

Lyng Primary School Knowledge Organiser

Information Technology



Autumn 1

Logo

Year 4

Topic: IT

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| What Goldilocks and Step On words will I use? | |
| **Spelling** | **Defintion** |
| Algorithm | A set of instructions that will reach a desired outcome. |
| Logo | A text-based coding language used to control an on-screen turtle to create a pattern. |
| BK | Move backwards a distance of units. |
| FD | Move forward a distance of units. |
| RT | Turn right a number of degrees. |
| LT | Turn left a given number of degrees. |
| Repeat | Repeat a set of instructions a specified number of times. |
| Setpc | Set pen colour to a given colour. |
| Setfc | Set the pen thickness. |
| PU/PD | Lift the pen up or down on the screen. |

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**Aims of this unit**

* Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.
* Solve problems by decomposing them into smaller parts.
* Use sequence, selection and repetition in programs; work with variables and various forms of input and output.
* Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.
* Use Turtle Logo to create and debug:
* A procedure
* An algorithm that uses setpos
* An algorithm with different colours
* An algorithm to write text
* An algorithm to draw arcs

**Safeguarding**

Filtering and monitoring system is in place. Children will use their own log in details to track any misuse and to protect the child from harmful websites and pop ups. Children will be reminded of how to stay safe online and to use technology safely and respectfully and to tell a trusted adult if there is anything on their computer that makes them uncomfortable. When using the iPads, the monitoring software will track which iPad has been used to enable us to know which class has used the iPad.

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| Outcomes |
| **All children**   * Write procedures using simple algorithms * Change the colour of the pen. * Write text using the label command.   **Most children**   * Draw shapes using setpos or setxy * Fill shapes in different colours * Draw arcs of different sizes as required.   **Some children**   * Create sophisticated agorithms and procedures * Include procedures with variables. |

Autumn Term

Control using Logo

**In this unit…**

Turtle Logo will be used to teach children how to create an algorithm to

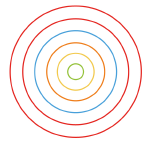
program a procedure. Children will recap the basic commands and how

to repeat alongside a variable. The children will use colour, set the

position of the turtle using coordinates. In the concluding lesson they

will use the arc command to create patterns using different shapes and

randomly selected colours.



**Agreed outcome:**

Use Logo to create a Viking shield using concentric circles.