

Lyng Primary School Knowledge Organiser

Computing

Topic: Computing



Robotics: What different things can we construct and program for a purpose?

Spring 2

Year 5

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| What Goldilocks and Step On words will I use? |
| **Spelling** | **Defintion** |
| Sequence | Order that commands are executed by a computer |
| Output | Any information that is processed by and sent from a computer |
| Input | Data that a computer receives |
| Conditional | Statements, expressions, constructs – features of a programming language which perform different computations or actions depending on whether a programmer specificies boolean conditions = true/fale |
| infrared | Method of transferring data without the use of wires |

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**Aims of this unit**

* Lego – Hazard Alarm. Engino – Space exploration.
* 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.

**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** * Explore different weather related hazards
* Create and program a device
* Use REPEAT statements

**Most children*** Use IF/THEN statements
* Explore leg type motions
* Explore infrared.

**Some children*** Present and document your solutions and explain how it helps.
* Use IF/WHILE statements
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Summer Term

Robotics

**In this unit…**

The children will develop their communication, teamwork and flexibility skills while being creative.

**Agreed outcome:**

Use different coding platforms to program a range of robotic equipment