

# Royal Cross Primary

Computing Curriculum

KS1



Computing aspect	KS1
<b>Computer science (CS)</b>	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
<b>Digital Literacy (DL)</b>	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
<b>Information Technology (IT)</b>	Use technology purposefully to create, organise, store, manipulate and retrieve digital content

# Subject Content

## 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

## KS1 Computing Curriculum 2 Year Cycle

Online Safety		Whole School Assemblies <i>Anti-Bullying Week</i>	Whole School Assemblies <i>Safer Internet (Day) Week</i>	Whole School Assemblies <i>Health Week</i> <i>(Time spent on electronic devices.)</i>
		<b>Fire, Steam &amp; Water</b>	<b>Explorers!</b>	<b>We Are What We Eat</b>
Year 1	2018 - 2019	Amazing Images: A1 (DL:IT)	All About Algorithms: A2 (CS)	Cool Researchers: A3 (IT)
		<b>Home Sweet Home</b>	<b>Wonderful World</b>	<b>Rock &amp; Roll</b>
Year2	2019 - 2020	Lets Make a Card: A5 (DL:IT)	Puppet Masters: A4 (IT)	Super Slideshow: A6 (DL: IT)

## KS1 Overview:

Unit A	Summary	Computing Strand
<b>Online Safety covered throughout all units.</b>		
A1	Amazing images	Digital Literacy Information Technology
A2	All about algorithms	Computer Science
A3	Cool researchers	Information Technology
A4	Puppet masters	Information Technology
A5	Lets make a card.	Digital Literacy Information Technology
A6	Super Slideshows	Digital Literacy

<b>Unit A1</b>	<b>Amazing Images Digital Literacy: Information Technology</b>
Software: Pic collage: Hardware iPads: Outcome: Children make a photo collage to support creative curriculum	
Step 1	Discuss topic Draw mind maps or pictures to plan research
Step 2	Children to learn how to take a digital photograph through pic collage Encourage children to take 5 or 6 photos using pic collage Children to experiment with changing the size and orientation of photographs
Step 3	Teach children how to change the borders of photographs Teach how to 'clip' photographs Teach how to edit photos
Extension	Frame layout to sequence a story about a famous inventor or invention.

Unit A2	All About Algorithms Computer Science
Software: None: Hardware: Beebots & Bluebots Outcome: Children can input instructions into a programmable toy.	
Step 1	Introduce algorithms to the children Children give basic instructions to each other on card Do they work? Go back 'debug'
Step 2	Battery powered and must be programmed to move; Enter a sequence of just forward commands which can be run/executed by pressing 'go'
Step 3	Use 'clear' button to delete a set of commands and so 'take turns' Left/right & back arrows to move in different directions; Combine sequences of commands to travel along 'L'-shaped routes
Extension	Travel in unusual paths; avoid obstacles (telling a space journey story linked with story characters/locations); 'Pause' button to temporarily stop at a place before continuing on its journey to a planet.

Unit  
A3

Cool Researchers  
Information Technology

Software: Infant Encyclopaedia: <http://www.parkfieldict.co.uk/infant/>

Hardware: Lap tops

Outcome: Children can make a presentation to support curriculum area.

Step 1  
Introduce children to a safe site to search from [www.swiggle.org.uk](http://www.swiggle.org.uk)  
Children click around site  
Discuss why we need to be careful online. What should we do if you see something you don't like?

Step 2  
Show children the infant encyclopedia website  
<http://www.parkfieldict.co.uk/infant/>  
Children explore website.  
Use some of the interactive activities.

Step 3  
Using Word or PowerPoint type information which they have found.  
Children struggling to type, copy some pictures from infant encyclopedia.  
PowerPoint, adding transitions between the slides.

Extension  
Research a holiday destination. How will you travel? What is the weather like?



Unit  
A4

## Puppet Masters Information Technology

Software: Puppet Pals

Hardware: iPads

Outcome: Children make a short play using Puppet Pals.

Step 1

Introduce Puppet Pals, model how to choose a character & setting & voices.

Children explore, to help them visualise the end of the project  
Children practice moving the characters around the screen

Step 2

Choose two characters from a story. What could they say to each other?

Give children a picture from the story & practice conversation between the characters

Step 3

Record the story.

Extension

Independent projects to present to an audience. Select characters from history.

<b>Unit</b> <b>A5</b>	<b>Lets Make a Card</b> <b>Digital Literacy: Information Technology</b>
Software: Publisher, Paint; Clicker Paint Hardware: Laptops Outcome: Children make a greeting card.	
Step 1	Children design pictures which they could put on the front of the card using an art package. Ensure pictures are saved as a jpeg.
Step 2	Share some examples. Show children how to open up Publisher and choose a card template. Insert their picture on to the front of the card. Add a text box to write a message (some children may be able to use WordArt). Choose clipart if they want.
Step 3	Children to write a message in the card in text boxes. Experiment with changing the font of the writing and colour.
Extension	Independent projects to make their own Christmas / Eid / Diwali cards.

<b>Unit</b> <b>A6</b>	<b>Super Slideshow</b> <b>Digital Literacy: Information Technology</b>
Software: Power Point; Keynote Hardware: Laptops; iPads Outcome: Children make a slideshow.	
<b>Step 1</b>	Choose a research topic. Search for images through safe search site and include E-safety. Encourage quality over quantity.
<b>Step 2</b>	Children to create new slide and text boxes and images. Choose an overall theme. Decide how much information they need to show. Decide how much information they need to show.
<b>Step 3</b>	Children to present their slideshow to a class. Develop presentation skills. Children could write their 'script' out in Word.
<b>Extension</b>	Independent projects to research a curriculum area. Make a slideshow of an outdoor visit.