



Computing - Year 3

Threshold Concepts and Milestones



| Term | Threshold Concept | Sub-division | Statement | Activity |
|----------|--------------------|------------------|--|--|
| Autumn 1 | Connect | | Give examples of the risks posed by online communications. Understand that comments made online that are hurtful or offensive are the same as bullying. | Children respond to pre-generated emails that simulate spam, malware, cyber bullying and fishing. |
| | Communicate | | Use some of the features of applications and devices to communicate ideas. | Children are introduced to touch typing Children complete a simulation within PurpleMash where they work in a virtual newspaper office following a story. |
| Autumn 2 | Code | Sound | Create and edit sounds Control when they are heard | Children to add sound effects to simple programs when a condition is fulfilled: <ul style="list-style-type: none"> • Monkey Jump • Fireworks |
| | | Draw | Control pens | Children use 2Go to draw simple shapes (squares, rectangles). Change colours and line thickness when confident with drawing shapes. |
| | | Operators | Use the Reporter operators () + () () - () () * () () / () to perform calculations. | Children explore spreadsheets in Purple Mash and how they can be used to perform calculations. |



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|----------|----------------|----------------------------|--|--|
| Spring 1 | Code | Looks | Set the appearance of objects and create sequences of changes | <u>Children select their own objects to add to a game app and begin to animate collisions of objects in espresso coding.</u> <u>Children create short animations using stop frame in iMovie or the "2animate" app in Purple Mash.</u> |
| | | Variables and lists | Use variables to store a value. Use the functions define, set, change, show and hide to control the variables. | Children create interactive games using Discovery Coding. |
| | | Events | Specify conditions to trigger events. | <u>Children to understand how they can sequence events using a timer.</u> |
| Spring 2 | Connect | | Contribute to blogs that are moderated by teachers. Understand the term 'copyright'. | <u>Children use the 2blog app to share ideas about topic investigations.</u> <u>Children conduct online research and consider the ownership of information and images found online.</u> |



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|----------|----------------|----------------|--|---|
| Summer 1 | Collect | | Construct databases using applications designed for this purpose | Using branching databases in PurpleMash |
| | Code | Control | Use IF THEN conditions. | |
| Summer 2 | Code | Motion | Use random position to control movement | Children create games with advanced conditional events in which when 1 object touches another, it will change to a new random position. |
| | | Sensing | Create conditions for actions by sensing proximity. | Children code racing apps with events to prevent vehicles passing through walls and other objects. |



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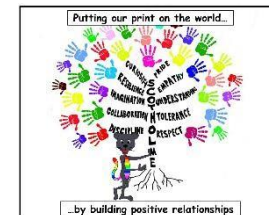


| Threshold Concept | Sub-division | Statement | Content |
|--|--|---|--|
| Code This concept involves developing an understanding of instructions, logic and sequences. | Motion | Use random position to control movement | <u>Children create games with advanced conditional events in which when 1 object touches another, it will change to a new random position.</u> |
| | Looks | Set the appearance of objects and create sequences of changes | <u>Children select their own objects to add to a game app and begin to animate collisions of objects in espresso coding.</u> <u>Children create short animations using stop frame in iMovie or the "2animate" app in Purple Mash.</u> |
| | Sound | Create and edit sounds Control when they are heard | Children to add sound effects to simple programs when a condition is fulfilled: <ul style="list-style-type: none"> • <u>Monkey Jump</u> • <u>Fireworks</u> |
| | Draw | Control pens | <u>Children use 2Go to draw simple shapes (squares, rectangles).</u> <u>Change colours and line thickness when confident with drawing shapes.</u> |
| | Events | Specify conditions to trigger events. | <u>Children to understand how they can sequence events using a timer.</u> |
| | Control | Use IF THEN conditions. | <u>Children create branching databases in PurpleMash</u> |
| | Sensing | Create conditions for actions by sensing proximity. | <u>Children code racing apps with events to prevent vehicles passing through walls and other objects.</u> |
| | Variables and lists | Use variables to store a value. Use the functions define, set, change, show and hide to control the variables. | Children create interactive games using Discovery Coding. |
| Operators | Use the Reporter operators () + () () - () () * () () / () | <u>Children explore spreadsheets in Purple Mash and how they can be used to perform calculations.</u> | |



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| | | | |
|---|--|---|--|
| <p>Connect This concept involves developing an understanding of how to safely connect with others.</p> | | <p>to perform calculations.</p> <p>Contribute to blogs that are moderated by teachers. Give examples of the risks posed by online communications. Understand the term 'copyright'. Understand that comments made online that are hurtful or offensive are the same as bullying.</p> | <p>Children use the 2blog app to share ideas about topic investigations.</p> <p>Children respond to pre-generated emails that simulate spam, malware, cyber bullying and fishing.</p> <p>Children conduct online research and consider the ownership of information and images found online.</p> |
| <p>Communicate This concept involves using apps to communicate one's ideas.</p> | | <p>Use some of the features of applications and devices to communicate ideas.</p> | <p>Children are introduced to touch typing</p> <p>Children complete a simulation within PurpleMash where they work in a virtual newspaper office following a story.</p> |
| <p>Collect This concept involves developing an understanding of databases and their uses.</p> | | <p>Construct databases using applications designed for this purpose.</p> | <p>Using branching databases in PurpleMash</p> |