

How do search engines work?

Google has a big index (database) containing millions of web addresses.

Each web address has a list of words and the number of times they appear on the site.

So when you search the web you are not actually searching the web, you are searching a database for key words.



Boolean search

You can use Boolean operators (special words and symbols) to drill down and find the information you need.

AND OR + / -
NOT Quotes " "

Copyright

Copy right is a law designed to help protect peoples work and ideas.



If you:

Take peoples work (download films / music)

Use people's work (copy text/ images from the internet)

Steal people's ideas (create a new product using someone else's technology)

Without permission and **without acknowledging them**, then you are breaking copyright law.

Typical punishments range from 6 months to 10 years imprisonment and also £5000 fine.

Year 8 My Digital World



What do you learn ?

- What to trust online and smart searching
- know how to evaluate websites, copyrights and copy wrongs
- understand how to use online resources and ideas without breaking the law.
- Staying safe online
- Understand the dangers online.
- Learn how to avoid them.
- How to evidence online abuse and what to do about it.
- Understand the ways in which you can put a stop to online abuse whether you experience it yourself or simply observe it.

Social Media

Social media are apps or websites that people use to communicate with others.

Often the age limit for these websites / apps is 13 years old.

The information people share is often personal and to stop people seeing it they should change their settings to Private.



Keywords for types of e-safety :

Cyberbullying

The bullying of another person using the internet, mobile phones and other digital devices, with the intent to deliberately upset them.

Netiquette

Correct or acceptable way of communication on the internet.

Cyberstalking

Repeated use of electronic communication to harass or frighten someone.

Online Grooming

Deliberate act taken to befriend and create an emotional connection with a child, resulting in not good intentions.

Phishing

Trying to get you to follow a link and provide information to the sender, like a password or an account number

Reliability

In order to determine whether or not a website is reliable and trustworthy, we need to evaluate the information we are given. We need to check the following:

1. How professional does it look?
2. Is the information provided of good quality? (spelling, detail etc.)
3. Do all links work?
4. Is it "Up-To-Date"? (is there an article publish / updated date?)
5. Is the URL relatable? (does the main web address relate to the website content)
6. Is the information is backed up by other websites?

Year 8 Binary

Bit	The smallest amount of data (stands for <i>binary digit</i>) (0 or 1).
Byte (B)	8 bits
Kilobyte (KB)	1024 bytes
Megabyte (MB)	1024 kilobytes
Gigabyte (GB)	1024 megabytes
Terabyte (TB)	1024 gigabytes
Petabyte (PB)	1024 terabytes

What is binary?

Binary numbers or binary code are used by computers and digital devices to talk to each other. It is used to give commands to the computer or a way to enter data (information).

A	01000001	N	01001110
B	01000010	O	01001111
C	01000011	P	01010000
D	01000100	Q	01010001
E	01000101	R	01010010
F	01000110	S	01010011
G	01000111	T	01010100
H	01001000	U	01010101
I	01001001	V	01010110
J	01001010	W	01010111
K	01001011	X	01011000
L	01001100	Y	01011001
M	01001101	Z	01011010

```
0011110001110010111111000111
0001111100111111101111110000
111101110111111111110001111
011101100000010011001110111
100000110111110111011111011
100010010011110001000110000
110011001011100111111111111
111100001000010101111111000
1100001001111001000011000000
```

0	0	0	1	1	1	1	0	0	0
0	0	0	1	0	0	1	0	0	0
0	0	0	1	0	0	1	0	0	0
1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1	1
0	1	0	0	0	0	0	0	1	0
1	1	1	0	0	0	0	1	1	1
1	0	1	0	0	0	0	1	0	1
1	0	1	0	0	0	0	1	0	1
1	0	1	0	0	0	0	1	0	1

We use the alphabet to write letters or words to communicate. Computers use binary code.

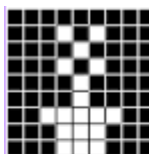


Image 1

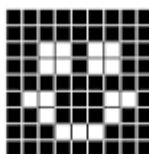


Image 2

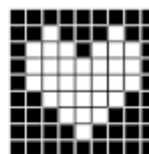


Image 3

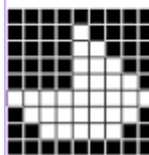


Image 4

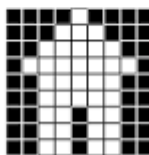


Image 5

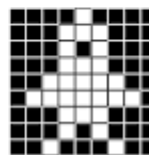


Image 6

Converting from binary to denary

128	64	32	16	8	4	2	1
0	1	0	1	1	0	0	1

- Write the binary table.
- Put the 0s and 1s into the table.
- If a number has a 0 under it, don't add the number on.
- If a number has a 1 under it, add that number onto the total.

In this example, we have 1s under 64, 16, 8, and 1, so:

$$64 + 16 + 8 + 1 = 89$$

Therefore, 01011001 in binary is 89 in denary!

There are only 10 types
of people in the world:
Those who understand binary
and those who don't

Converting from denary to binary

- Write the binary table.
- Start from the left hand side of the table.
 - If the number is **larger** than the number in the table, put a 0 under it and move onto the next number
 - If the number is **smaller** than the number in the table, put a 1 under it and take that number away from your number
- Repeat step 2 until all of the columns have a 1 or a 0 under them..

In this example, we start from 32 as the other numbers are too large. We put a 1 under 32, leaving 10 remaining. Adding 8 and 2 together makes 10, so this must be our answer:

128	64	32	16	8	4	2	1
0	0	1	0	1	0	1	0

What do you learn?

In this unit the children extend their drawing skills to create 3D models based on using the software SketchUp. Children will learn how to create simple and complex 3D models. They will be able to add detail and manipulate 3D models using a variety of tools.

Getting Started with SketchUp



Choose the 'Urban Planning Meters' template.

Units: Meters
This template is for urban planning, geo-modeling, and surveying.

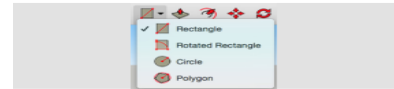
Click 'Start using SketchUp' to begin.

Start using SketchUp

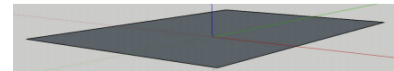
Drawing simple 3D shapes

When drawing shapes click to start the shape and click to end the shape (don't drag).

Select the Rectangle tool in the shape menu.

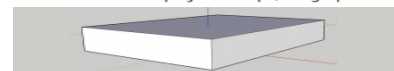


Click, move mouse and click to draw a rectangle.



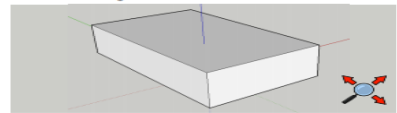
Select the Push/Pull tool.

Place the tool on top of the shape, drag upwards.



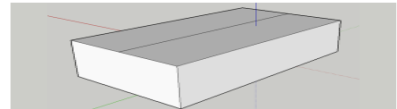
Try the Push/Pull tool on the vertical faces, using the Orbit, Pan and Zoom tools to change the view of the cuboid.

Notice how the Zoom Extents tool shows the whole drawing.

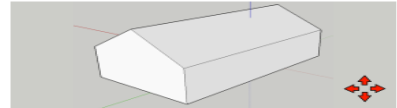


Turning it into a House

Draw a line from the midpoint on top of the cuboid.



Use the Move tool to lift the line, creating a roof.

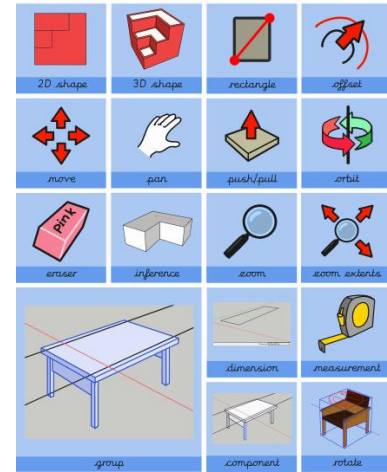


Use the Orbit tool to rotate to check the roof from end on.



Year 8 Google sketch up

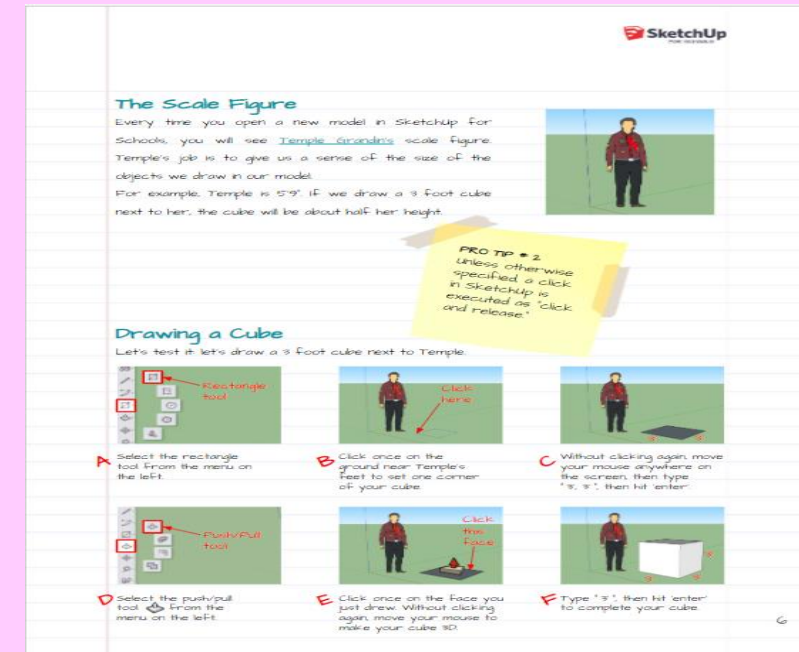
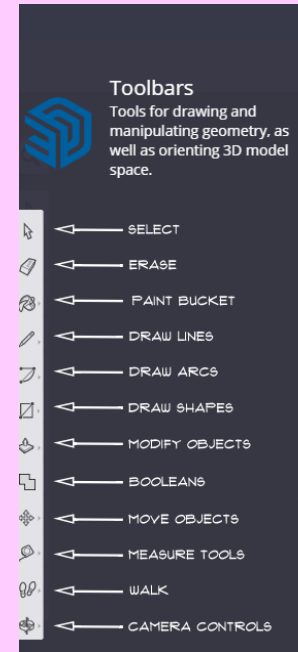
3D Modelling: SketchUp



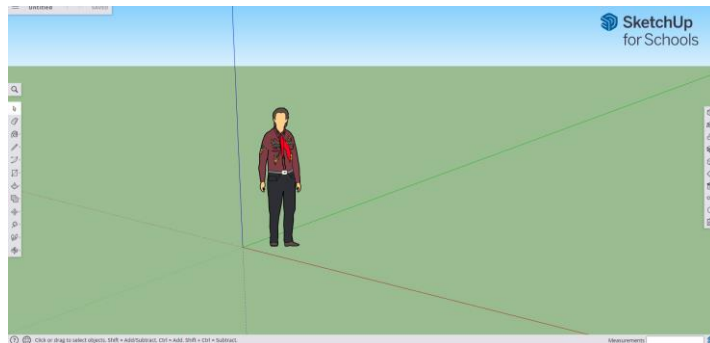
Keywords

orbit	shape
tools	measurement
dimension	pan
rectangle	zoom
zoom	guide
move	eraser

Step by step tutorials <https://www.sketchup.com/>



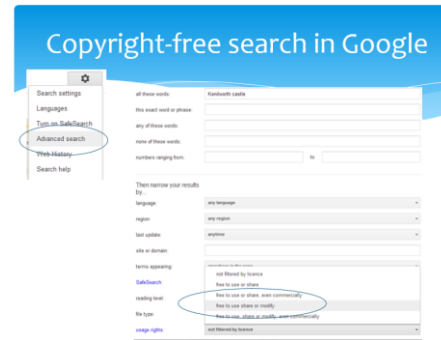
Quiz	A	B	C
What is SketchUp?	A computer-aided design tool.	A TV programme about art.	A search engine.
What does CAD stand for?	Control additional data.	Complex-aided design.	Computer-aided design.
Where would I find SketchUp?	Computer-aided design.	On the internet	In a book.
What is aesthetic awareness?	Knowing when art shows great beauty.	Knowing when art shows great sadness.	Knowing when art needs a frame.



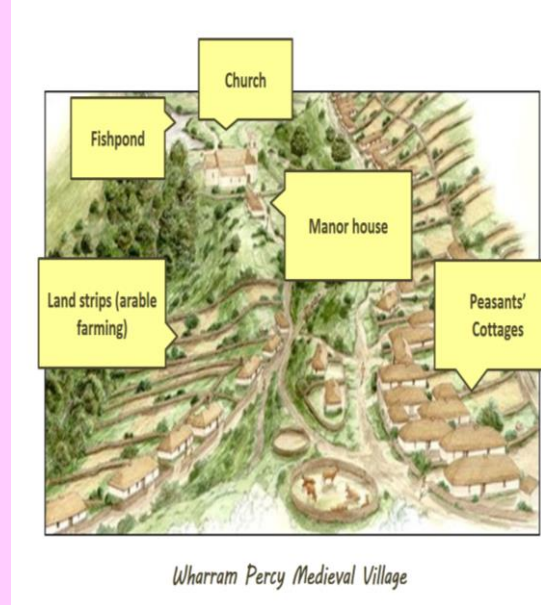
Unit Objective

- The key objective of this unit is to enable students to use & develop ICT skills to demonstrate the knowledge and understanding they have gained in another subject (History). The aim of this is twofold: to reinforce prior learning they have gained in another subject and to gain an appreciation of ICT in terms of how it is used in the wider world; using a set of tools used to achieve specific outcomes.

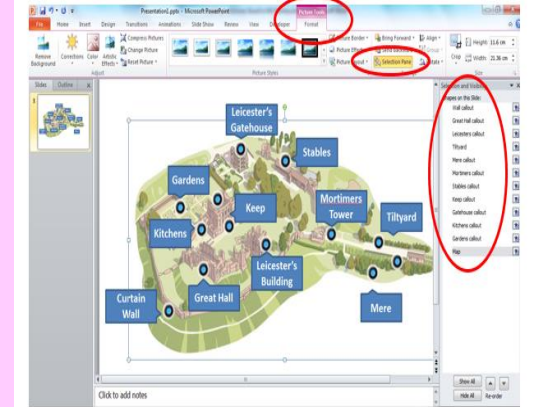
Year 8 Hi-ICT



Creating a discovery board.



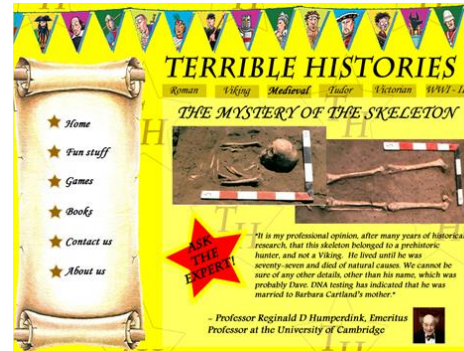
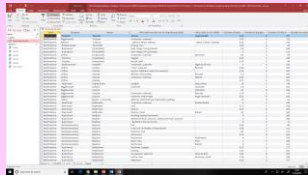
Then rename the callout boxes using shape selection pane [select the map – click Format – click Selection Pane]. This will help you later on when you are working with all the different elements.



This is the main screen for our discovery board.

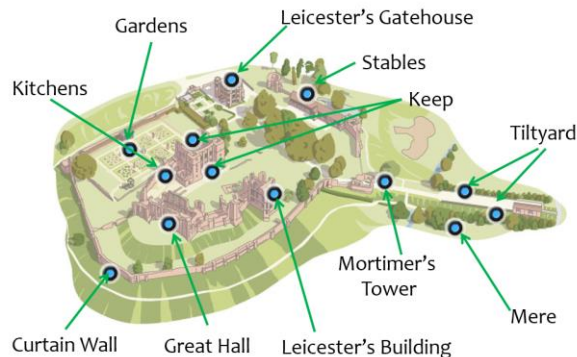
We're now going to create a "pathway" in our product. A pathway is a sequence of slides with links between them, containing information on a certain subject, which allows the user to explore different information about that subject. The subject we are going to look at is the keep.

Analysing data



At the end of this project students will have learned how to:

- Undertake effective historical enquiry using a range of ICT tools & techniques
- Assess the value of the results of this enquiry and assess the Nature, Origin and Purpose of a digital artefact
- Collect and analyse historical data using a range of ICT tools and techniques
- Present the findings of their enquiry using a variety of digital artefacts in a digital multimedia product
- Evaluate the effectiveness of their project work



Keywords

Multimedia

(of art, education, etc.) using more than one medium of expression or communication.

Boolean search

Boolean searches allow you to combine words and phrases using the words AND, OR, NOT (known as Boolean operators) to limit, broaden, or define your search

Database

a structured set of data held in a computer, especially one that is accessible in various ways.

Discovery Board

An interactive document that allows people to find specific information

historical enquiry

is the process by which students use the same methods as a professional historian when investigating an aspect of history