of paper that is being passed along as the ‘front page of the school website’ needs to be cut into 3 pieces. • Choose a route along a piece of string to ‘break’ for slide 25. • Use slides 28 to 32 to check recognition of hardware names. • Look again at a Packet’s Tale. In pairs ask children to talk through what is shown in this video. 	
3	<p>Technology in our Lives</p> <p>I can tell you the Internet services I need for different purposes. (6)</p>	<p>How we use the Internet</p> <ul style="list-style-type: none"> • Ask learners to create their own map of the Internet based on slide 25. How can they make this as simple as possible for the other teachers to understand? • Watch BBC’s How does the Internet Work? What ideas do the learners have about how they could represent the Internet and packets of data being transported? • Set children the challenge to use an appropriate resource to help others learn 	<p>Gold: I can tell you the sequence that information takes leading up to when I see it on a screen.</p> <p>Silver: I can name parts of the Internet, and different spaces and what their jobs are.</p>

		about how the Internet works. This could be a poster, PowerPoint presentation, Scratch simulation, green screen video.	Bronze: I can tell you what the Internet is, and how computers are linked together.
Additional learning opportunities:			
4	<p>Technology in our Lives</p> <p>I can describe how information is transported on the Internet. (6)</p>	<p>What happens when things go wrong?</p> <ul style="list-style-type: none"> Use Helen Greer's activity to show 'redundancy' ie data is slowed down by routers and fails to cannot reach its destination. Learning can be reinforces with this song – words / music. Talk about why we all need to protect our data and the ways we do this. (e-Safety) 	<p>Gold: I can explain how the Internet has methods of solving problems in order to maintain a service.</p> <p>Silver: I can understand ways in which the Internet can fail.</p> <p>Bronze: I can understand that the Internet works by making data smaller, in order to transport it.</p>
5	<p>Technology in our Lives</p> <p>I can describe how information is transported on the Internet <i>and discover where a web service or a website is hosted.</i></p>	<p>Where are websites hosted?</p> <ul style="list-style-type: none"> Discover how to trace where websites are hosted and the routers the information goes through to get there. Children can use http://www.yougetsignal.com/tools/visual-tracert/ OR http://en.dnstools.ch/visual-traceroute.html to enter a website and to click on host trace to see the route information from the website will take to come back to their device. They can also run a trace route on a windows computer http://www.screenr.com/wuC8 You will probably need to ask the technician to give your class additional permissions to be able to do this. Or they will need to take it in turns to use your computer (under supervision). 	<p>Gold: I can find which country a website is hosted in.</p> <p>Silver: I can count the number of routers in a sequence to reach a website.</p> <p>Bronze: I can enter a web address and see the route the information takes to reach me.</p>