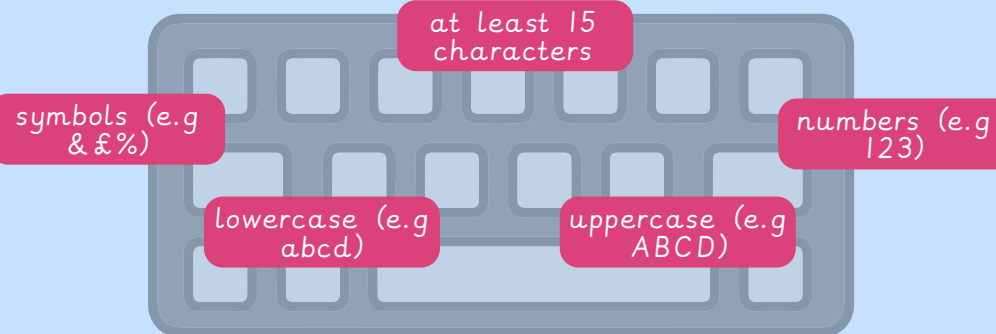


Year 5 - Online safety

app	The shortened word for application is a type of computer program typically found on smart phones and tablets.
bullying	The deliberate act of harming, intimidating or threatening someone else to cause them physical or emotional distress.
health	The mental and physical condition of a person or living thing.
judgement	To come to a sensible conclusion about a matter or a person.
memes	An image or video visual with some usually humorous writing added to it.
online communication	The way people communicate (share and receive information) with each other over a computer networks, such as the internet.
permission	The action of allowing something to happen.
well-being	The state of mind, health and happiness.

A strong password contains the following:



Key facts

Apps require our permission for things such as accessing location or photo library. It is important to know where these settings are.



Any form of online communication can be misinterpreted. Text may be misread and emojis or memes could be misunderstood.



Technology can have both positive and negative effects on our health and wellbeing.



Tell a trusted adult if you are getting bullied online. You can also get help from these places:

Childline
<https://www.childline.org.uk/>

NSPCC
<https://www.nspcc.org.uk/>

Programming music with Scratch

Basic commands	The simplest instructions that can be used.
Bug	A mistake or error in the code, stopping the program from working as intended.
Computer code	A set of instructions written in programming language, to tell a computer what to do.
Code (verb)	To write in programming language (code).
Code block	A visual representation for a section of code that performs a certain job. They can be snapped together to build a program.
Debug	To remove and repair the error or mistake in computer code.
Error	A mistake or a fault in software.
Live loop	Like loops, but instead of repeating a number of times, they go on forever. You can also have multiple running at the same time.
Loop	A repeated sequence of instruction.
Pitch (music)	A musical term which refers to how high or low a note is.
Program language	The particular library of code which a piece of software is written in, for example Java and C++.
Rhythm	A musical term that refers to the 'pattern' of long and short notes.
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.
Soundtrack	A music recording that accompanies a film or TV show.
Tempo (music)	A musical term which refers to the speed of the music.
Timbre (music)	A musical term which refers to the characteristic trait of a sound.

Key facts

Scratch 'create' interface

Block Palette

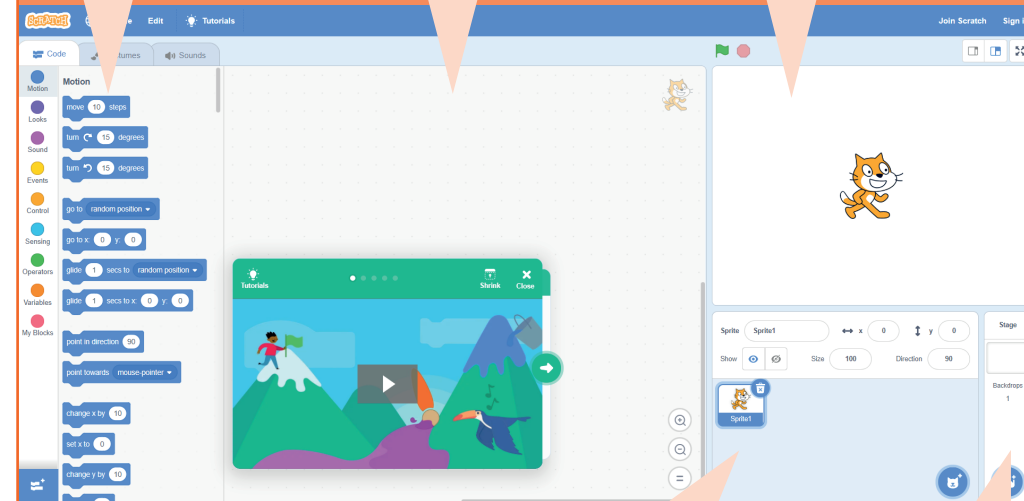
This is where you choose the blocks to use.

Scripts Area

This is where you create your program.

Stage

This is where you see your program in action.



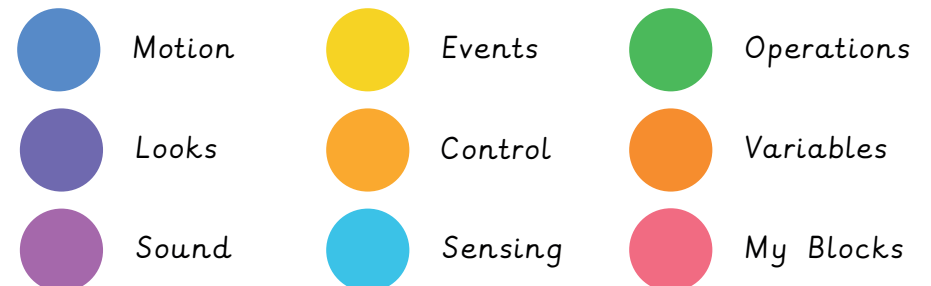
Sprites

This is what characters or objects are called in Scratch

Backdrop

Backgrounds for your project.

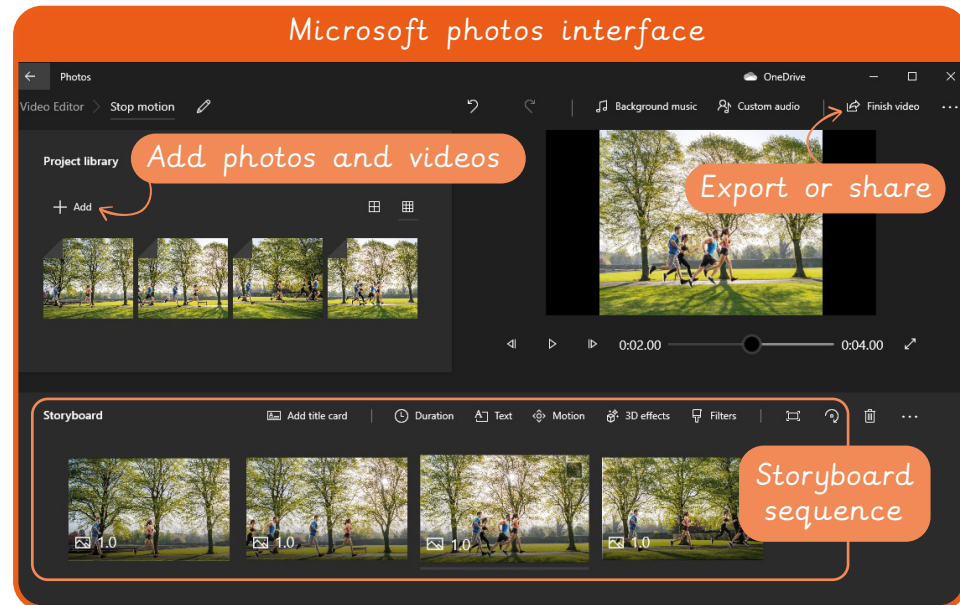
Scratch code blocks colour key



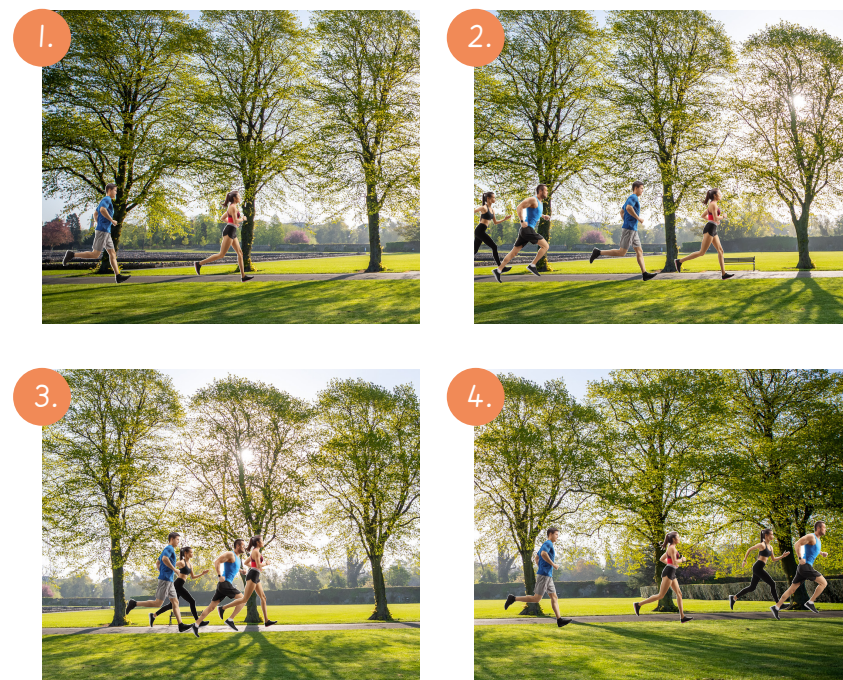
Year 5 - Stop Motion with camera

Animation	Pictures or photographs in a sequence to give the illusion of movement.
Animator	Someone who specialises in the creation of animations.
Background	What can be seen behind the main objects or people in a picture.
Decompose	To break something down into smaller chunks.
Device	Equipment designed for a specific purpose or job.
Duplicate	To make an exact copy of something.
Editing	The process of making changes to a text or film.
Frame	Each picture or page in an animation.
Illusion	Something that is not how it appears to be.
Stop Motion	A sequence of images or photographs used to create an animation.
Storyboard	A sequence of sketches to show what will be included within an animation or video.
Upload	To send files from a device to another device or program.

Key facts



The stop motion animation process.



Basic commands	The simplest instructions that can be used.
Bug	A mistake or error in the code, stopping the program from working as intended.
Code (computer)	A set of instructions written in programming language, to tell a computer what to do.
Code (verb)	To write in programming language (code).
Debug	To remove and repair the error or mistake in computer code.
Error	A mistake or a fault in software.
Live loop	Like loops, but instead of repeating a number of times, they go on forever. You can also have multiple running at the same time.
Loop	A repeated sequence of instructions.
Pitch (music)	A musical term which refers to how high or low a note is.
Program language	The particular library of code which a piece of software is written in, for example Java and C++.
Rhythm	A musical term that refers to the 'pattern' of long and short notes.
Sonic Pi π)))	A coding program specifically dealing with music, that is based upon a computing language called Ruby.
Soundtrack	A music recording that accompanies a film or tv show.
Tempo (music)	A musical term which refers to the speed of the music.
Timbre (music)	A musical term which refers to the characteristic trait of a sound.
Tinker	To explore and play with something to discover the key functions.

Live loop:

```
live_loop :beats do
  sample :bd_haus
  sleep 0.5
end
```

Simple melody:

```
play 70
sleep 1
play 75
sleep 0.5
play 82
```

Selecting sounds:

```
sample :drum_cowbell
use_synth :tb303
sample :ambi_choir
```

Key facts

The Sonic Pi interface

Play controls:



Editor controls:



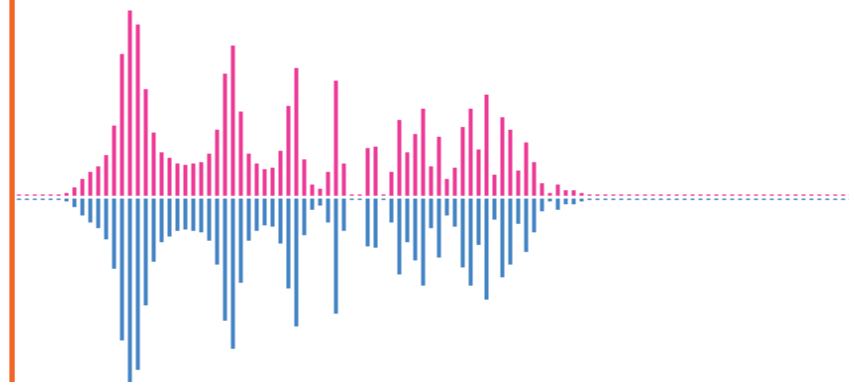
Information and help controls:



Code editor: Design the track here in Ruby code

```
1 use_synth :tb303
2 play_chord [62, 64, 66]
3
```

Scope: View the rhythm of your coded track



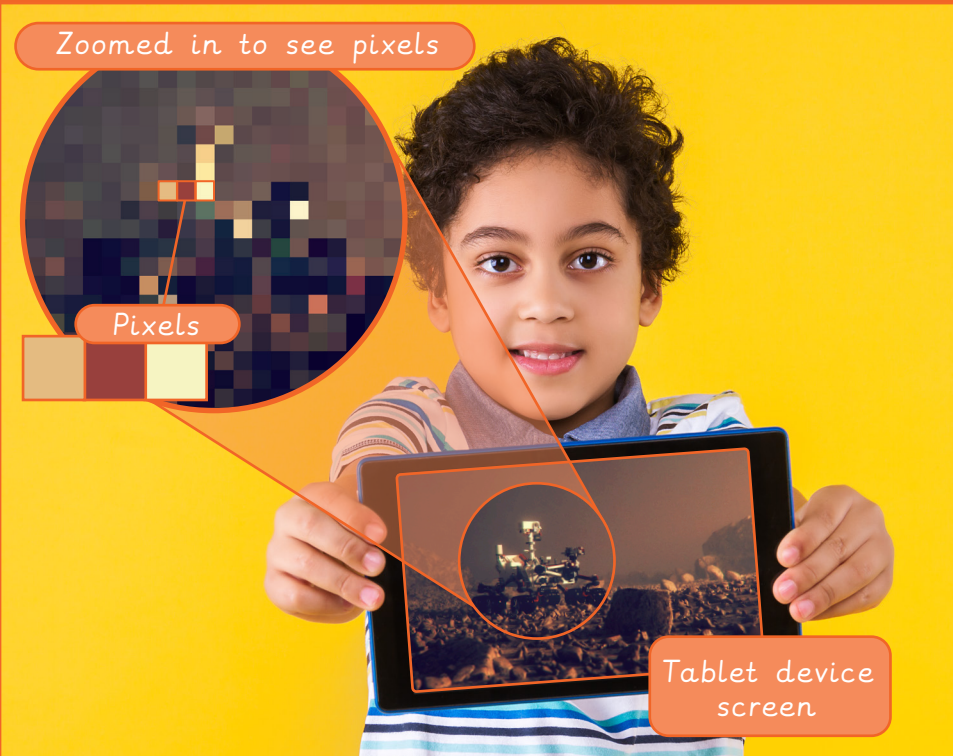
Log viewer: View Sonic Pi instruction here

```
> Redefining fn: live_loop_drive
```

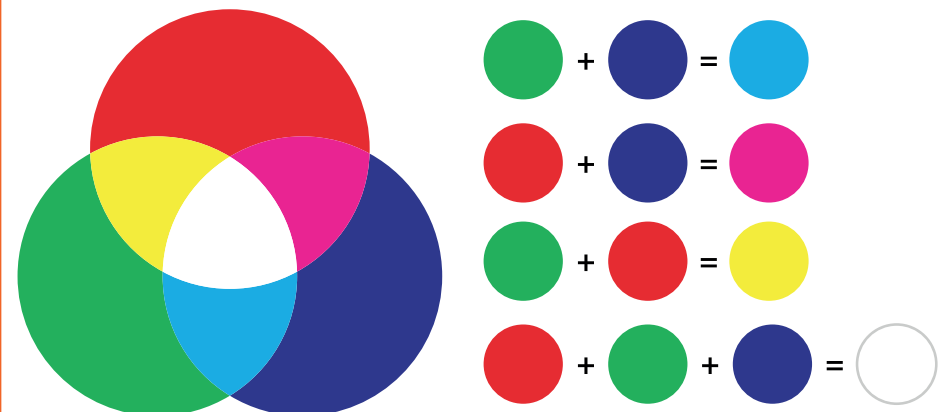
Algorithm	A sequence of instructions which, when followed, solve a problem.
Binary image	An image where the pixels are made up of only two colours, such as black and white. 
Bit	One unit of data, that either has a value 1 or 0. A bit is also known as a 'binary digit'.
Bit pattern	A sequence of binary digits.
CAD	Computer-aided design, software used to create graphics, diagrams or other visuals.
Compression file	Taking single or multiple files, and reducing their file size to take up less digital storage space.
CPU	Central Processing Units are the brains of a computer and deal with all of the data it receives from input and output devices, as well as programs ran within the computer.
Data	Information used for a specific purpose or investigation.
Digital image	Formed by a series of programmed pixels.
Encode	To convert something into a different code, for someone or something else to understand it.
Image	A picture of people or objects.
JPEG	Joint Photographic Experts Group. A popular image compression format.
Memory computer	Any hardware device that is able to store data or information.
Operating system	The base software needed on a computer for it to manage basic commands, hardware and software and provide a user-friendly interface.
Pixels	A screen is made up of a grid of pixels, each pixel is programmed to display a certain colour which when put together form an image.
RGB	Red, Green, Blue. A colour mode, that uses these three hues combined to create a spectrum of colours.

Key facts

Digital images are formed by a series of programmed pixels.



The RGB colour mode, uses different levels of red, blue and green light to produce a spectrum of colours.



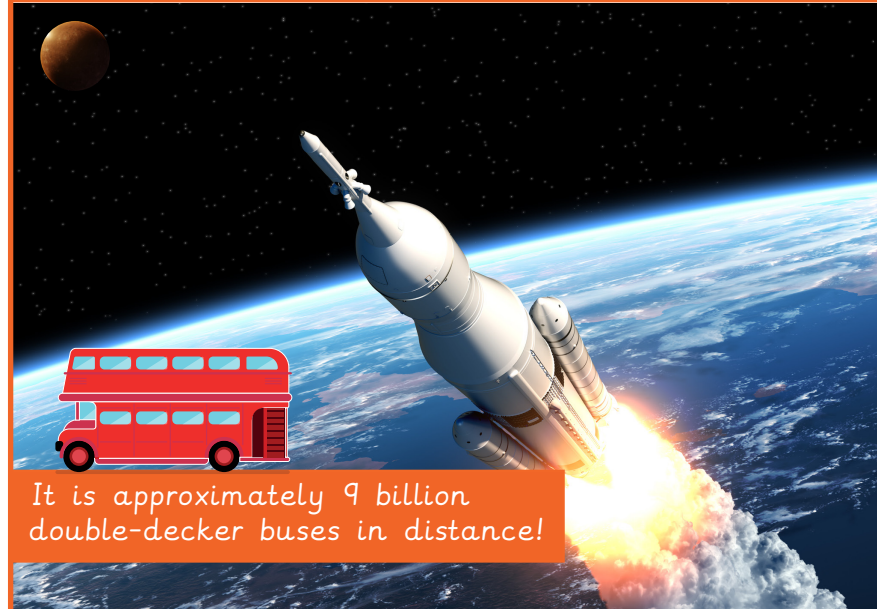
Mars Rover I

Binary code	A code used in computers, based around the binary values of 0 and 1.
Data	Information used for a specific purpose or investigation.
Data transmission	The movement of information from one or more points to another.
Discovery	When something is intentionally or unintentionally found.
Distance	The amount of space between two places or objects.
Input	Information sent to a computer by an input device such as a keyboard or mouse for processing.
Mars Rover	A robotic vehicle, that explores, investigates and returns data about the terrain on Mars.
Moon	Orbits round planet Earth and is Earth's only natural satellite.
Numerical data	Information that is based on numbers and digits.
Output	Information or data that is sent by the computer to an output device such as a printer or speakers.
Planet	A large natural object that orbits around a star.
Radio signal	A radio wave that is sent or received to somewhere.
Scientist	A person who studies within the fields of Science, such as Physics, Biology and Chemistry.
Sequence	A set order or pattern for something to follow.
Signal	A voltage, current or electromagnetic wave that is either sent or obtained.
Computer simulation	Computer generated imitation of something such as a program test or product prototype.
Space (astronomy)	A vast area around and beyond planet Earth, which is not inhabited.



Key facts

The Mars Rover had to travel 350 million miles (approx) to get to Mars, it took eight and a half months.

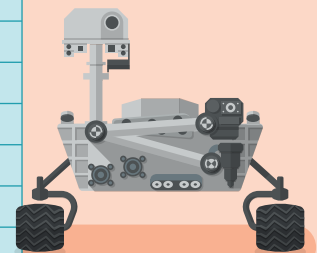


It is approximately 9 billion double-decker buses in distance!

Binary:

When a robot thinks independently, it needs to be able to calculate a range of data. All decisions carried out by a robot, or any computer, are done in binary - including the Mars Rover.

Binary value	Decimal value
0 0 0 0	0 zero
0 0 0 1	1 one
0 0 1 0	2 two
0 0 1 1	3 three
0 1 0 0	4 four
0 1 0 1	5 five
0 1 1 0	6 six
0 1 1 1	7 seven
1 0 0 0	8 eight
1 0 0 1	9 nine
1 0 1 0	10 ten



Search engines

Algorithm	A sequence of instructions which, when followed, solve a problem.
Company logo	A symbol or motif, used to represent an organisation, so that it can be identified quickly and easily in a busy environment online or in the real world.
Data leak	When information is released without approval from the owner or creator.
Data privacy	The right to keep information private and away from those you do not wish to have access.
Fake news	False and inaccurate information that is shared in a convincing way, usually on social media and in websites.
Inaccurate information	When information is false and untrue. ⚠️
Index	A computer saves key information about previously searched results, to make this quicker next time they are accessed.
Keywords (internet)	A set of words used to define and produce an accurate search engine result.
Network	When more than one electronic device is connected in a network through the internet or a local connection in order to share files and information.
Online	When a person is accessing the internet through an electronic device.
Page rank	Web pages are sorted in an order to give the user the most suitable results at the top of the list, the first result could be considered rank one.
Search engine	A way for a user to search the internet's database of information.
TASK	Title, Author, Summary, Kids
Web crawler	A program that uses keywords to search the WWW in a logical and systematic way to find the most suitable results for the user.
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. For example, Google. The main place where particular web pages can be viewed or accessed.
WWW	The acronym used to express the 'World Wide Web'. It is found at the beginning of website addresses e.g. www.kapowprimary.com

Key facts

The screenshot shows the Kapowiverse website interface. At the top, there's a navigation bar with 'Kapowiverse' and 'Dino' tabs. Below this is a search bar with the text 'Search...' and 'Dinosaurs', and a 'Go' button. A cursor is pointing at the 'Go' button. Below the search bar are tabs for 'All', 'Images', 'Videos', and 'News'. The main content area displays search results for 'Dinosaurs'. The first result is from 'Dino website' with the URL 'https://www.dino.earth'. It includes a 'Company logo' annotation pointing to the 'DINO' logo. The second result is from 'Dinosaur directory' with the URL 'https://www.dinosaurdirectory.com'. It includes a 'Hyperlink' annotation pointing to the URL and a 'Keywords' annotation pointing to 'Dinosaur directory' and 'A-Z Dinosaurs'. The third result is from 'Jurassic history' with the URL 'https://www.Jurassic_history.com'. It includes a 'Keywords' annotation pointing to 'Jurassic time line' and 'Dinosaurs'. The fourth result is from 'London apatosaurus' with the URL 'http://www.London_apatosaurus.com'. It includes a 'Fake news' annotation pointing to the title and a 'Keywords' annotation pointing to 'Apatosaurus sightings'.

Kapowiverse

Search bar

Search... Dinosaurs Go

All Images Videos News

https://www.dino.earth
Dino website
Watch and learn about different dinosaurs.
Dinosaurs T-Rex Jurassic history

https://www.dinosaurdirectory.com
A-Z Dinosaur names library
What can you learn about all of the dinosaurs from A-Z?
Dinosaur directory A-Z Dinosaurs

https://www.Jurassic_history.com
Jurassic time line
How did dinosaurs become extinct? Explore all of the key dinosaur facts here!
Jurassic time line Dinosaurs

http://www.London_apatosaurus.com
Apatosaurus sightings
A sauropod herbivorous dinosaur has been captured in the centre of London city! Book your ticket for just £1,000 today!
Apatosaurus Dinosaur Sighting