KS1 NC Subject Content
Pupils should be taught to:
1a understand what algorithms are; how they are implemented as programs on digital devices
1b create and debug simple programs
1c use logical reasoning to predict the behaviour of simple programs

KS2 NC Subject content
Pupils should be taught to:
1a design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts
1b use sequence, selection, and repetition in programs; work with variables and various forms of input and output
1c use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

KS1
- I understand what algorithms are.
- I know how algorithms are implemented as programs on digital devices.
- I know that programs execute by following precise and unambiguous instructions.

KS2
- I can create and debug simple programs.
- I can use logical reasoning to predict the behaviour of simple programs.
- I can use sequence, selection, and repetition in programs.

UKS2
- I can design, write and debug programs that accomplish specific goals.
- I can use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
- I can use sequence, selection, and repetition in programs.

program and correct errors in algorithms.

input and output.

repetition in programs; work with

problems by decomposing them.

simulating physical systems; solve

goals, including controlling or

programs that accomplish specific

algorithms work and to detect and correct errors in algorithms and programs.

I can use sequence, selection, and repetition in programs.

Studio Code Course B
- Lesson 1: Move It, Move It
- Lesson 2: Sequencing with Scratch
- Lesson 3: Your Digital Footprint
- Lesson 5: Programming with Scratch
- Lesson 6: It’s Great to Create and Play Fair
- Lesson 7: Programming with Rey and BB-8
- Lesson 8: Loops with Scratch
- Lesson 9: Loops with Laurel
- Lesson 10: Loops with Laurel
- Lesson 11: Drawing Gardens with Loops
- Lesson 12: The Big Event Jr.
- Lesson 13: A Royal Battle with Events

Studio Code Course C
- Lesson 1: Building a Foundation
- Lesson 2: Programming with Angry Birds
- Lesson 3: Debugging in Maze
- Lesson 4: Paper Planes
- Lesson 5: Collecting Treasure with Rey
- Lesson 6: Drawing Art with Code
- Lesson 7: Getting Loopy
- Lesson 8: Loops with Rey and BB-8
- Lesson 9: Sticker Art with Loops
- Lesson 10: Harvesting Crops with Loops
- Lesson 11: The Big Event
- Lesson 12: Build a Flappy Game

Studio Code Course D
- Lesson 1: Graph Paper Programming
- Lesson 2: Introduction to Online Puzzles
- Lesson 3: Relay Programming
- Lesson 4: Debugging with Laurel
- Lesson 5: Events in Minecraft
- Lesson 6: Loops in Minecraft
- Lesson 7: Drawing Shapes with Loops
- Lesson 8: Nested Loops in Minecraft
- Lesson 9: Fancy Shapes using Nested Loops
- Lesson 10: Snowflakes with Anna and Elsa
- Lesson 11: while Loops in Farmer
- Lesson 12: Until Loops in Maze

Studio Code Course E
- Lesson 1: My Robotic Friends
- Lesson 2: Coding with Comments
- Lesson 3: Building a Foundation
- Lesson 4: Debugging with Scratch
- Lesson 5: Creating Art with Code
- Lesson 6: My Loopy Robotic Friends
- Lesson 7: Drawing Shapes with Loops
- Lesson 8: Nested Loops in Maze
- Lesson 9: Creating Art
- Lesson 10: Conditional with Cards
- Lesson 11: Conditionals with the Farmer
- Lesson 12: Build a Star Wars Game
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Move mouse</td>
<td>Add a background</td>
<td>Use a web browser to access a variety of websites through its URL (Uniform Resource Identifier)</td>
<td>Use a range of web browser to access a variety of websites through its URL (Uniform Resource Identifier)</td>
<td>Understand computer networks including the internet.</td>
<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
</tr>
<tr>
<td></td>
<td>Left/right click</td>
<td>and objects to a frame.</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
</tr>
<tr>
<td></td>
<td>Drag and drop.</td>
<td>Copy/clone a frame and move objects to create an animation.</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<td></td>
<td>Touch typing; home row</td>
<td>Create an animation with multiple objects moving simultaneously.</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
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<tr>
<td>Text and images</td>
<td>Add and resize images.</td>
<td>Add text to label and describe images.</td>
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<td></td>
<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
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<tr>
<td>Music Creation</td>
<td>Use digital instruments to experiment with different sounds</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<tr>
<td>Digital Art (Activity 1)</td>
<td>Resize canvas</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<td>Zoom in and out on canvas</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<td>Draw a rectangle shape</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<td>Draw lines</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<td></td>
<td>Use the fill tool</td>
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<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
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<tr>
<td></td>
<td>Save my work</td>
<td></td>
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<td></td>
<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
</tr>
<tr>
<td>Data Handling</td>
<td>Label a pictogram and add data to each column.</td>
<td>Edit a table with correct titles and numbers to create a bar chart and pie chart.</td>
<td>Explain what a pictogram and bar chart shows.</td>
<td></td>
<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
</tr>
<tr>
<td>Digital Art (Activity 2)</td>
<td>Draw a range of 2D shapes</td>
<td>Change fill and line colours</td>
<td>Add text as labels</td>
<td></td>
<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
</tr>
<tr>
<td>Game Creation (Act 1)</td>
<td>Create a background</td>
<td>Create characters</td>
<td>Create a platform</td>
<td></td>
<td>Use emailing software is to email other pupils respectfully and responsibly.</td>
<td>Understand how and why we can collaborate online.</td>
</tr>
</tbody>
</table>

**KS1 NC Subject Content**
Pupils should be taught to:
2a use technology purposefully to create, organise, store, manipulate and retrieve digital content

**KS2 NC Subject Content**
Pupils should be taught to:
2a 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.
### KS1 NC Subject Content

**Pupils should be taught to:**

1. Recognise common uses of information technology beyond school.
   - Spot digital technology in school (Task 1)
   - Spot digital technology amongst a range of day-to-day objects (Task 2)
   - Find a piece of computer equipment and choose the correct definition. (Task 3)

2. Select appropriate websites for the given task.

3. Use various shape and paint tools plus duplication and rotation to create a symmetrical portrait.

4. Use shape tools to create a landscape and then use reflective symmetry.

5. Use various image editing tools for effect.

6. Add, resize and organise colour or picture backgrounds.

7. Add, resize, organise characters/objects to different panels.

8. Add narration using text and direct speech using speech bubbles.

### LKS2 NC Subject Content

**Pupils should be taught to:**

1. Recognise common uses of information technology beyond school.
   - Spot technology used in school.
   - Spot technology when out of school.
   - Learn about a particular technology used beyond school (E.G. shop till, barcode scanner).

2. Use various shape and paint tools plus duplication and rotation to create a symmetrical portrait.

3. Use shape tools to create a landscape and then use reflective symmetry.

4. Use various image editing tools for effect.

5. Add, resize and organise colour or picture backgrounds.

6. Add, resize, organise characters/objects to different panels.

7. Add narration using text and direct speech using speech bubbles.

### KS2 NC Subject Content

**Pupils should be taught to:**

1. Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.

2. Select appropriate websites for the given task.

3. Use various shape and paint tools plus duplication and rotation to create a symmetrical portrait.

4. Use shape tools to create a landscape and then use reflective symmetry.

5. Use various image editing tools for effect.

6. Add, resize and organise colour or picture backgrounds.

7. Add, resize, organise characters/objects to different panels.

8. Add narration using text and direct speech using speech bubbles.

### UKS2

**Internet Research (Activities 4-6)**

- Select appropriate websites.
- Be discerning in evaluating digital content.
- Search a database correctly for specific information.
- Check the internet for fake news by cross-referencing facts.

**Data Handling (Year 4 Projects)**

- Use formulae to find totals, averages and maximum/minimum numbers.
- Select the correct chart type to present data.
- Answer 'What if?' questions.

**eBook Creation**

- Add audio, including hiding it behind an object.
- Add hyperlinks to text and images.
- Add audio to pages.
- Embed content such as maps/Youtube videos.

**3D Design – Independent project**

- Add and resize 3D shapes.
- Adjust the height of 3D shapes.
- Apply my skills to create a 3D design.

**Virtual Reality**

- Understand what virtual reality is and how it can help people.
- Add, move and resize objects in a VR environment.
- Add animate objects.
- Use code blocks to add movement.
- Create multiple scenes.
### KS1 NC Subject Content
Pupils should be taught to:

4a use technology safely and respectfully, keeping personal information private; know where to go for help and support when they have concerns about material on the internet

- **Books**
  - DigiDuck
  - Penguinpig
  - Monkeycow
  - Chickenclickin
  - Webster’s Bedtime

- **Videos**
  - Ask before you watch
  - How to make an avatar
  - Lee and Kim’s adventures

### KS2 NC Subject Content
Pupils should be taught to:

4a use technology safely, respectfully and responsibly; know a range of ways to report concerns and inappropriate behaviour

- **Books**
  - DigiDuck
  - Penguinpig
  - Monkeycow
  - Chickenclickin
  - Webster’s Bedtime

- **Videos**
  - Ask before you watch
  - How to make an avatar
  - Lee and Kim’s adventures

- **Other resources**
  - Jessie and friends
    - Episode 1 - Watching Videos (4-5 years)
    - Episode 2 - Sharing Pictures (5-6 years)
    - Episode 3 - Playing Games (6-7 years)

  - Smartie the Penguin
    - Pop ups and in app purchasing
    - Inappropriate websites for older children
    - Cyberbullying

### UKS2 NC Subject Content
Pupils should be taught to:

- I know how to use technology safely, respectfully and responsibly;
- I know a range of ways to report concerns and inappropriate behaviour

- **Books**
  - DigiDuck
  - Penguinpig
  - Monkeycow
  - Chickenclickin
  - Webster’s Bedtime

- **Videos**
  - Ask before you watch
  - How to make an avatar
  - Lee and Kim’s adventures

- **Other resources**
  - Jessie and friends
    - Episode 1 - Watching Videos (4-5 years)
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    - Episode 3 - Playing Games (6-7 years)

  - Smartie the Penguin
    - Pop ups and in app purchasing
    - Inappropriate websites for older children
    - Cyberbullying

### E-Safety Issues
- I know how to use technology safely and respectfully, keeping personal information private;
- I know where to go for help and support when I have concerns about material on the internet

### Year 2018-2019
- **Online Safety**
  - (Digital Literacy - DL)

### Year 2019-2020

### Year 2020-2021

### Year 2021-2022

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