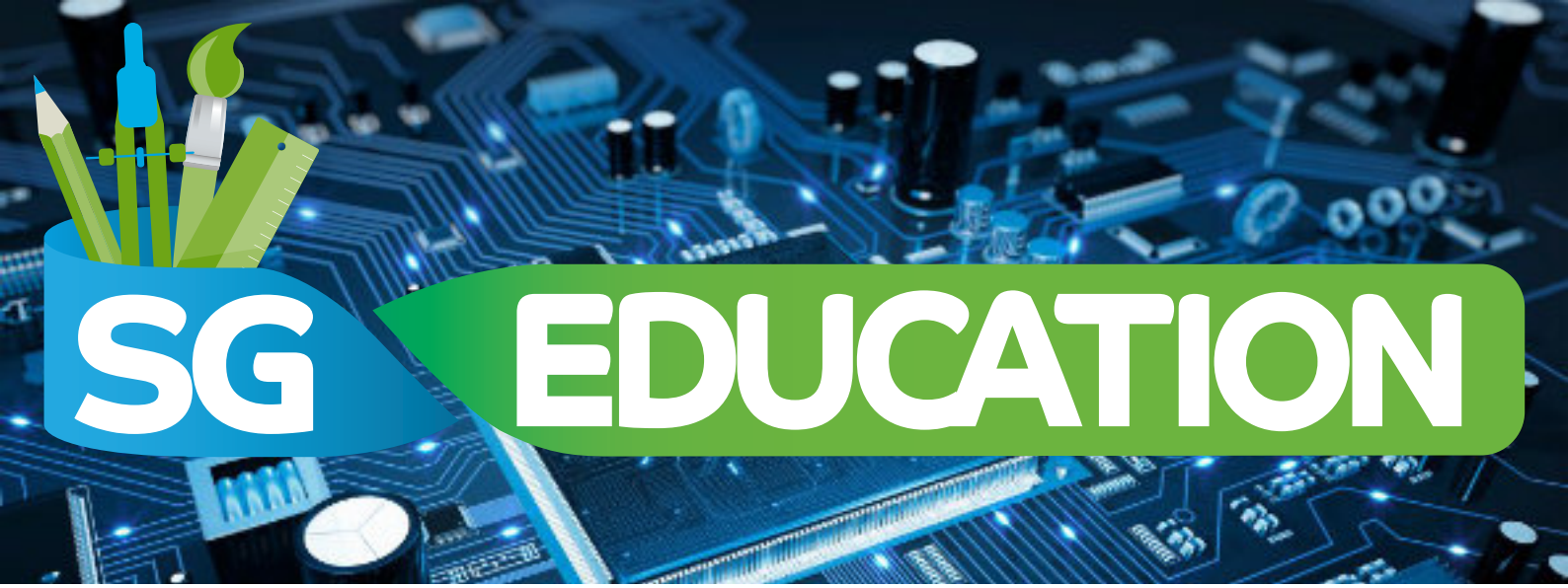


Computer science encompasses the study of computing and algorithmic processes. The Leaving Certificate Computer Science curriculum delves into the application of programming and computational thinking to problem-solving, as well as the profound impact of computing technology on our world.

In the context of the 2024 Leaving Cert project, students are tasked with identifying scenarios where computer science can enhance people's health and wellbeing.

To fulfill this project requirement, students must design and develop:

1. An embedded system aimed at improving some facet of wellbeing.
2. A computer model capable of providing valuable insights into wellbeing-related aspects.

To assist students in excelling in this project, SG Education offers a careful selection of essential products below

ElecFreaks Smart Health Kit

EF08256 €79.95

Smart Health Kit has a good selection of the Sensor:bit, Analog UV Sensor, PIR Sensor, Alcoholic Sensor Brick, etc.. It can be used to build such themes as the UV light detections, sitting posture reminder, alcohol detector and more, from which you can learn how to program and how to keep healthy living habits in a scientific way.

ElecFreaks Smart Home Kit

EF08197 €70.00

Use the smart home kit to drive intelligent devices in your house such as a smart fan and voice activated lights. The kit contains temperature, sound, crash, moisture and light sensors, as well as a relay, a DC motor, a 180° Servo and an OLED screen.

ElecFreaks Octopus C02 Gas Sensor

EF04100 €57.95

As the concentration of CO2 increases, the output voltage decreases. The CO2 sensor is designed with industrial-grade materials that exhibit high sensitivity to CO2 while being resistant to interference from alcohol and CO. Please note that this sensor requires a breakout board for operation, and it is typically paired with the Elecfreaks IOT:BIT board by the manufacturer.

Kitronik: Inventor's Kit

KI 5603 €29.95

The Inventor's Kit is a great way to get started with programming and hardware Interaction. This kit contains everything you need to complete 10 experiments including, using LEDs, motors, LDRs and capacitors. It is a comprehensive package with an array of components and detailed instructions.

Kitronik: Discovery Kit

KI 5666 €14.94

The Kitronik Discovery Kit includes components and instructions for electronics and coding projects, making it ideal for wellness-related endeavours and hands-on practical learning experiences that foster creativity and personal growth.

ElecFreaks Smart Coding Watch Kit

EF08206 €12.95

Elecfreaks Smart Coding Watch Kit is a wearable device based on micro:bit button cell extension board Pro. A DIY micro:bit watch can easily be made with a simple installing method. It could be used for projects including step counting, sleep alarm etc..

www.sgeducation.ie | sales@sgeducation.ie | 071 9153810

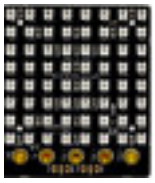
Kitronik Air Quality and Environmental Board

KI 5674 €49.95

The Kitronik Air Quality Board provides a complete air monitoring and reporting solution for the BBC micro:bit. The wealth of onboard sensors and connection points allow you to collect extensive air quality data that can be stored in onboard memory, and displayed on the OLED screen or transferred to a computer for analysis.

Kitronik ZIP Tile

KI 5645 €27.95



The Kitronik ZIP Tile is an 8x8 display panel for the micro:bit. It can scroll text, show all the colours of the rainbow, and multiple tiles can be linked up to make even bigger displays! It features 64 colour addressable LEDs arranged in an 8 x 8 grid, ZIP LED expansion points on the left, right and top of the board.

Kitronik Environmental Control Board

KI 5697 €35.50

The Kitronik environmental control board provides a variety of sensor inputs and connection points for the BBC micro:bit and provides the ability to control outputs for devices such as a water pump, fan, servo or heater pad. This makes it ideal for feedback control systems.

Kitronik PIR Motion Sensor

KI 4633 €24.94

This is a simple to use motion sensor. Power it up and wait 1-2 seconds for the sensor to get a snapshot of the still room. If anything moves after that period, the 'alarm' pin will go low. This unit works great from 5 to 12V. The alarm pin is an open collector meaning you will need a pull up resistor on the alarm pin.

ElecFreaks IOT:BIT

EF03426 €16.95

The IOT:BIT expansion board, designed for micro:bit, simplifies IOT integration. With built-in Wi-Fi and various sensors,it facilitates seamless data transmission to Wi-Fi networks such as ThingSpeak. This empowers users to embark on diverse IOT projects, enhancing creative exploration by displaying or utilizing data on websites and databases.

Kitronik ZIP Halo

KI 5625 €16.95

The Halo has 24 ZIP LEDs, which are individually addressable full colour. Each LED can display a huge spectrum of colours, allowing amazing colourful effects to be achieved. The Halo bolts directly onto the micro:bit using five bolts. The board also has extension connector pads allowing more ZIP LEDs to be connected. Could be used for mindfullness, aid for meditation, countdown timers, timers for exercise etc.

Kitronik ZIP Circle

KI 35132 €7.75

The Kitronik ZIP Circle is an innovative LED board featuring 12 individually addressable ZIP LEDs arranged in a circular pattern. This compact and versatile board allows you to create captivating visual effects and animations, making it perfect for creative projects and lighting designs.

Kitronik Edge Connector Beakout Board

KI 5601B €6.56

This breakout board has been designed to offer an easy way to connect additional circuits and hardware to the pins on the edge of the micro:bit. It provides access to all processor pins and the important pins on the bottom edge of the micro:bit allowing a lot of extra functionality to be added.

Kitronik Crocodile Leads Pack of 10

KI 2407 €4.10

Pack of ten wires in a selection of five colours each with insulated crocodile clips on both ends. Lead length 0.5m. Max current 0.5 Amp.

Jumper Wires M/M M/F Pack of 40

KI 4128-40/KI 4110-40I €3.95

These are 20cm long jumpers in packs of 40. Multiple jumpers can be installed next to one another on a 0.1" header.