Great Moor Junior School
Knowledge Organiser
Year 4

(updated July 2023)

Childnet International

BE SMART ONLINE

S — SAFE
Keep your personal information safe. When chatting or posting online don't give away things like your full name, password or home address. Remember personal information can be seen in images and videos you share too. Keep them safe to keep yourself safe.

M — MEET
Meeting up with someone you only know online, even a friend of a friend, can be dangerous as this person is still a stranger. If someone you only know online ever asks you to meet up, for personal information or for photos/videos of you then tell an adult straight away and report them together on www.thinkuknow.co.uk

THINK U KNOW

A — ACCEPTING
Think carefully before you click on or open something online (e.g. links, adverts, friend requests, photos) as you never know where they may lead to or they may contain viruses. Do not accept something if you are unsure of who the person is or what they've sent you.

R — RELIABLE
You cannot trust everything you see online as some things can be out of date, inaccurate or not entirely true. To find reliable information compare at least three different websites, check in books and talk to someone about what you have found.

T — TELL
Tell a trusted adult if something or someone ever makes you feel upset, worried or confused. This could be if you or someone you know is being bullied online. There are lots of people who will be able to help you like your teachers, parents, carers or contact Childline – 0800 11 11 or www.childline.org.uk

BE SMART WITH A HEART
Remember to always be smart with a heart by being kind and respectful to others online. Make the internet a better place by helping your friends if they are worried or upset by anything that happens online.

WWW.CHILDNET.COM

Year 4 Autumn 1: Creating Wikis

Computing Focus: Digital Literacy (IT and E-safety) and
Using technology

What you should know from Year 3: Searching with keywords. Using Word to create simple documents, Use iMovie for filming and photos. Used a website for uploading work. Used a mouse, use a keyboard, copy and paste

In this unit we use the internet to search the World Wide web safely and develop the use of wikis and word processing skills to communicate information

Key Knowledge, vocabulary and skills

Search the World Wide web through the Internet using key words and child friendly websites :

Kiddle https://www.kiddle.co/

Swiggle https://swiggle.org.uk/

CHILD FRIENDLY SEARCH

DK Findout
https://www.dkfindout.com/uk/

What do you want to find out?

The Internet	An interconnected network made of computers connected to each other around the world.
Search	Search technology is any tool that can look for websites you want to find.
web browser	Finds and displays pages from the World Wide Web, Examples of browsers are: Safari, Google Chrome, Internet Explorer, Edge etc.
Wiki	A wiki which is a website that allows users to contribute and modify its content individually and collaboratively. It is named wiki after a Hawaiian word meaning "quick." The most famous wiki is Wikipedia.

**Online safety / E-safety**
Remind about BE SMART rules
Focus on Privacy and security ways to improve your privacy and security when online

Year 4 Autumn 2: Programming with MSW Logo using Repetition

Computing Focus: Computer Science

What they should know from Year 2: sequence, algorithm, bug, debugging
In this unit we learn about creating algorithms and using Logo to create programs to implement them

Key Knowledge, vocabulary and skills

Vocabulary and skills	Examples in Logo
Algorithm An algorithm is a precise set of ordered instructions, which can be turned into code	Here is an example of an algorithm: Right turn 90 degrees, forward 10 steps, right turn 90 degrees (code below)
Turtle Home position (centre of screen for Turtle)	◁
Debugging Finding and correcting errors in your code.	Commands typed incorrectly e.g. rt90; no space between rt and 90
Sequence is a specific order for a set of instructions.	A sequence in Logo. **RT 90 FD 10 RT 90 FD 10**
Repetition a sequence that is repeated a number of times	★★★☽☽★★★☽☽ here the sequence is repeated twice
Repetition in an algorithm Repeat 3 times: Draw ✳♡ Draw ♡	output is ✳♡♡✳♡♡✳♡♡
Count controlled loops (**Repetition**) These repeat the loop a number of times	The number after **repeat** is the number of times to repeat the code. The code to be repeated is in square brackets. e.g. **repeat 4 [FD 100 LT 90]**
Decomposition breaking down a task into smaller, more-manageable parts.	In Logo breaking the code sequence into chunks or snippets
Procedure is a code snippet that is given a name and can be reused in programming.	When creating a procedure in Logo, the word '**TO**' is typed, followed by the procedure name, e.g. **TO SQUARE**.

Online safety / E-safety
Focus on Online Bullying: (linked to anti-bullying week) To know about different media in which you can be unkind. Bullying online is the use of technology to upset, threaten, embarrass or target another person regularly.

Year 4 Spring 1: Investigating data using data logging

<u>**Computing**</u> Focus: Collecting and presenting data

<u>**What they should know from Year 3**</u>:data and information, collected and presented data as a bar chart, inputs, outputs
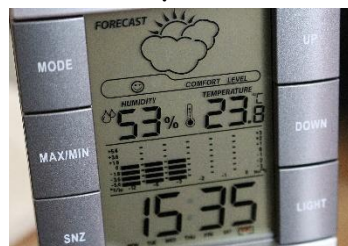
In this unit we learn about collecting and presenting data

Key Knowledge, vocabulary and skills

data It is a collection of numbers, words and symbols gathered by observation, questioning or measurement e.g. yes, no, 5, 7. cheese etc. , measurements, observations or just descriptions of

E.g. **the values** for health: temperature, heart rate; sport: number of runs;

weather: rainfall, wind speed etc.

information is where data is presented in graphs, sentences etc. so that it makes sense and tells the reader something about the data. Data = 17 can become "The temperature is 17 degrees C ."

data set   data attribute   data value

Weather			
Day	Summary	Temperature (°C)	Rainfall (mm)
Sunday	Sunny	21	0
Monday	Partly cloudy	17	0
Tuesday	Overcast	16	2
Wednesday	Overcast	15	1

The entire table is a **data set.**
The headings of each column is the **data attribute.**
The answers in the columns are the **data values** .

data logger	A digital device that can collect data from sensors over time and store it. Data loggers can collect data about brightness of light, temperature, and loudness of sound etc.
data point	The moment data is collected by a sensor/data logger. Each moment is datum (singular of data).

Online safety / E-safety

Safer Internet day. Focus on online reputation to know that some information about anyone online could have been created, copied or shared by others.

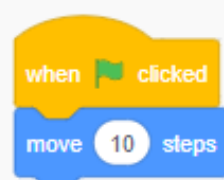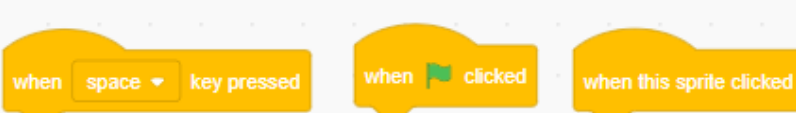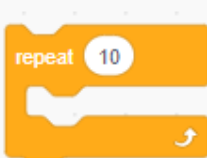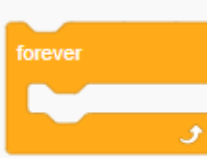# Year 4 Spring 2: Programming games in Scratch using Repetition

Computing Focus: Computer Science

What they should know from Year 3 <u>Autumn 2</u>, <u>Summer 1</u> and <u>Year 4</u>:
sequence, algorithm, bug, debugging, loops, count controlled loops
In this unit we read and use count controlled loops and infinite loops in Scratch

Key Knowledge, vocabulary and skills

	Examples in Scratch
Algorithm An algorithm is a precise set of ordered instructions, which can be turned into code	When the user clicks on the green flag, the sprite moves by 10 steps from its actual location. The code will be
Sequence is a specific order for a set of instructions.	The above code is in a specific order to be run through when the program is executed.
Execute Makes the program run.	Using any of these event blocks will start a program
Count controlled loops (Repetition) These repeat the loop a number of times. **Forever loop (Repetition)** These repeat the loop forever.	
Wait blocks are used in many projects. A common use is with animation **Hide** block **Show** block	

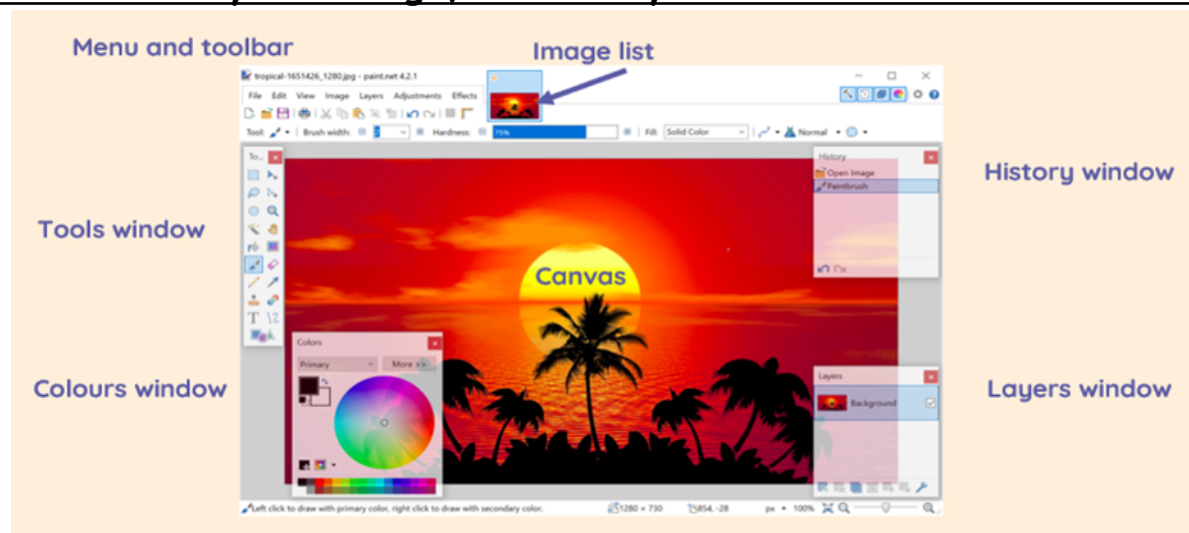| Online safety / E-safety |
|---|
| **Focus on Self-Image and Identity:** |

Year 4 Summer 1: Photo Editing

Computing Focus: Multimedia

What they should know from Year 3 to have used a camera before.
In this unit you will learn how to use a camera and photo editing software
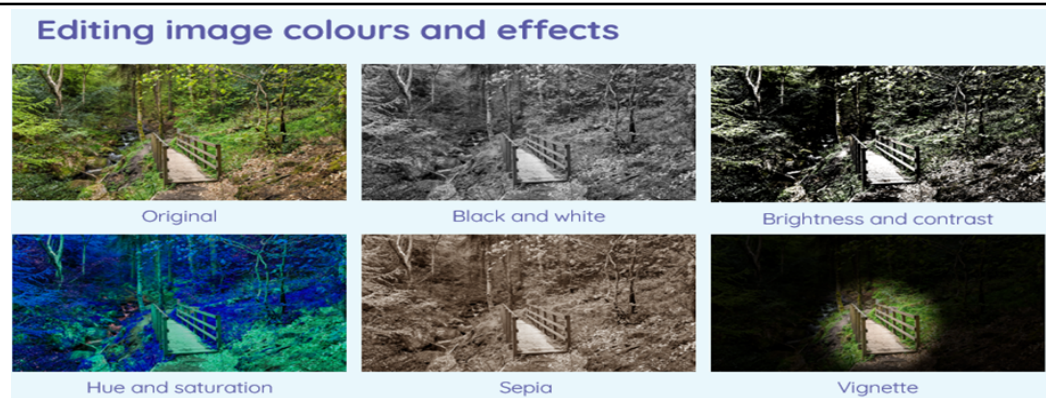
Key Knowledge, vocabulary and skills

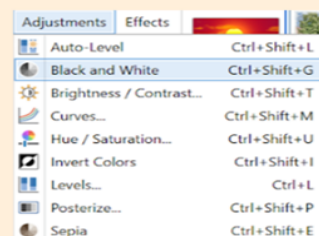|	
Main features of image editor: paint.net	
Cropping	Remove the outer layers of a picture is called cropping
image effects to use	
some tools to use: clone stamp, recolor, magic wand	

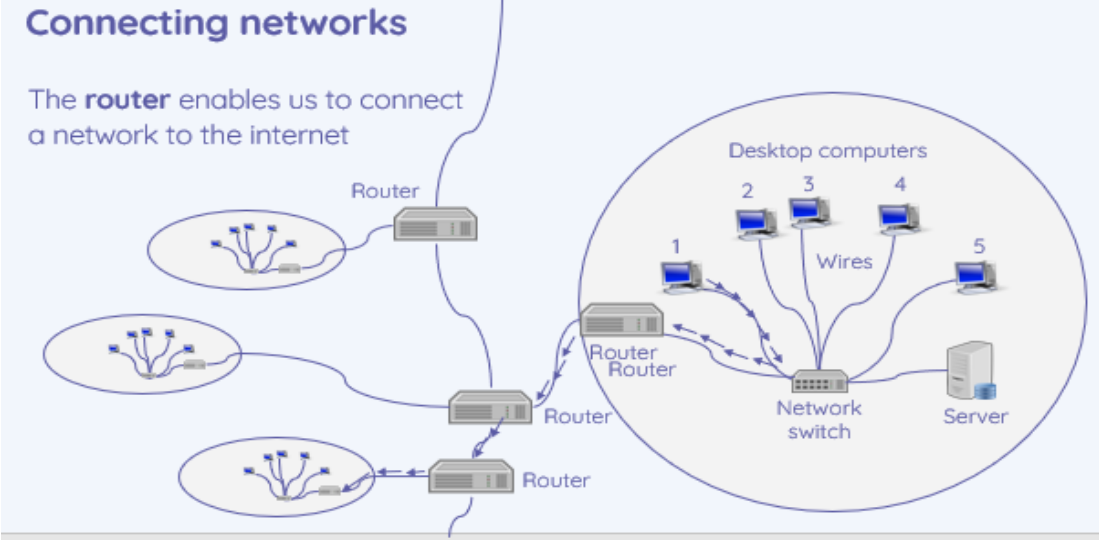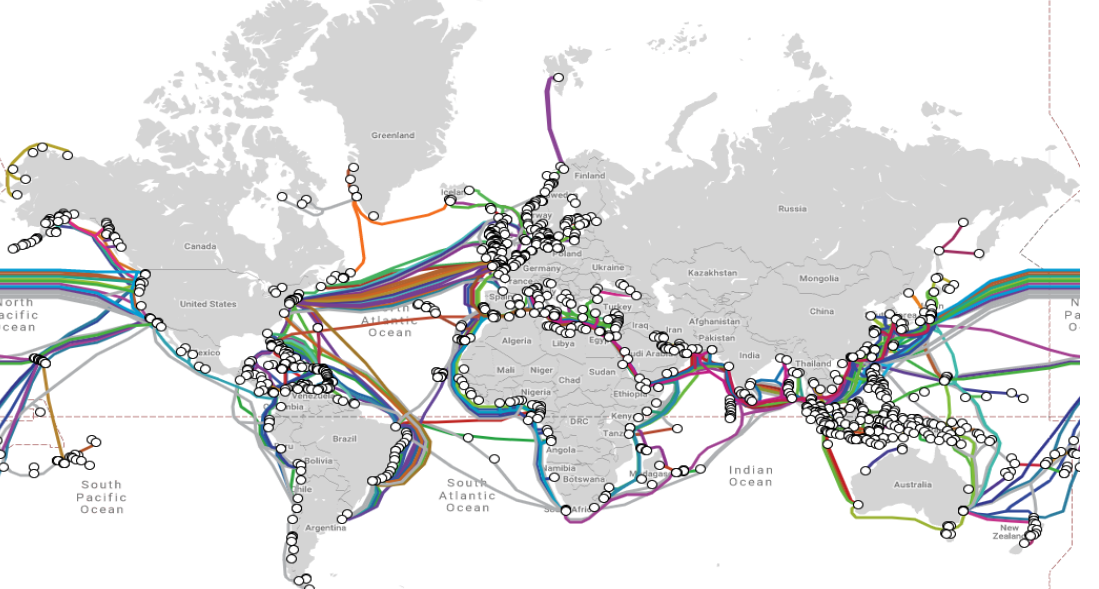| **Online safety / E-safety** |
|---|
| **Focus on Health Well-being and lifestyle**: Looking at the effects of using technology, especially online and computer games on our moods and feelings |

Year 4 Summer 2: The Internet and Networks

Computing Focus: Networks

What they should know from Year 3: local networks
In this unit we will understand more about networks and how the Internet is a network; where it is; and how it relates to web pages.

Key Knowledge, vocabulary and skills

A local network connected by a router to other networks	
The global network that forms the Internet (physically connected) and linked by cabling under the sea	
web browser	It lets you look at web pages (pages created and held on computers) and then found by searching the Internet. Examples of web browsers: Chrome, Safari, Edge, Firefox
domains and websites:	domain website address that ends **.gov** is a government website domain website address that ends **.sch.uk** is a school or college domain website address that ends **.fr** is a website from France domain website address that ends **.com** is a company

Ownership of content online	In most cases, copyright of any material is owned by the creator of that material.
Creating content online	Some websites enable you to create content e.g. Scratch, Chrome Music Lab and YouTube . But others e.g BBC Newsround, only lets you view or listen to content.

(all images from NCCE plans)

Online safety / E-safety

Focus on Copyright and ownership To begin to find out about what you can and can't reuse from the internet because of who owns the content.