

























Online Searchers and Surfers: What Is the Internet?

National Curriculum 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.		Lesson Duration It is estimated that this lesson will take approximately 60 minutes.	
Aim To understand what the Internet is and how it is used around the world.			
Success Criteria I can explain what the Internet is and how it works. I can identify the many different ways the Internet is used. I can understand that a computer is connected to the Internet via a router. I can explain how the Internet is connected around the world.	Key Vocabulary Connection, copper cables, electricity, fibre-optic, Internet, Internet Service Provider (ISP), light, network, radio signals, router, submarine cables, web browser, wireless Internet, World Wide Web (www).		
Resources Lesson Pack Coloured pens or pencils Large sheets of paper	Preparation - one per pair Differentiated What Is the Internet Activity Sheet - one per child Internet Activity Cards - cut up the individual cards and provide one set of cards per group In order to activate prior knowledge and develop a purpose for learning through interests, we recommend you begin the _____ prior to starting this unit.		

Prior Learning: It would be helpful if children have accessed _____, where they will have briefly looked at the Internet and what it is. It would also be beneficial for the children to understand how to access a web browser.

Learning Sequence

	Knowledge Organiser: Introduce the topic and Knowledge Organiser . Explain that the Knowledge Organiser has all the key information and vocabulary that the children will need to learn and understand by the end of this unit. Look through this together discussing what they already know and underline words that they don't yet know. We recommend completing one per pair at LKS2.	
	What Is the Internet?: Using the Lesson Presentation , ask the class to work in pairs to think of an explanation or examples of what the Internet is. Ask the children to further discuss, with their talk partners, which other devices could also be connected. Examples could include: washing machines, tumble dryers, cars, printers, home heating systems, Ebook readers, smart glasses, fridges, etc.	
	Who Invented the Internet?: Using the Lesson Presentation , talk through the various computer scientists who invented the Internet.	
	The Internet and World Wide Web: Using the Lesson Presentation , discuss what the World Wide Web is. Ask the children if they are familiar with the web browser icons shown on the slide.	
	How Is the Internet Used?: Using the Lesson Presentation , show all of the different ways the Internet can be used. Then give the children a moment to think about how they use the Internet in school or at home. Allow for a discussion about this and record the children's contributions - this could be used as part of your computing display. What do you use the Internet for?	
	How Are We Connected Around the World?: Using the Lesson Presentation , discuss how the Internet travels around the world.	
	Can You Piece Together How the Internet Works?: Using the Internet Activity Cards , children should work in groups to organise these cards on a large sheet of paper to represent the journey of 'How Are We Connected Around the World?' using what they have learnt from the previous slide. They will also need to draw arrows within the representation. Can you explain the process of how the Internet works, in your own words?	

	<p>Different Types of Internet Connections: Using the Lesson Presentation, discuss the different types of Internet connections: copper cables, wireless Internet and fibre-optic cables including their advantages and disadvantages. Ask children to explain which Internet connection they think would be the best to use and why?</p>	
	<p>What Is the Internet?: Using the differentiated What Is the Internet? Activity Sheets, children should fill in the blank boxes with information they have learnt from the Lesson Presentation. This can be completed independently, in small groups or in pairs.</p> <p> Children should create a name for their Internet, a description of what the Internet is, how it can be used and digital devices it can be connected to. A word bank is provided.</p> <p> Children should complete sections about their version of the Internet. This includes designing their own web browser logo similar to that of Google Chrome and Microsoft Edge, providing a diagram of how the Internet works, a company name, what the Internet is, how it can be used and the digital devices that it can be connected to.</p> <p> Children should complete all aspects of the previous two sheets with the addition of a section asking them to explain the three different types of packages (copper, wireless and fibre-optic Internet) and their speed.</p>	
	<p>True or False: Using the Lesson Presentation, ask the children to look over the statements and provide an answer.</p>	

Explore it

Research it: If the children have Internet access at home, they can find out which ISP they are connected to, research which type of Internet connection they have (fibre-optic or copper) and also discover what their download speed is by using an online Internet speed checker.

Present it: Create a song, rap, poem, eBook, _____ over images or poster to explain how the Internet works around the world, including the difference between the Internet and the World Wide Web (www).

Find it: Children require access to Twinkl Go!, where they can play the _____ interactive game. The children will have the opportunity to find the keywords explored in this lesson.

Assessment Notes:

Disclaimer

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What Is the Internet?

To understand what the Internet is and how it is used around the world.



Imagine that all current knowledge of the Internet has been wiped from the Earth. Your task is to try and sell your new product 'The Incredible Internet' to everybody in the world.

Company Name:

What Is the Internet?



Digital Devices It Connects To:

Word Bank:

router, network, servers, submarine cables, fibre-optic wires, wireless Internet, connection, devices, computer

How Can It Be Used?



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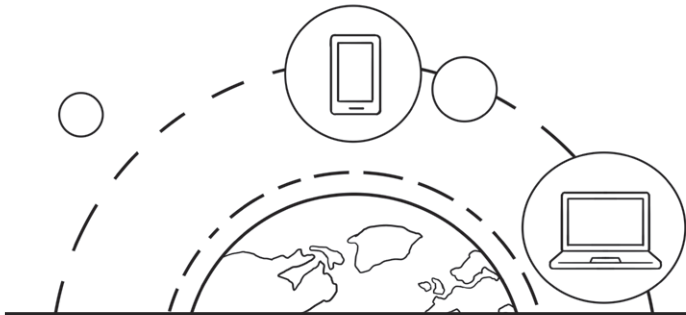


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A Diagram of How It Works:

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Design Your Own Web Browser Logo:



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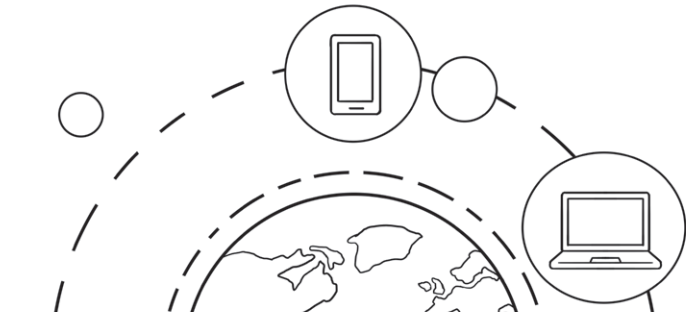


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A Diagram of How It Works:

Connections:

Fibre-optic:

Wireless:

Copper:

Design Your Own Web Browser Logo:



What Is the Internet? **Answers**

Company Name:

Children to create their own name here.

What Is the Internet?

The Internet is a network of computers connected to each other all around the world.

Digital Devices It Connects To:

Pupils' own responses, such as:

Laptops, computers, tablets, printers, smartphones, smart watches, cars, washing machines, dryers, home heating systems, gaming consoles.

How Can It Be Used?

The Internet allows people to...

browse the Internet.

watch and download videos.

watch TV.

view and download photographs.

listen to music.

play games.

access maps

communicate (e.g. email, chat and blogs).

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Design Your Own Web Browser:

Children to create their own design similar to Google Chrome or Microsoft Edge.

A Diagram of How It Works: A diagram similar to the one on the presentation, showing the router connecting to wires going underground, connecting to a network and travelling through submarine cables in the ocean.

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Connections:

There could be a range of possible answers given.

The children should explain each connection type in detail and may be able to include some of the following advantages and disadvantages:

Fibre-optic: This is the fastest Internet connection as it uses light to transmit data. There is a small chance of disruption to the network. Although this is the best option, it is also the most expensive which is why fibre connections are not possible everywhere.

Wireless Internet: This can offer fast download and upload speeds however, it is not as reliable as fibre optic connections. Signal can become weak as wireless connectivity occurs over a very short distance. Signal can become disrupted.

Copper: Electrical signals are sent through these cables. They are cheaper than fibre and most countries have these cables laid underground. However, the speeds can be much slower than using fibre optic cables.

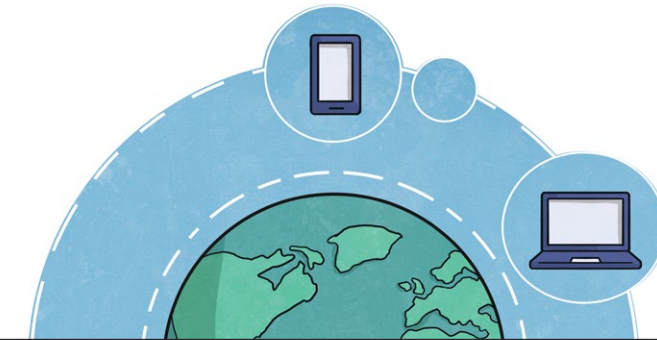
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Word Bank:

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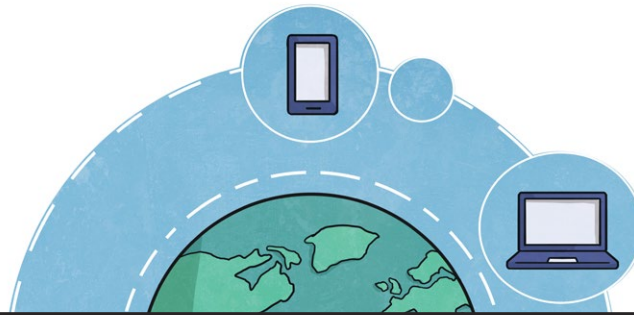
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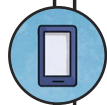
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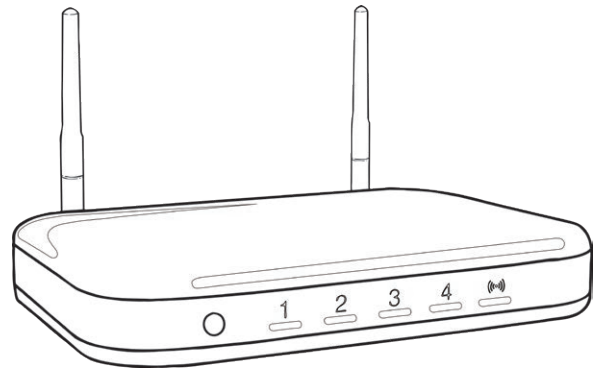
Internet Activity Cards

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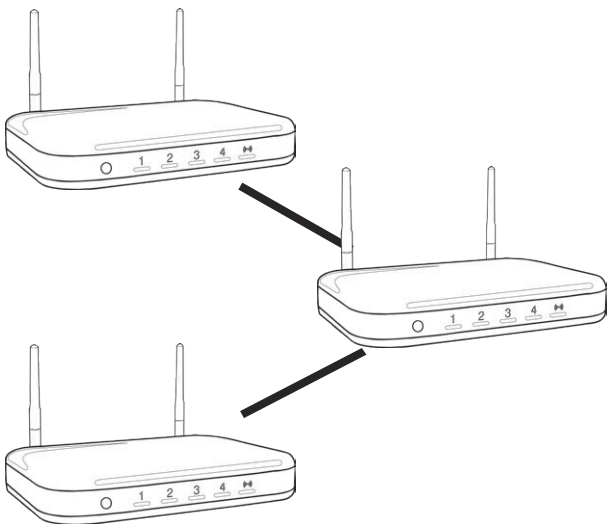
Cut out these cards and place them in order of how the Internet travels from a house, to a web server in another country and back to the house again.



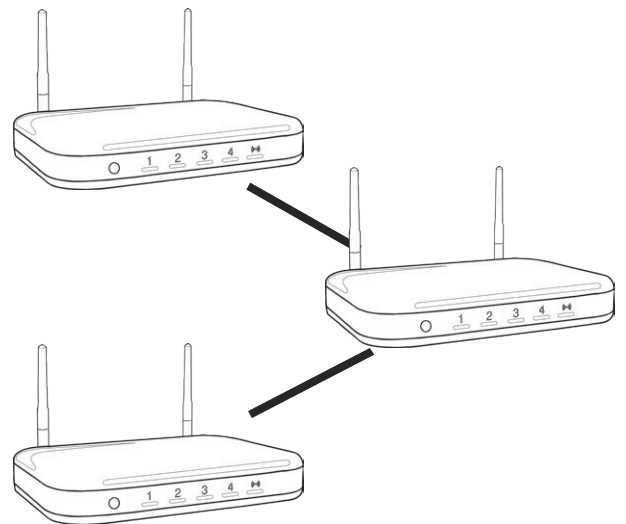
laptop



router

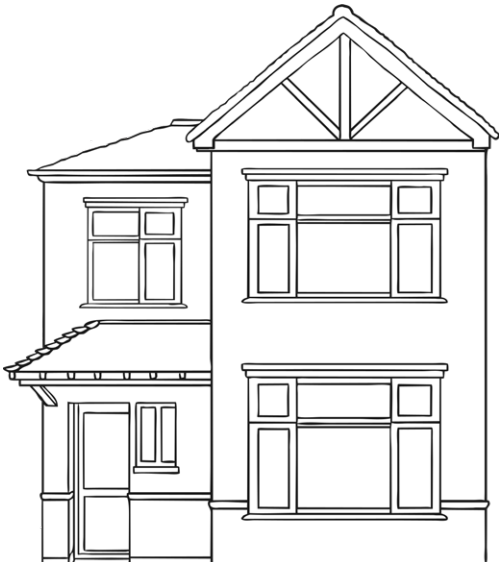


routers

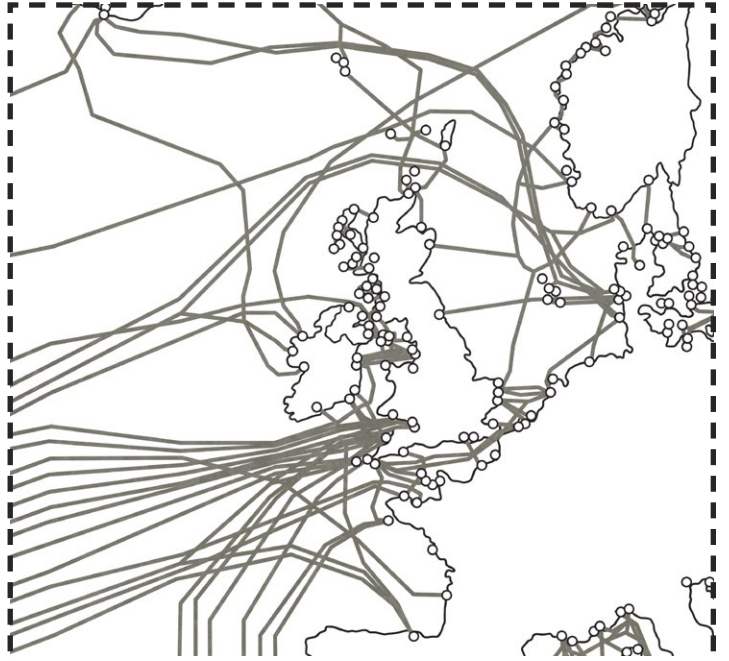


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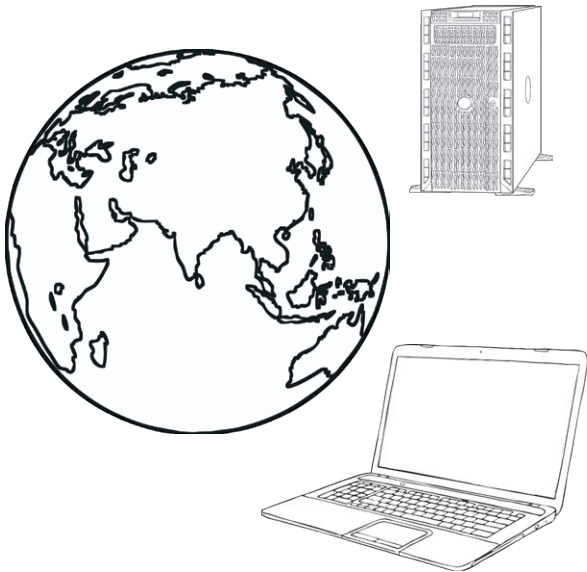
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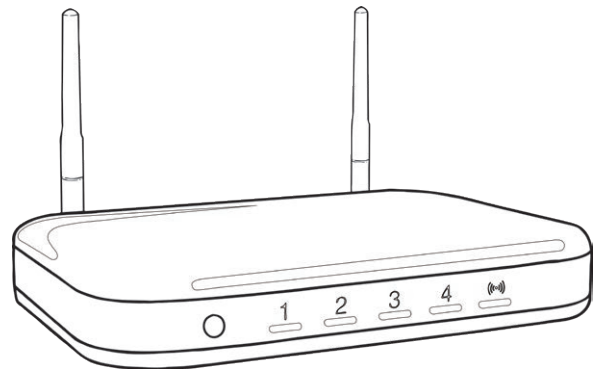
house



submarine cables

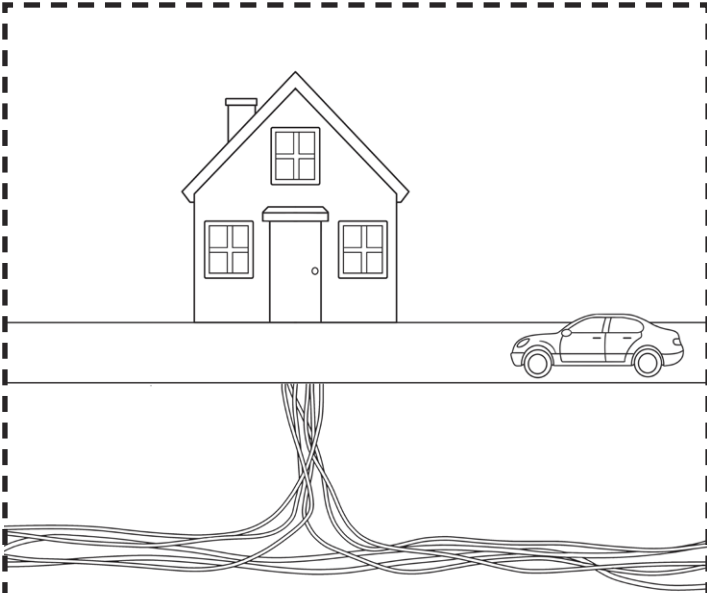


web server

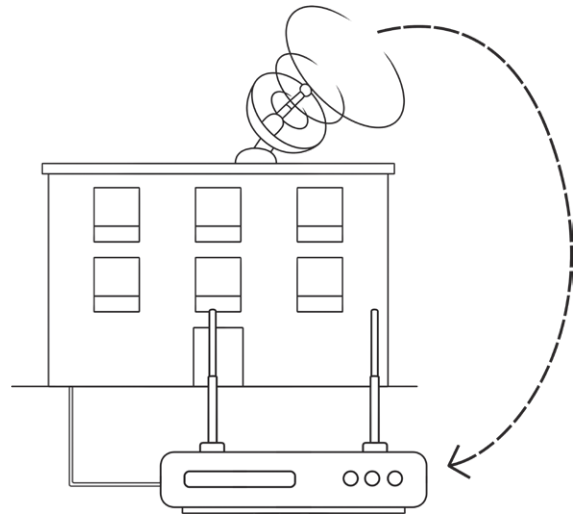


router

Internet Activity Cards



**underground Internet
cables**



**Internet Service
Provider (ISP)**

Internet Activity Cards Answers

To understand what the Internet is and how it is used around the world.



The children should have placed the cards in this order, using arrows to show the journey to the web server and then the return journey back to the computer in the house.

START

house



laptop



router



underground Internet cables



ISP



routers



submarine cables



routers



web server



router

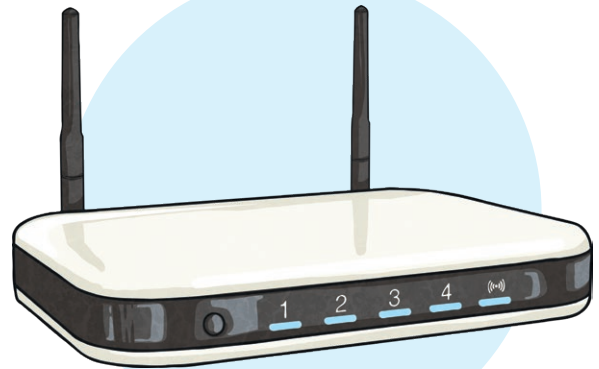
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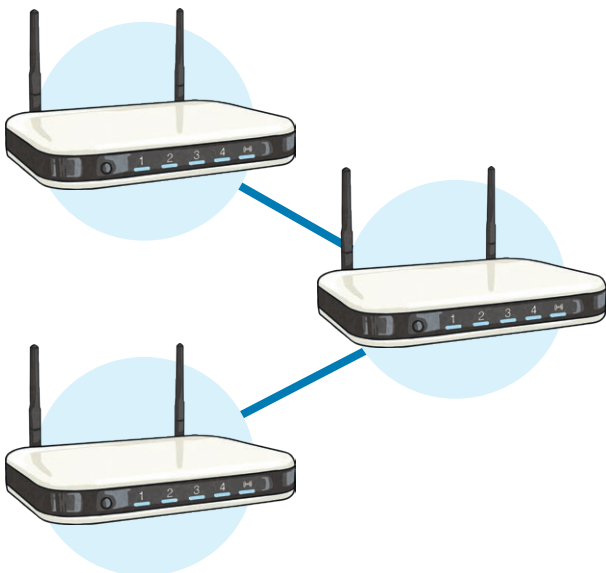
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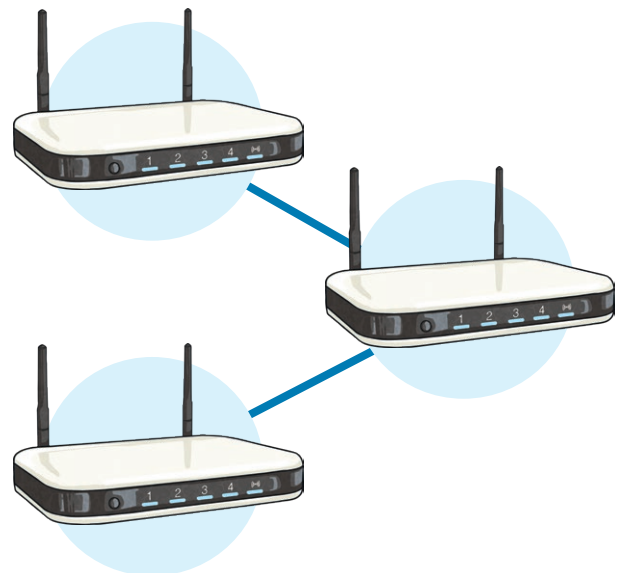
laptop



router



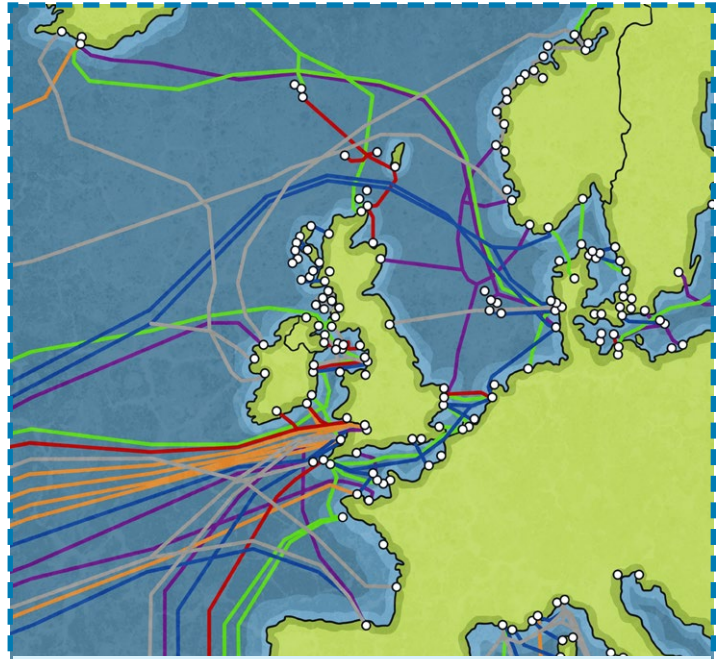
routers



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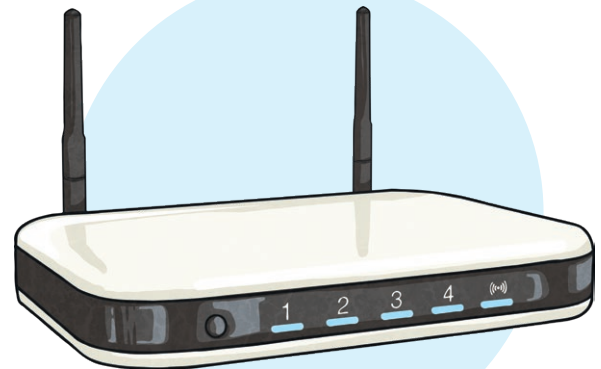
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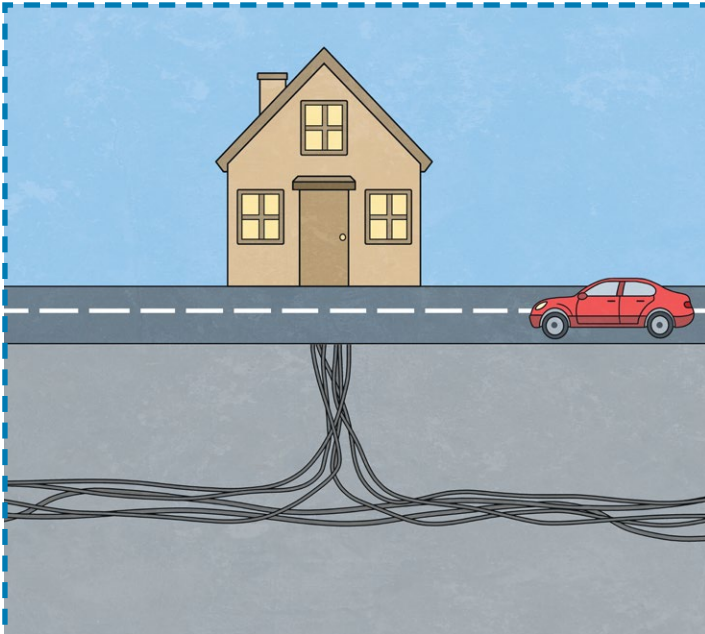
submarine cables



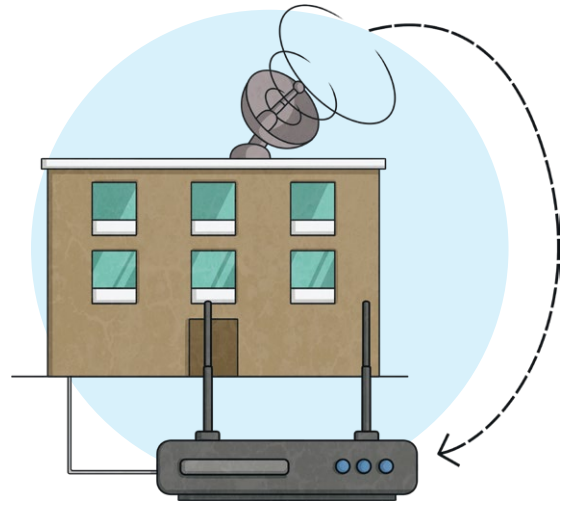
web server



router



underground Internet cables



Internet Service Provider (ISP)

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router



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ISP



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routers



web server



router

