



Year 4 – Collaborative Learning - Knowledge Organiser

Collaborative learning

Collaborate	Working with others to achieve a specific goal.
Comment	Verbal feedback or notes to express a 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. Formula 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.



Key facts

Working on an online document editor together:

Online document editor:

ANIMALS THAT LIVE IN THE ARABIAN DESERT

- > Bactrian camels
- > Emporer penguins
- > Snakes
- > Addax antelope
- > Scorpiane

Comments:

- Hiya, please can we change the font? I don't like this one...
- Yes I think the same! Which one?
- Are you joking? Emporer penguins??
- Ooo I like this! I think the background could be brighter?
- I think you spell this 's-c-o-r-p-i-o-n'
- Okay I will check the dictionary :)

Status: offline, away, online, online

Presenting the finished poster together:

Arabian desert animals

- > Bactrian camel
- > Arabian red fox
- > Rattle snake
- > Addax antelope
- > Scorpion



Year 4 – Investigating Weather - Knowledge Organiser

Investigating weather

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.

Key facts

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.



Using a green screen when recording, means that the subject (person, animal, object) can be separated from the backdrop and put in front of another background.



1. Green screen recording

2. Chroma key to remove the green.

3. Replace the background



Year 4 – Computational Thinking - Knowledge Organiser

Computational thinking

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.

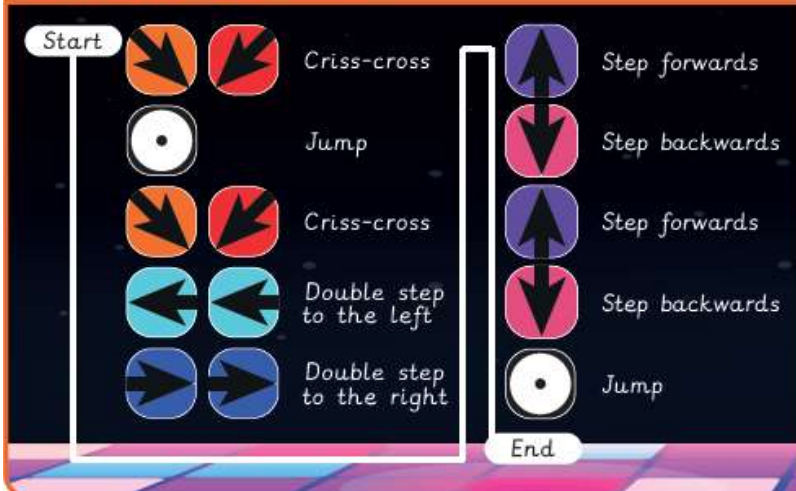
Key facts



Data without any identification, order or sequence.



Sequence of dance moves:



Decomposition:



Pattern recognition:





Year 4 – Further Coding with Scratch - Knowledge Organiser

Further coding with Scratch

Code (computer)	A set of instructions written in programming language, to tell a computer what to do.
Code block	A visual representation for a section of code that performs a certain job. They can be snapped together to build a program.
Conditional statement	A rule which states that something cannot happen until certain requirements are met.
Decompose	To break something down into smaller chunks.
Direction	A way in which something moves such as up, down, left, right.
Feature	The individual parts that make up something.
Icon	A small image which represents something or someone.
Orientation	Positioning to a particular place or direction.
Position	The location of where something or someone is.
Program verb	To write code based instructions for a computer to process.
Project (Scratch)	A creation developed within the Scratch program.
Scratch	A coding program, in which you can develop interactive games and animations.
Sprite	Visual objects that can be manipulated through code, for example to move, respond, appear or disappear.
Stage (Scratch)	The background of the Scratch project to suit your game, animation or project.
Tinker	To explore and play with something to discover the key functions.
Variable	This could be a number or text, that can change each time the program is run and often in combination with selection to change the end result of the program.

Examples of Scratch sprites:



Key facts

Scratch coding blocks and what they do:

Motion

move steps

Move your sprite (character), change direction, point towards and position

Sound

start sound

Play sounds, add sound effects, change volume and pitch when the sprite performs an action

Looks

costume

Include speech and thought bubbles, change the sprite or background appearance and sizes

Events

when clicked

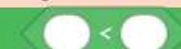
Instruct to perform actions when a certain condition is met or at a specified time

Control



Loops to repeat code, if statements for when conditions are met and cloning code

Operators



Maths blocks, such as more than, less than, equal to, and, or and not statements; (+, -, x, ÷)

Sensing

touching ?

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

Variables

set to

Set a value yourself, such as a score counter

My blocks

myBlock

Create your own coding blocks! - Give them a name and add instructions



© Scratch



Year 4 – HTML - Knowledge Organiser

HTML

Code (verb)	To write in programming language (code).
Content	All information and media contained in something, for example a webpage.
Copyright	The law which protects other people's work from being copied or used without permission.
CSS	Cascading Style Sheets are used to layout documents and webpages, written in a markup language such as HTML.
Hacker	Someone who writes malicious software to gain unauthorised access or steal data without permission.
Hex code	Hexadecimal numbering system code, which deals with a combination of 16 characters and digits to represent numbers.
HTML	Hypertext Markup Language used in the creation of electronic pages that can be viewed on the WWW.
Internet browser	Allows you to conduct a search on the WWW, for information and media.
Permission	When someone has given you the right to do something.
Script	A list of computer commands written in a particular programming language.
URL	Uniform Resource Locators are used to identify the address of a WWW page.
Web page	A hypertext page that can be viewed through an internet browser.

HTML tags:

<head></head>	Title of the website window or tab
<body></body>	Main content within the website
 	Start and end of an ordered list (ol); list item (li)
	An image
 	A line break, space between two lines of content

Key facts

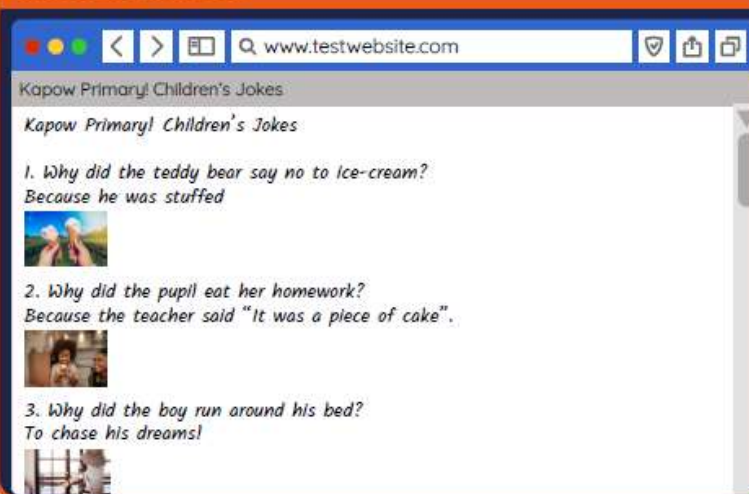
HTML code:

```
<html>
<head>Header - Kapow Primary! Children's Jokes</head>
<body>
  <p>Kapow Primary! Children's Jokes</p>
  <ol><br/>
    <li>1. Why did the teddy bear say no to ice-cream?</li>
    <li>Because he was stuffed</li>
    <li></li>
  <br/>
    <li>2. Why did the pupil eat her homework? </li>
    <li>Because the teacher said "It was a piece of cake".</li>
    <li></li>
  <br/>
    <li>3. Why did the boy run around his bed?</li>
    <li>To chase his dreams!</li>
    <li></li>
  </ol>
</body>
</html>
```

CSS code:

```
<style>
body {
  background-color: 'FFFFFF'
  font-family: 'kalam,'
  font-size: 9px;
  font color: '000000'
}
</style>
```

Finished website:





Year 4 – Website Design - Knowledge Organiser

Website design

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	<input type="checkbox"/>	Build a new page	<input type="checkbox"/>	Place a text box	<input type="checkbox"/>
Insert a file	<input type="checkbox"/>	Change the theme	<input type="checkbox"/>	Embed a link	<input type="checkbox"/>

Key facts

Building a website:

The screenshot shows a web browser window with two tabs: 'Dino' and 'Games'. The address bar shows 'https://www.dino.earth'. The website has a header with the title 'DINO All about us'. Below the header, there are three links: 'Homepage', 'Dinosaur facts', and 'Dinosaur pictures'. A mouse cursor is hovering over the 'Homepage' link. The main content area features a large pink dinosaur illustration and a smaller orange and blue striped dinosaur illustration. A text box with 'Aa' is visible. On the right side, there is an 'Insert...' menu with options: Text box, Image, Embed link, Upload, and Video. At the bottom right, there is a progress bar labeled 'Upload in progress...'.