Kingsway Infant School

Computing

In Reception at Kingsway Infants, we aim to ensure that all pupils:

- Know how to operate simple equipment
- Show an interest in technological toys with knobs or pulleys, or real objects
- Show skill in making toys work by pressing parts or lifting flaps to achieve effects such as sound, movements or new images
- Know that information can be retrieved from computers
- Complete a simple program on a computer
- Interact with age-appropriate computer software

In KS1 at Kingsway Infants we aim to ensure that all pupils:

- 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
- can evaluate and apply information technology, including new or unfamiliar technologies, analytically to solve problems
- are responsible, competent, confident and creative users of information and communication technology

Kingsway Infant School

Computing Progression of Skills – Year 1

Year 1 iLearn2 Progression of Skills and Teaching Sequence

A * next to the packs that are essential for curriculum coverage and progression.
Titles are highlighted with 3 colours showing the aspects of learning (*Computer Science* in orange, *Information Technology* in purple and *Digital Literacy* in green).

Year 1 Mouse and Keyboard Skills (4-6 hours)*

Progression of skills in this pack

1. Move the mouse or trackpad and left click to select an object.
2. Drag and drop with mouse or trackpad to move objects around the screen.
3. Use double click or double tap.
4. Find letters or numbers on keyboard.
5. Begin touch typing with home row keys.

Year 1 Digital Art (1-2 hours)*

National Curriculum Content

Use technology purposefully to create digital content.

Progression of skills in this pack

1. Change the colour of individual pixels to accurately re-create basic artwork.
2. Make changes where required.
3. Change the colour of individual pixels to accurately re-create detailed artwork.
4. Use custom colours to make digital art your own.
5. Use zoom controls to help fill small shapes.

Year 1 Design (1-2 hours)*

**Pupils should have completed EYFS Digital Art and Design before this pack.*

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Change the colour and pattern of elements.
2. Position and rotate objects on a design.
3. Position objects in relation to each other.
4. Resize, rotate, flip and arrange objects behind/in front of each other.

Year 1 Text and Images (3-4 hours)*

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Change the background colour of a page.
2. Add, resize and position images (pictures) on a page.
3. Type and position text on a page, if possible using capital letters and punctuation.
4. Label pictures with text.
5. Use word-banks for writing sentences about pictures.

Year 1 Comic Creation (1-2 hours) - FREE

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Add, resize and organise colour or picture backgrounds.
2. Add, resize, organise characters/object to different panels.
3. Add narration using text and direct speech using speech bubbles.

Year 1 Music Creation (2 hours) - FREE*

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Create a rhythm using a pattern of beats.
2. Create digital sounds using patterns and shapes.
3.Create a simple melody using patterns and adjust tempo.

Year 1 Introduce Programming (5-7 hours)*

National Curriculum Content

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.

Progression of skills in this pack

1. Place instructions into the correct order (sequence) to make something work.
2. Use direction arrows to move an on-screen object (character/sprite) to achieve an objective.
3. Predict a route and sequence direction commands (algorithm) to achieve an objective. Correct the errors if necessary (debug).
4. Predict a route and sequence distance commands to program an on-screen object to achieve an objective.
5. Predict and sequence movement and pen commands to program the drawing of different 2D shapes.
6. Sequence code blocks, including movements and execute (start program) blocks to write a program to achieve an objective.

Year 1 E-safety (1-2 hours)*

National Curriculum Content

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.

Progression of skills in this pack

1.Understand what the internet is and how people use it.
2.Understand what personal information is and why we keep personal information private.
3. Why do websites want personal information.
4. Identify when and where to go for help when concerned.

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Computing Progression of Skills – Year 2

Year 2 iLearn2 Progression of Skills and Teaching Sequence

A * next to the packs that are essential for curriculum coverage and progression.
Titles are highlighted with 3 colours showing the aspects of learning (*Computer Science* in orange, *Information Technology* in purple and *Digital Literacy* in green).

Year 2 Recognise uses of IT (1-2 hours)*

National Curriculum Content

Recognise common uses of information technology beyond school.

Progression of skills in this pack

1. Understand what makes a computer a computer.
2. Understand computers store and follow instructions.
3. Spot digital technology in school.
4. Understand how different technology helps us.

Year 2 Digital Art (3-4 hours)*

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Use lines and fill tools to make interesting patterns.
2. Add a variety of shapes (outlines and fill) and label them with text.
3. Re-create graphics using pixels with different colours.

Year 2 Introduction to Animation (2-4 hours)*

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Add a background and objects to a frame (including text)
2. Copy/clone a frame and move objects to create an animation, including flipping objects.
3. Create an animation with multiple objects moving simultaneously.
4. Create screen-recording animation (optional, requires iPad).
5. Create stop-motion animation with photos (optional, requires iPad).
6. Create animated drawings of characters by cropping photos and adjusting points of movement.

Year 2 Introduce Data Handling (2-3 hours) - FREE*

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

- Understand what data is and collect it as a tally.
- Use software to label a pictogram and add data to each column.
- Edit a table with correct titles and numbers.
- Use software to create a bar chart/pie chart/line chart suitable for the data.
- Interpret a pictogram/bar chart/line chart.

Year 2 Ebook Creation (3-4 hours)

National Curriculum Content

Use technology purposefully to create, organise, store, manipulate and retrieve digital content.

Progression of skills in this pack

1. Add a book cover with title, author, colour and image.
2. Add multiple pages based on a theme.
3. Add text on different pages.
4. Add images on different pages to match the theme/text.
5. Add voice recordings to match the text and theme.

Year 2 Develop Programming (4-5 hours)*

National Curriculum Content

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.

Progression of skills in this pack

1. Create and debug simple programs by selecting code blocks, placing them in the correct sequence and executing a program.
2. Use logical reasoning to predict the behaviour of simple programs.
3. Simplify a program by using a loop.

Year 2 Programming with Scratch Jr (3-4 hours)

National Curriculum Content

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.

Progression of skills in this pack

1. Program movements.
2. Program outputs for audio or text.
3. Find errors in a program.
4. Program inputs.
5. Program selection/conditions (if one sprite hits another).

Year 2 E-safety (1-2 hours)*

National Curriculum Content

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.

Progression of skills in this pack

(Resources 4-7)

1. What are the dangers of sharing photos online?
2. People online are not always who they say they are.
3. Trusting information online.
4. Using the Internet responsibly.
5. Being respectful.

Year 2 Internet Research (1 hour +)*

National Curriculum Content

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.

Progression of skills in this pack

1. Understand how a web-page displays information in different ways; text, images, videos and interactive elements.
2. Use a web-page to answer questions.