



Computing

Mixed-age plan

Contents:

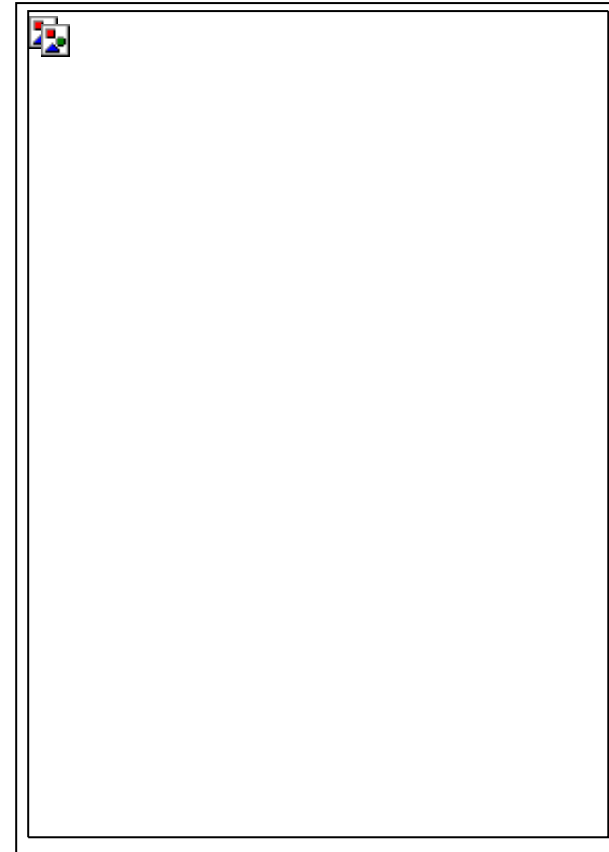
How does Kapow Primary help our school to meet the statutory guidance for Computing?
How does Kapow Primary's scheme of work align with the National Curriculum?
How is the Computing scheme of work organised?
Key areas
The skills showcase units
A spiral curriculum — Is there any flexibility in the Kapow Primary Computing scheme?
Suggested mixed-age plan: Computing - Overview (KS1)
Suggested mixed-age plan: Computing - Outline (LKS2)
Suggested mixed-age plan: Computing - Outline (UKS2)

How does Kapow Primary help our school to meet the statutory guidance for Computing?

Our scheme of work fulfils the statutory requirements for computing outlined in the **National Curriculum (2014)** and, when used in conjunction with our RSE & PSHE scheme, also covers the government's **Education for a Connected World -2020 edition** framework (see our [Education for a Connected World framework mapping](#)).



© Crown copyright 2019



© Crown copyright 2013

How does Kapow Primary's scheme of work align with the National Curriculum?

Our scheme of work fulfils the statutory requirements outlined in the **National Curriculum (2014)**. The National Curriculum Programme of Study for Computing aims to ensure that all pupils:

We have identified these three strands which run throughout our scheme of work:

★ Can understand and apply the fundamental principles and concepts of computer science, including abstraction, logic, algorithms and data representation.

★ Can analyse problems in computational terms, and have repeated practical experience of writing computer programs in order to solve such problems.

Computer Science

★ Can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems.

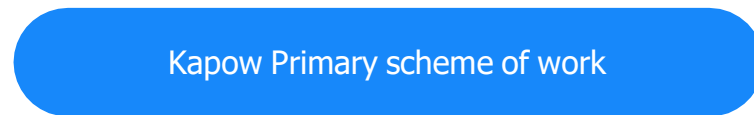
Information Technology

★ Are responsible, competent, confident and creative users of information and communication technology.

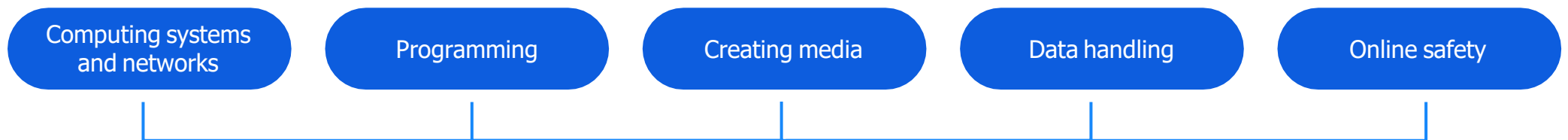
Digital Literacy

How is our Computing scheme of work organised?

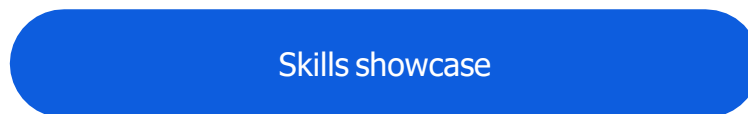
National Curriculum guidance



Kapow Primary key areas



The 'Skills showcase' key area, features aspects from some or all of the five key areas above



Key areas

We have categorised our lessons into the five key areas below, which we return to in each year group making it clear to see prior and future learning for your pupils and how what you are teaching fits into their wider learning journey.

Computing systems and networks

Identifying hardware and using software, while exploring how computers communicate and connect to one another.

Programming

Understanding that a computer operates on algorithms, and learning how to write, adapt and debug code to instruct a computer to perform set tasks.

Creating media

Learning how to use various devices — record, capture and edit content such as videos, music, pictures and photographs.

Data handling

Ensuring that information is collected, recorded, stored, presented and analysed in a manner that is useful and can help to solve problems.

Online safety

Understanding the benefits and risks of being online — how to remain safe, keep personal information secure and recognising when to seek help in difficult situations.

Skills showcase units

There are four units entitled Skills showcase. These units give children the chance to combine and apply skills and knowledge gained, from a range of the five key areas above, to produce a specific outcome.

Y1/2 - Rocket to the moon



Y3/4 - HTML



Y5/6 - Mars Rover 2



Y5/6 - Inventing a product



A spiral curriculum

Kapow Primary's Computing scheme of work has been designed as a spiral curriculum with the following key principles in mind:

- ✓ **Cyclical**: Pupils revisit the five key areas throughout KS1 and KS2.
- ✓ **Increasing depth**: Each time a key area is revisited, it is covered with greater complexity.
- ✓ **Prior knowledge**: Upon returning to each key area, prior knowledge is utilised so pupils can build on previous foundations, rather than starting again.





Long Term Plan Computing Science



Suggested long-term plan: Computing (KS1 Mixed-age)

Cycle A				Cycle B		
Year 1/2	Previous curriculum year	Key area		Year 1/2	Previous curriculum year	Key area
Improving mouse skills	Year 1	Computing systems and networks	Autumn 1	Bee-bots	Year 1	Programming
Algorithms unplugged	Year 1	Programming	Autumn 2	Digital imagery	Year 1	Creating media
Rocket to the moon	Year 1	Skills showcase	Spring 1	Introduction to data	Year 1	Data handling
What is a computer?	Year 2	Computing systems and networks	Spring 2	Scratch Jr	Year 2	Programming
Algorithms and debugging	Year 2	Programming	Summer 1	Stop-motion	Year 2	Creating media
Word processing	Year 2	Computing systems and networks	Summer 2	International space station	Year 2	Data handling
Year 1			Online safety	Year 2		



Suggested long-term plan: Computing (LKS2 Mixed-age)

Cycle A				Cycle B		
Year 3/4	Previous curriculum year	Key area		Year 3/4	Previous curriculum year	Key area
Emailing	Year 3	Computing systems and networks	Autumn 1	Networks and the internet	Year 3	Computing systems and networks
Programming: Scratch	Year 3	Programming	Autumn 2	Comparison cards	Year 3	Data handling
Video trailers	Year 3	Creating media	Spring 1	Journey inside a computer	Year 3	Computing systems and networks
Website design	Year 4	Creating media	Spring 2	Collaborative learning	Year 4	Computing systems and networks
Further coding with Scratch	Year 4	Programming	Summer 1	Investigating weather	Year 4	Data handling
Computational thinking	Year 4	Programming	Summer 2	HTML	Year 4	Skills showcase
Year 3			Online safety	Year 4		



Suggested long-term plan: Computing (*UKS2 Mixed-age*)

Cycle A				Cycle B		
Year 5/6	Previous curriculum year	Key area		Year 5/6	Previous curriculum year	Key area
Micro:bit	Year 5	Programming	Autumn 1	Programming:Music	Year 5	Programming
Mars Rover 1	Year 5	Data handling	Autumn 2	Stop motion animation	Year 5	Creating media
Mars Rover 2	Year 5	Skills showcase	Spring 1	Search engines	Year 5	Computing systems and networks
Bletchley Park	Year 6	Computing systems and networks	Spring 2	Big data 1	Year 6	Data handling
History of computers	Year 6	Creating media	Summer 1	Big data 2	Year 6	Data handling
Inventing a product	Year 6	Skills showcase	Summer 2	Introduction To Python	Year 6	Programming
Year 5			Online safety	Year 6		