



Computing Year 4 Autumn 1

Computer Systems & Networks 1: Collaborative Learning



Key Vocabulary

Collaborate	Working with others to achieve a specific goal.
Comment	Verbal feedback or notes to express an opinion on something.
e-Document	An electronic file which can contain text, images, tables and charts.
Edit	To change and amend something.
Email	Electronic-mail which allows us to send messages and files from one account to another over a network.
Icon	A small image which represents something or someone.
Insert (file)	To attach or place a file into an email or document.
Link	A line of text that, when clicked, directs you to another website or document.
Presentation software	A program that allows you to insert information into slides ready to share with others.
Presentation	A slide show that is used to display information.
Reply	To say or write a message in response to something that has been said to you.
Reviewing comments	Looking at comments written by others on a document to help the collaborative process.
Share	To show or give a part of something to someone else.
Spreadsheet	A file where you can input, sort and analyse data across a series of cells. Formulae can be written to output mathematical solutions from the data.
Transition	Effects that can be applied to occur between slides, images or video clips.

Did you know?

You can work together online on presentations, documents and spreadsheets.



Working on an online document editor together:

Presenting the finished poster together:

Online Safety

Companies use lots of techniques to try and encourage you to buy online.



special offers



extra lives/objects



pay to stop advertisements

ad	Short for advertisement, companies pay to have their website at the top of the list of search engine results.
belief	Something we accept to exist or be true, usually without proof.
bot	A computer program, sometimes referred to as a chatbot, that can act like a living thing (e.g. speaking to Alexa).
fact	Something that can be proven to be true by evidence.
in-app purchases	Extra content or services that are advertised and can be bought when using an app.
influencer	A person who recommends products or services on social media.
opinion	A view or judgement about something.
respectful	Being considerate and polite to others, such as treating people kindly and with good manners.
snippets	A short summary.

Prior Learning:

Reception: Using a computer. Year 1: Improving mouse skills. Year 2: What is a computer?
Year 3: Networks, Emailing, Journey inside a computer.



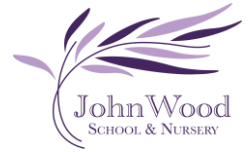


Computing

Year 4

Autumn 2

Programming : Further coding with Scratch



Key Vocabulary

code	A set of instructions written in a programming language to tell a computer what to do.
code block	Similar to puzzle pieces, they can be dragged, dropped and snapped together to create an algorithm.
conditional statement	Helps the computer decide what to do next based on the user's response.
decompose	To break something down into smaller parts.
direction	How a sprite points or moves, such as up, down, left or right.
orientation	Which way a sprite is facing.
position	Where a sprite is on the stage.
quiz	A game or competition in which questions are asked and answered.
sprite	An image or character that moves or reacts to commands.
stage	Where the action happens in Scratch.
tinker	To explore and play with something to discover the key functions.
variable	A container or holder for storing information that can change, e.g. numbers or text.

Examples of Scratch sprites



Scratch coding blocks

Motion:

move steps

move, turn, slide or point a sprite in different directions.

Sound:

start sound

play sounds, add effects or change the volume and pitch when a sprite performs an action.

Looks:

costume

add speech, thought bubbles, change a sprite's size or appearance or switch the background.

Events:

when clicked

perform an action when a keyboard key or sprite is clicked or when a condition is met.

Control:

repeat

loops to repeat code, if statements for when conditions are met or clone code.

Operators:

<

maths blocks, e.g. more than, less than, equal to, and, or and not statements; (+, -, x, ÷).

Sensing:

touching mouse-pointer ?

respond to certain actions, such as moving the mouse pointer, questions, timers and dates.

Variables:

set my variable to

create and manage variables, track a score or remember a user's name.

My blocks:

myBlock

create your own coding blocks, give them a name and add instructions.



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Prior Learning:

Reception: All about instructions. Year 1: Algorithms Unplugged. Year 2: Algorithms unplugged, Scratch Jnr. Year 3: Scratch.



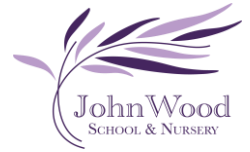


Computing

Year 4

Spring 1

Creating Media: Website Design

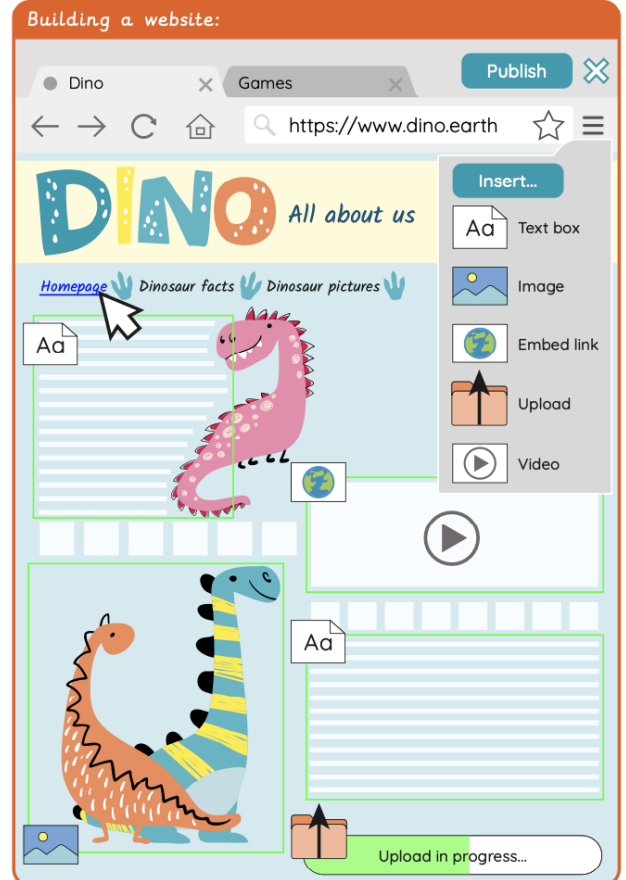


Key Vocabulary

Collaboration	Working with others to achieve a specific goal.
Content	All information and media contained in something, for example a webpage.
Create	To make something.
Design	To make, draw or write plans for something.
Edit	To change and amend something.
Embed	Media files (video, music) which can be stored and viewed within a webpage.
Feature	The individual parts that make up something.
Header	Text at the top of the page.
Hyperlink	A link commonly used in a web page or document, to direct you to another website or file.
Insert (file)	To place a file into a web page or piece of software.
Online	When a person is accessing the internet through an electronic device.
Plan	An idea about how to do something in future.
Tab	A way of opening and organising multiple websites in a single window on an internet browser.
Web page	A hypertext page that can be viewed through an internet browser.
Website	A series of web pages and other content, which can be discovered and read through an internet browser, that all belong to a single domain name.
WWW	The acronym used to express the 'World Wide Web'. It is found at the beginning of website addresses e.g. www.kapowprimary.com

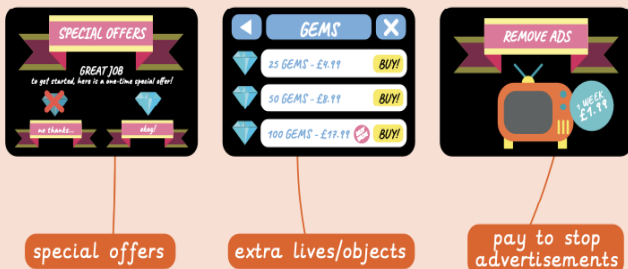
Essential skills checklist: Can you?

Make a new site	☐	Build a new page	☐	Place a text box	☐
Insert a file	☐	Change the theme	☐	Embed a link	☐



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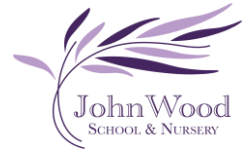
Prior Learning:

Year 1: Creating Media: Digital Imagery. Year 2: Stop Motion.
Year 3: Video Trailers.





Computing Year 4 Spring 2 Skills Showcase: HTML



Key Vocabulary

code (verb)	To write in a programming language.
content	All information and media contained in something, for example, a web page.
copyright	The law which protects other people's work from being copied or used without permission.
CSS	Cascading Style Sheets are a set of instructions that tell a web page how to look (e.g. the colours and size of things on a page).
end tag	Ends a section of page content.
hacker	Someone who writes malicious software to gain unauthorised access to steel data without permission.
HTML	HyperText Markup Language is the programming language used to create and design web pages.
HTML tags	A part of the HTML that tells the internet browser how to format and display content on a web page (e.g. creating headings or paragraphs).
internet browser	A software application used for accessing websites and the internet (e.g. Google Chrome).
start tag	Opens a section of page content.
web page	A page that can be viewed through an internet browser.

HTML is used to create everything we see and do on websites.



This code cannot be seen but it is always there in the background.



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Prior Learning:

Year 1: Creating Media: Digital Imagery. Year 2: Stop Motion.
Year 3: Video Trailers & Website Design.





Computing Year 4 Summer 1 Programming 2: Computational Thinking



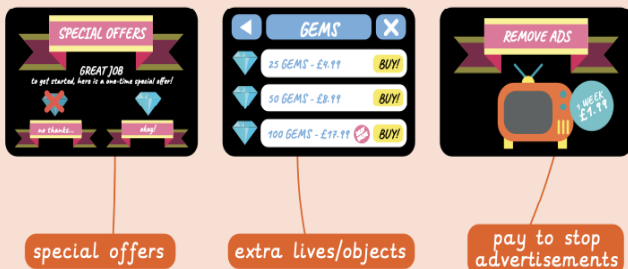
Key Vocabulary

Abstraction	Identifying the important detail and ignoring irrelevant information.
Algorithm design	Creating a formula or set of instructions to solve the problem.
Code (computer)	A set of instructions written in programming language, to tell a computer what to do.
Code blocks	A visual representation for a section of code that performs a certain job. They can be snapped together to build a program.
Computational thinking	A method of tackling a complex problem, to devise a solution which both computers and humans can understand.
Computer	Electronic machines that accept and process information to produce an output, and then store the results.
Decompose	To break something down into smaller chunks.
Pattern recognition	Identifying similarities and recurrences in data.
Problem	A matter or situation that needs to be resolved.
Sequence	A set order or pattern for something to follow.



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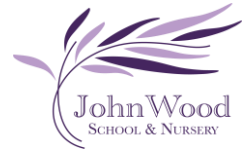
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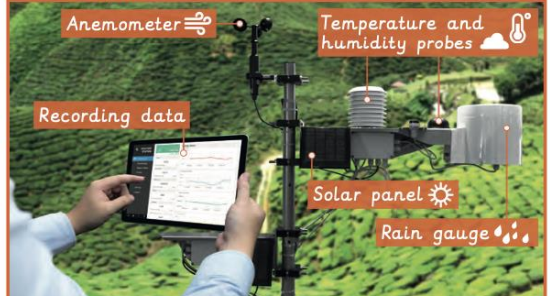
Computing Year 4 Summer 2 Data Handling: Investigating Weather



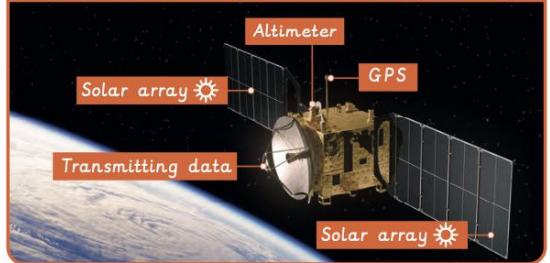
Key Vocabulary

Algorithm	A sequence of instructions which, when followed, solve a problem.
Automated machine	Works without the need for human interaction, after being programmed to carry out a specific job.
Calculate	To use mathematics to discover, prove or solve something.
Climate	The weather conditions you would normally expect in a location.
Device	Equipment created for a certain purpose or job.
Forecast	To predict what might happen or occur as the result of something in the future (for example, weather forecasts).
Log data	A record of information that has been collected by a person or a computer, while monitoring something.
Predict	To make an educated guess, as to what might happen or occur as the result of something in the future.
Record	To log information in the present (for example data during a science experiment), to look back on it in the future.
Sensor	A tool or device that is designed to monitor, detect and respond to changes for a specific purpose, such as a smoke alarm, which will ring if smoke is detected in the air.
Source	Where something comes from, for example milk is a source of calcium.
Spreadsheet	A file where you can input, sort and analyse data across a series of cells.
Temperature	How hot or cold something is.
Weather	The current condition of the atmosphere around the world, such as the temperature, rain, wind, clouds and sunshine.

A weather station uses a system of sensors to monitor the atmosphere:



Weather satellites collect and send data back down to Earth, after monitoring the atmosphere from space.



When filming remember to:



Make sure your surroundings are quiet



Let the presenter know when to start by saying, "3,2,1 action!"

Keep the presenter in the middle of the screen - no chopped off heads!



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Prior Learning:

Reception - Data Handling: Introduction to data. Year 1: Data Handling: Introduction to data. Year 2: International Space Station. Year 3: Comparison Cards Databases.

