# Computing Curriculum

## Computing Whole School Unit Overview and Key Skills Checklist

**Essential Learning Objectives** (Chris Quigley):
To Code
To Connect

Programs used in Year 3:
PaintZ – drawing program
Publisher
Word
Power Point
Scratch – animation coding program

## Year 3

| National Curriculum Unit | | Key Skills (to be covered during the year) (from CQ Milestones) |
|---|---|---|
| To code (using Scratch)<br><br>Projects:<br>Dancing Sprites<br>Growing and Shrinking<br>Bouncing emoji's | Looks | • Set the appearance of objects and create sequences of changes. |
| | Sound | • Create and edit sounds. Control when they are heard, their volume, duration and rests. |
| | Events | • Specify conditions to trigger events. |
| | Sensing | • Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions). |
| | Variables and lists | • Use the functions define, set, change, show and hide to control the variables. |
| **To Connect**<br>E-Safety – 'Kara Winston and the Crew' website.<br>SMART rules | | • Give examples of the risks posed by online communications.<br><br>• Understand the term 'copyright'.<br><br>• Understand that comments made online that are hurtful or offensive are the same as bullying. |

**Computing  Whole School Unit Overview and Key Skills Checklist**

**Essential Learning Objectives** (Chris Quigley):
To Code
To Connect
To Communicate
To collect

Programs used in Year 4:
PaintZ – drawing program
Publisher
Word
Power Point
Scratch – animation coding program
Email
Excel

# Year 4

| National Curriculum Unit | | Key Skills (to be covered during the year) (from CQ Milestones) |
|---|---|---|
| To code (using Scratch)<br><br>Projects:<br>Smoky Car Game<br>Slug Trail Game | Motion | • Use specified screen coordinates to control movement. |
| | Draw | • Control the shade of pens. |
| | Control (Year 5) | • Use IF THEN conditions to control events or objects. |
| | Sensing | • Create conditions for actions by sensing proximity or by waiting for a user input (such as proximity to a specified colour or a line or responses to questions). |
| | Variables and lists | • Use variables to store a value.<br><br>• Use the functions define, set, change, show and hide to control the variables. |

| | | |
|---|---|---|
| | Operators | • Use the Reporter operators<br><br>() + ()<br><br>() - ()<br><br>() * ()<br><br>() / ()<br><br>to perform calculations. |
| **To Connect**<br>E-Safety – 'Kara Winston and the Crew'<br>SMART rules | | • Contribute to blogs that are moderated by teachers.<br><br>• Give examples of the risks posed by online communications.<br><br>• Understand the term 'copyright'.<br><br>• Understand that comments made online that are hurtful or offensive are the same as bullying.<br><br>• Understand how online services work. |
| **To Communicate**<br>Email | | • Use some of the advanced features of applications and devices in order to communicate ideas, work or messages professionally. |
| **To Collect** | | ● Devise and construct databases using applications designed for this purpose in areas across the curriculum. |

**Computing Whole School Unit Overview and Key Skills Checklist**

**Essential Learning Objectives** (Chris Quigley):
To Code
To Connect
To Communicate
To collect

Programs used in Year 5:
Paint.net – editing photographs
Publisher- Computer components and Hardware
Power Point - WWII
Scratch – animation coding program
Excel
Flowol – real life control simulations

# Year 5

| National Curriculum Unit | | Key Skills (to be covered during the year) (from CQ Milestones) |
|---|---|---|
| **To code (using Scratch)** | Motion | • Set IF conditions for movements. Specify types of rotation giving the number of degrees. |
| | Sound | • Upload sounds from a file and edit them. Add effects such as fade in and out and control their implementation. |
| | Draw | • Combine the use of pens with movement to create interesting effects. |
| **To Connect**<br>E-safety lessons.<br>Web Research<br>How Networks works | | • Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems.<br><br>• Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder.<br><br>• Understand the effect of online comments and show responsibility and sensitivity when online.<br><br>• Understand how simple networks are set up and used. |

| | |
|---|---|
| **To communicate**<br>Web Research | • Choose the most suitable applications and devices for the purposes of communication.<br><br>• Use many of the advanced features in order to create high quality, professional or efficient communications. |
| **To collect**<br>Spreadsheets | • Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner. |

**Subject Whole School Unit Overview and Key Skills Checklist**

**Essential Learning Objectives** (Chris Quigley):
To Code
To Connect
To Communicate
To collect

Programs used in Year 6:
Power Point
Scratch – animation coding program
Python – coding
Excel

# Year 6

| **National Curriculum Unit** | | **Key Skills (to be covered during the year)** (from CQ Milestones) |
|---|---|---|
| **To code (using Scratch)**<br>Projects:<br>Maze Game<br>Fish Tank<br>Winter Animation<br>Using images from Google | Looks | • Change the position of objects between screen layers (send to back, bring to front). |
| | Events | • Set events to control other events by 'broadcasting' information as a trigger. |

| | | |
|---|---|---|
| | Control | • Use IF THEN ELSE conditions to control events or objects. |
| | Sensing | • Use a range of sensing tools (including proximity, user inputs, loudness and mouse position) to control events or actions. |
| | Variables and lists | • Use lists to create a set of variables. |
| | Operators | • Use the Boolean operators<br>() < ()<br>() = ()<br>() > ()<br>()and()<br>()or()<br>Not()<br>to define conditions.<br>• Use the Reporter operators<br>() + ()<br>() - () |

| | | |
|---|---|---|
| | | () * ()<br><br>() / ()<br><br>to perform calculations.<br><br>Pick Random () to ()<br><br>Join () ()<br><br>Letter () of ()<br><br>Length of ()<br><br>() Mod () This reports the remainder<br><br>after a division calculation<br><br>Round ()<br><br>() of (). |
| **To Connect**<br><br>E-Safety - Be a responsible digital citizen.<br>Cyberbullying and safe use of social media | | • Give examples of the risks of online communities and demonstrate knowledge of how to minimise risk and report problems.<br><br>• Understand and demonstrate knowledge that it is illegal to download copyrighted material, including music or games, without express written permission, from the copyright holder.<br><br>• Understand the effect of online comments and show responsibility and sensitivity when online.<br><br>• Understand how simple networks are set up and used. |

| | |
|---|---|
| **To collect**<br>Spreadsheets | • Select appropriate applications to devise, construct and manipulate data and present it in an effective and professional manner. |