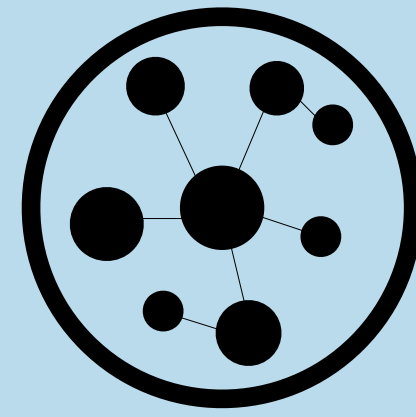


Information

Isolated facts that can have no organisational basis or links



Schema

Knowledge organised in a meaningful way - memories (emotional), concepts, knowledge

Second Order Concepts

'The kinds of questions we ask in Computing'

Second-order concepts: these shape the key questions asked in a subject and organise the subject knowledge.

Cause and consequence

How can I debug this code to make it work?

How does this code affect the performance of the sprite?

Responsibility

Do I trust this source?

Am I respectful of age restrictions?

How can I get help if something online feels unsafe?

Do I consider the risks before using technology?

Do I understand the impact of my digital footprint?

When is the right time to use technology?

Written and oral expression

How can technology improve my ability to communicate?

Would recording my voice help me to express myself?

Is creating a video the best way of demonstrating my learning?

Similarity and difference

Are there any patterns in this data?

What can I conclude from my findings?

Purpose

Who is the target audience?

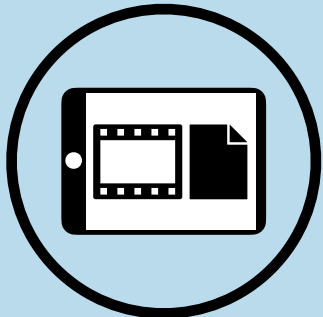
What can this media be used for?

How can I present my ideas effectively?



Key Concepts (Big Ideas)

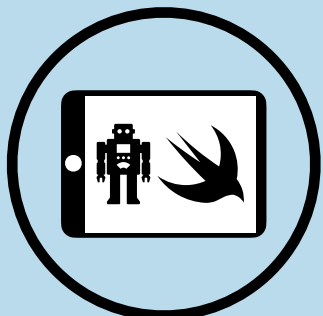
Key concepts identify the content or focus areas of study



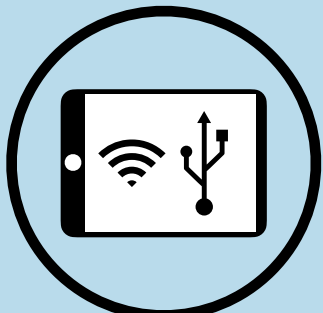
Creating media: (design and development, communicating and collaborating online, presenting, creating content)



Data and information: (collecting, analysing, evaluating, presenting data and information)



Programming: (interpreting, creating and evaluating algorithms, programming to accomplish specific goals, detecting and correcting errors)



Systems and networks: (systems, networks and how they are used, the internet, hardware and software)



Staying safe: Evaluating online content, using all elements of technology in a safe, respectful and responsible manner.

National Curriculum

Key stage 1

Pupils should be taught to:

- understand what **algorithms** are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions
- **create** and **debug** simple programs
- use **logical reasoning** to **predict** the **behaviour** of simple programs
- **use technology purposefully** to create, organise, store, manipulate and retrieve digital content
- **recognise common uses** of information technology beyond school
- **use technology safely** and respectfully, keeping personal information private; **identify where to go for help** and support when they have concerns about content or contact on the internet or other online technologies.

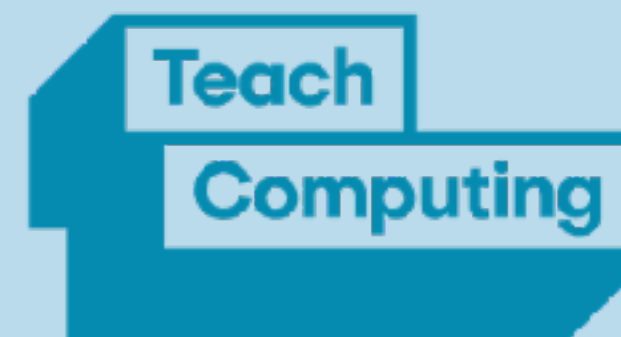
Key stage 2

Pupils should be taught to:

- **design, write and debug programs** that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
- use **sequence, selection,** and **repetition** in programs; work with **variables** and various forms of **input and output**
- use **logical reasoning** to explain how some simple algorithms work and to **detect and correct errors** in algorithms and programs
- understand computer networks including the **internet**; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration
- **use search technologies** effectively, appreciate how results are selected and ranked, and **be discerning** in evaluating digital content
- **select, use and combine a variety of software** (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including **collecting, analysing, evaluating** and **presenting data and information**
- **use technology safely,** respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to **report concerns** about content and contact.

Computing Curriculum Overview

| | EYFS | Year 1 | Year 2 | Year 3 | Year 4 | Year 5 | Year 6 |
|--------|--|--|---|---|--|--|---|
| Term 1 | Busy Bodies - Barefoot Computing - Unplugged instruction following and giving | Computing systems and networks Teach Computing: Technology around us | Computer systems and networks Teach Computing: IT around us | Computing systems and networks Teach Computing: Connecting computers | Computing systems and networks Teach Computing: The Internet | Computer systems and networks Teach Computing: Systems and searching | Computer systems and networks Teach Computing: Communication and collaboration |
| Term 2 | Creating Media Everyone can create photography Chapter 1 Everyday objects activities 1 and 2 | Creating media Everyone can create photography Chapter 1 Everyday objects activity 3 | Creating media Everyone can create photography Chapter 2 Portraits Activity 1 and 2 | Creating media Everyone can create photography Chapter 2 Portraits Activity 3 | Creating media Everyone can create photography Chapter 3 Scenes | Creating media Everyone can create photography Chapter 5 Collage composition | Creating media Everyone can create photography Chapter 7 animated gifs |
| Term 3 | Programming A Bee-Bot programming | Programming A Swift Playground Learn to Code 1 - Commands | Programming A Swift Playground Learn to Code 1 - Functions | Programming A Swift Playground Learn to Code 1 - Loops | Programming A Swift Playground Learn to Code 1 - Logical Operators | Programming A Swift Playground Learn to Code 2 - Variables | Programming A Swift Playground Learn to Code 2 - Types |
| Term 4 | Data and Information Everyone can create drawing Chapter 1 Activity 2: Lines and patterns | Data and information Everyone can create drawing Chapter 8 Infographics Grouping data | Data and information Everyone can create drawing Chapter 8 Infographics Pictograms | Data and information Teach Computing Branching databases | Data and information Teach Computing Data logging - sensors | Data and information Teach Computing Flat-file databases | Data and information Teach Computing Introduction to Spreadsheets |
| Term 5 | Creating Media Type my name using a keyboard and start to use a mouse | Creating media Teach Computing Digital writing - Typing skills | Creating media Digital music Teach Computing/ Chrome Music Lab | Creating media Everyone Can Create Photo: Chapter 7 Activity 2 Stop motion animation | Creating media Everyone Can Create Video - Chapter 1 Your First Movie using Clips | Creating Media Everyone Can Create Video Chapter 4 Tutorials | Creating Media Everyone Can Create Video Chapter 5 Documentaries |
| Term 6 | Programming B Initial Swift Playground levels (modelled) | Programming B Teach Computing Programming animations using Scratch Jr | Programming B Teach Computing Programming quizzes using Scratch Jr | Programming B Swift Playground Learn to Code 1 - Conditional Code | Programming B Swift Playground Learn to Code 1 - While Loops | Programme B Programming using Spheros | Programming B Programming using Spheros |



Staying Safe Curriculum Overview

Our e-safety curriculum is based upon the DSAT Safeguarding Curriculum and the eight areas set out by The UK Safer Internet Council's 'Education for a Connected World'. We use a combination of resources from Project Evolve and SCARF (taught during PSHE lessons).

| | Project Evolve Strands | SCARF units (PSHE lessons) and additional opportunities* |
|---------------|---|--|
| Term 1 | Self-image and Identity | Me and My Relationships |
| Term 2 | Online Relationships Online Bullying | |
| Term 3 | Health, Well-being and Lifestyle | Keeping Myself Safe Safer Internet Day - Staying Safe Initiative |
| Term 4 | Managing Online Information | Rights and Respect |
| Term 5 | Privacy and Security Copyright and Ownership | |
| Term 6 | Online Reputation | |

PROJECT
EVOLVE

SCARF