

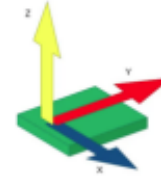
micro:bit



bluetooth



MakeCode



accelerometer



Edge
connector



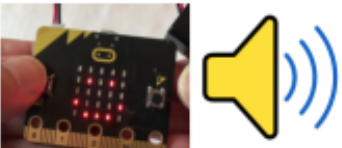
input



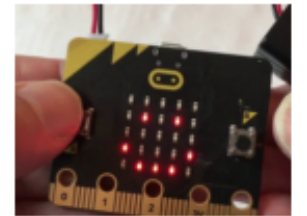
Computing: Making Interactive Toys



Light-emitting
diode (LED)



output



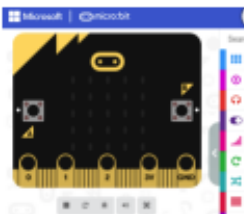
LED display



system



interactive



simulator



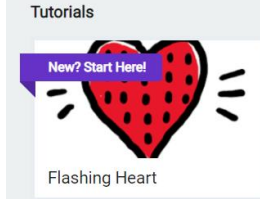


decompostion



interactive

Y6 Computing: We are Toy Makers – Topic Vocabulary Mat

| Subject Specific Vocabulary | | Relevant Pictures | Exciting Books/Websites |
|-----------------------------------|--|--|--|
| micro:bit | A simple, single board programmable computer with input, output and network capabilities. |  <p>Black History Month</p> <p>Garrett Morgan was a Black American inventor and engineer. His design for a breathing hood formed the prototype for the gas masks which saved countless lives in the First World War. He also created the first design of a three-light traffic light system that we still use today.</p>  <p>Garrett Morgan, Inventor of the Traffic Light</p> | https://makecode.microbit.org/ Use the MakeCode platform to try basic micro:bit projects from home. You can use the simulator to test the end result of your code!  |
| MakeCode | A block- and text-based editor from Microsoft, used to write programs for the micro:bit, as well as other devices. | | |
| input | Data supplied (put in) to a computer. | | <p>Other Information</p> <ul style="list-style-type: none"> This unit is a physical computing project. Physical computing involves interactive systems that can sense and respond to the world around them – this means they sense inputs such as touch or sound and control outputs such as lights, displays and motors. |
| output | Information produced (put out) by a computer. | | |
| interactive | A system whose output is determined by the input provided. | | |
| simulator | Software that allows one computer system to behave as another. | | |
| light-emitting diode (LED) | An electronic component that lights up when current flows in one direction. | | <p>Key Knowledge</p> <ul style="list-style-type: none"> A micro: bit is a small programmable computer which stores and runs simple programs. The micro:bit has different inputs and outputs that the children should develop an awareness of. |
| bluetooth | A way of sending and receiving information. A wireless digital communication protocol using low energy signals over short distances. | <p>What I've learnt already</p> <p>Y5:</p> <ul style="list-style-type: none"> 'if/then/else' and 'sensing' blocks can be used to allow the player's sprite to interact with other elements in a game. There are different techniques that can be used to detect and correct errors in code, such as explaining what the code does, isolating the bit of code that is causing a problem, changing variables or rewriting code. <p>Y4:</p> <ul style="list-style-type: none"> A micro: bit is a small programmable computer which stores and runs simple programs. It has different inputs and outputs An accelerometer is an input on the micro:bit that detects and provides information about changes in motion (motion sensor). <p>Y2:</p> <ul style="list-style-type: none"> Programs are sequences of code. These are precise instructions (or a set of rules) that can be understood and followed by a computer. | <ul style="list-style-type: none"> An accelerometer is an input on the micro:bit that detects and provides information about changes in motion (motion sensor). |
| accelerometer | A hardware component providing data on changes in motion (movement), typically in three directions. | | <ul style="list-style-type: none"> To become familiar with the MakeCode block editor and the micro:bit, including knowing the function of different blocks, predicting how a micro:bit program will work, detecting errors and understanding how to transfer code to the micro:bit. |
| decomposition | Breaking a problem down into smaller parts. | | <ul style="list-style-type: none"> To know and understand the definitions of the unit's key vocabulary, particularly: computer, input, output, variable, simulator, source code and object code. |