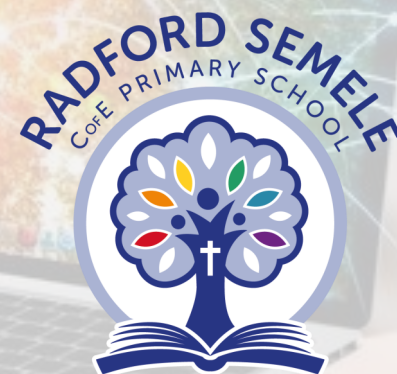


Year 4 Computing Knowledge Organisers



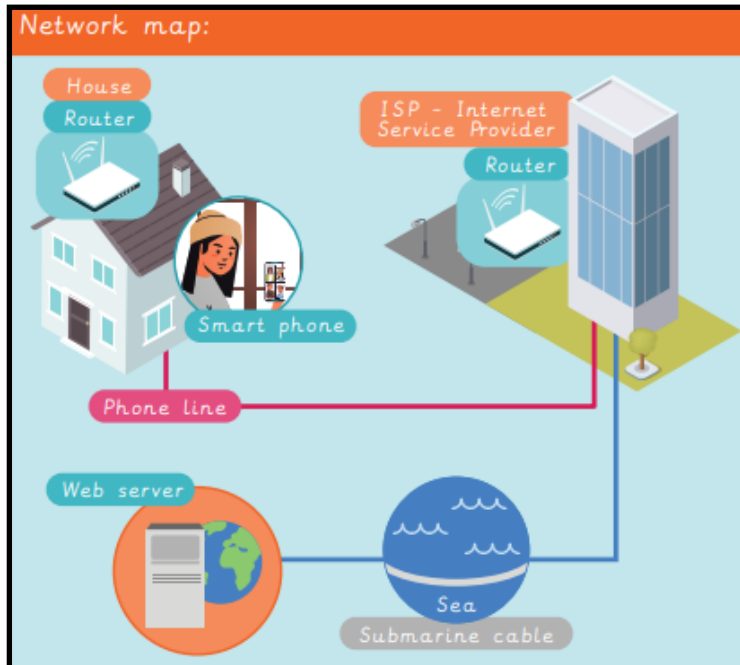
Computing Knowledge—Year 4—Autumn 1 - The Internet

Online Safety and Digital Literacy

There are strategies for keeping personal information private, depending on context. Internet use is never fully private and is monitored by adult supervision. Some online services may seek consent to store information about us. Trusted adults can help us with this if we are not sure. There is a digital age of consent and this impacts some services asking for consent.

Vocabulary

Networks	When more than one device is connected through the internet; for file sharing
Routers	The main device responsible for providing internet access
Servers	A computer or program that provides data and information to other devices
World Wide Web	A system of public webpages accessible through the internet
Web Address	Tells a device where to find a webpage



- Information can move around a network and can also move between networks
- A router can enable many networks to be connected together and can pass messages via the Internet
- Networks need to be kept secure and we have to be careful about who can access networks
- A server manages a network and stores files and information for it
- Through the Internet, we can access the World Wide Web
- Lots of different objects can be shared via the Internet and shared with others
- A web address can provide information about the site itself
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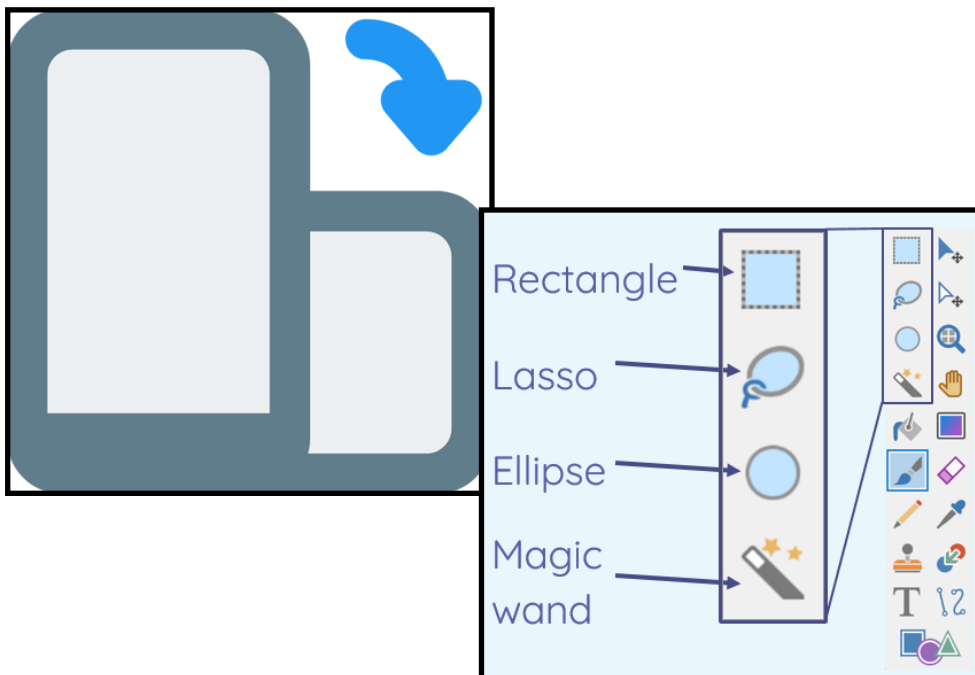
Computing Knowledge—Year 4—Autumn 2 - Photo Editing

Online Safety and Digital Literacy

The internet can be used to search for content to use in other work, but it is important to consider who owns it and whether we have the right to reuse it or not. Some content must not be used without permission from the owner such as videos, music and images.

Vocabulary

Edit	To make any changes or alterations before the final product
Crop	To cut parts off a picture by using a computer
Rotate	Change which way up an image is
Duplicate	To make a copy of an image, text box or document
Combine	Merging together two or more images



- Digital images can be manipulated in a number of ways
- These images can also be changed or edited for different purposes depending on what we want the viewer to see
- There are different tools that we can use to edit images
- It is important to consider how these changes will affect the quality of the image
- There are a variety of different editing techniques we can use such as rotating, cropping and combining.
- Colours and filters can be added to an image to change the final product

Computing Knowledge—Year 4—Spring 1— Debugging

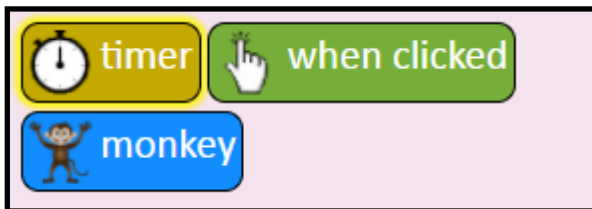
Online Safety and Digital Literacy

There are strategies for safe and fun experiences in a range of online social environments e.g. livestreaming, gaming platforms. It is important to be respectful to others online and to know how to recognise healthy and unhealthy online behaviours. Content shared online may feel unimportant to one person but may be important to other people's thoughts, feelings and beliefs.

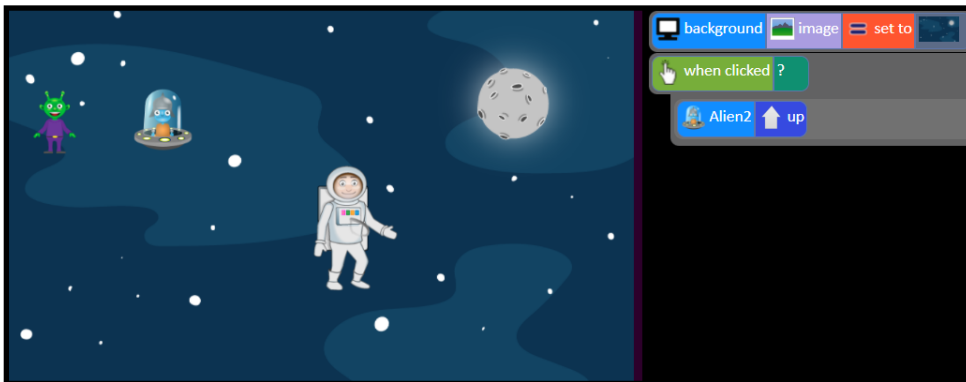
There are ways of finding out information about others through searching online. Social media or search engines can be used to find out about other people as well as factual websites about famous figures. Information online about people could have been created, copied or shared by others.

Vocabulary

Algorithm	A clear set of instructions for a computer to follow
Debugging	Finding and fixing problems in a program
Code	A set of instructions written in programming language that tells a computer what to do
Program	Giving a computer instructions to follow
Cyberbullying	Bullying that takes place online or via messaging.



Blocks of code



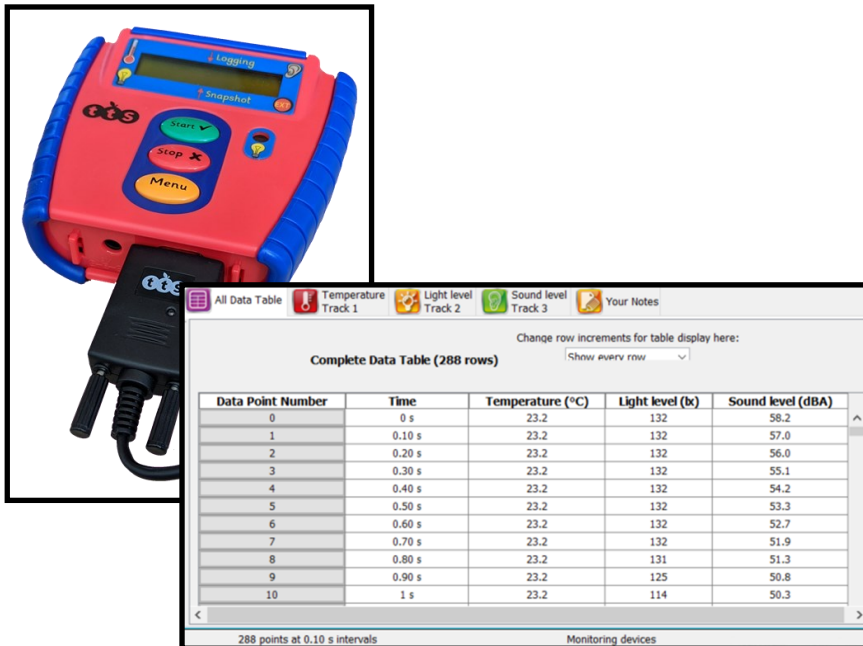
- An algorithm is a set of instructions that tells a computer or program what to do.
- Testing is an important part of programming as it allows for any mistakes to be spotted and debugged.
- Instructions and algorithms should be clear and in the right order so that they are easy for the computer to follow.
- Coding programs follow the steps exactly.
- Breaking down code into smaller chunks can help to spot the mistake and debug it.
- Simple code and programs use coding blocks to help program.
- Objects on screen can be given different sets of code to allow for movement and interaction

Computing Knowledge—Year 4—Spring 2— Data Logging

Online Safety and Digital Literacy

People can feel upset, hurt or angry online. They can be bullied through a range of media such as image, video, text or chat. People need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them and their reputation.

Technology can be a distraction from other things, in both a positive and a negative way. There are times or situations when someone may need to limit the amount of time they use technology and strategies for doing so.



Vocabulary

Logging	Collecting and storing data over a period of time
Sensors	A device which measures a physical property
Data point	A single piece of data, usually part of a larger collection
Digital device	A device with an input, process and output
Attribute	A feature or characteristic of something

- Digital devices such as data loggers can be used to collect data points
- These data points can be logged over time
- Sensors are a useful input device and can help to capture data points
- It is important to consider how often to collect data samples in order to capture data
- Data can be sorted by attribute
- Attributes can also help to locate information
- Data and information can be exported in different formats

Computing Knowledge—Year 4—Summer 1 - Word Processing and Computing Skills

Online Safety and Digital Literacy

Some information online may not be accurate and it is important to make our own decisions regarding content. We can search for information within a wide group of technologies and make judgements about the probable accuracy. There are different methods that are used to encourage people to buy things online e.g. in-app purchases and pop-ups.

Lots of people may share the same opinions or beliefs online but that does not necessarily mean those opinions or beliefs are true. Technology can be designed to act like or impersonate living things. Some people may create or alter information online to pretend something is true

[Click here](#) for a great cake recipe!

Hyperlink

Cell

Monday	
Tuesday	
Wednesday	
Thursday	

Vocabulary

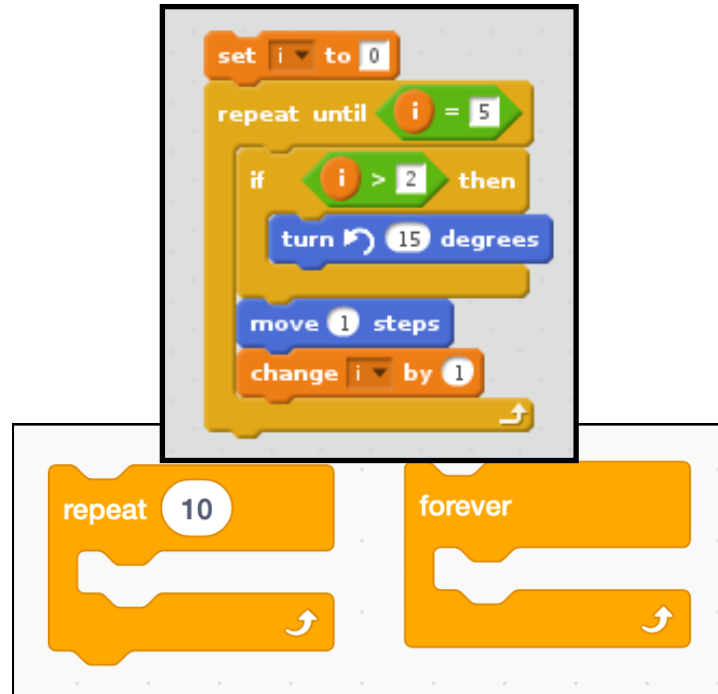
Document	A piece of information used to communicate something
Layout	The appearance of a document or webpage; the organisation of text and images.
Cell	One of the rectangular boxes in a table; part of a column and a row
Spellcheck	Checks the spelling and sometimes grammar of a document on a computer
Hyperlink	A link commonly used in a document to direct you to another website

- The layout of a document can be changed to make it look more appealing to the reader by moving around the different elements such as the pictures.
- Images and text can both be formatted to change their appearance.
- Images can be added to documents along with text and hyperlinks to take the reader to another page.
- Spellcheck can be used to check for any spelling errors in a document, but sometimes we may need to use the 'Ignore' function.
- Tables can also be added to documents to show data and the cells can be formatted.

Computing Knowledge—Year 4—Summer 2- Programming

Online Safety and Digital Literacy

Our online identities can be different to offline identities. There are positive ways to interact with others online and this may positively impact on how others perceive them. Others online may pretend to be somebody else, including our friends.



Vocabulary

Repetition	Repeating or looping part or all of a sequence
Loop	A command used to repeat commands
Indefinite	Loops that continue until the program is told to stop
Count-controlled	Loops that have a set number of repetitions
Outcome	The result of a program

- Repetition can take place as part of a sequence using the loop command
- We can identify patterns as part of sequences
- Loops can be programmed to repeat indefinitely until the program itself is stopped
- Loops can also be programmed to repeat for a set number of times
- Not all processes can be run at once but some sequences can be run at the same time
- We need to recognise when it is appropriate to use loops and which loop we should be using