i.t.wales
www.itwales.com

technocamps

Inspiring | Creative | Fun
Ysbrydoledig | Creadigol | Hwyl

Swansea University
Prifysgol Abertawe

Prifysgol Aberystwyth University

Prifysgol Bangor University

University of South Wales
Prifysgol De Cymru

ESF

Llywodraeth Cymru
Welsh Government

Ewrop & Chymru: Buddsoddi yn eich dyfodol
Cronfa Gymdeithasol Ewrop

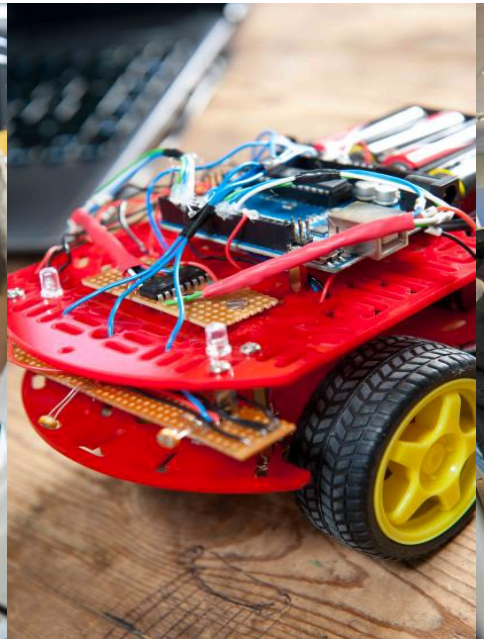
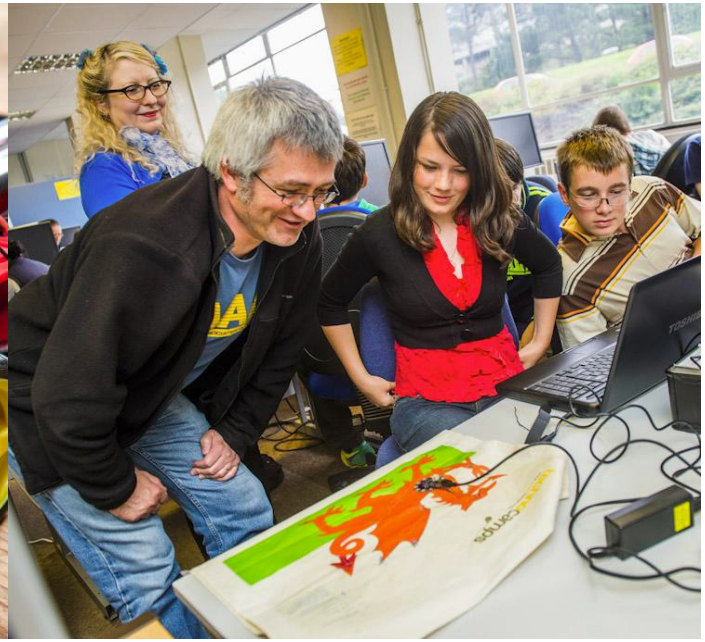
Europe & Wales: Investing in your future
European Social Fund

technocamps

Pre-Day Questionnaire

About Technocamps

We go around schools like yours and show you lots of interesting stuff!

We also do things we call “bootcamps” during holidays!

What is a STEM subject?

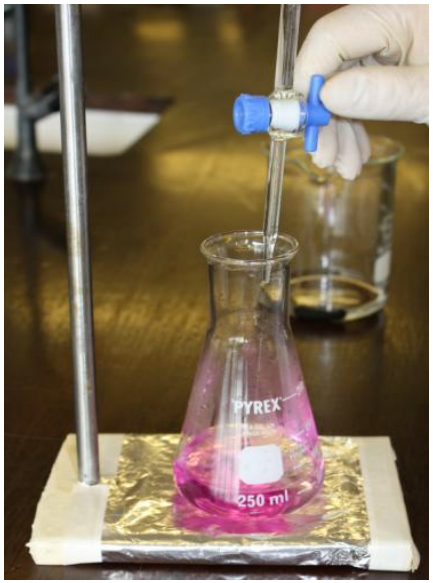
Science

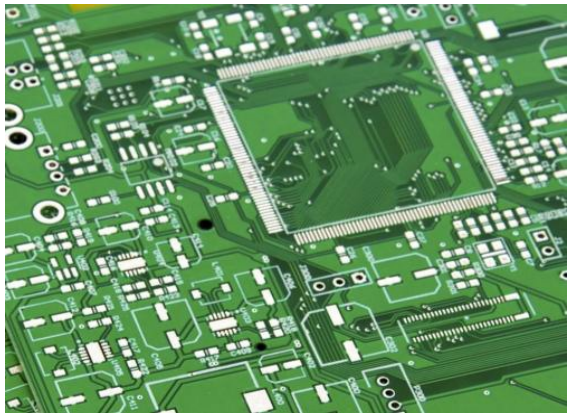
Technology

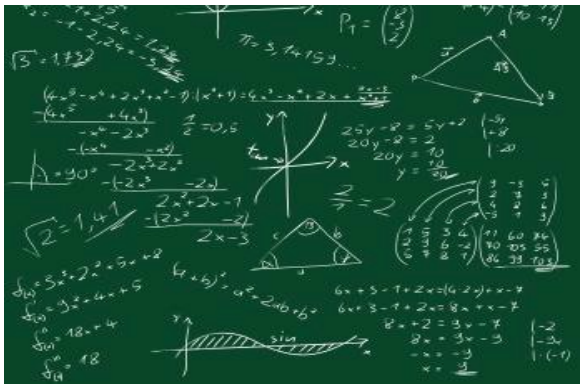
Engineering

Maths

They all link with each other!





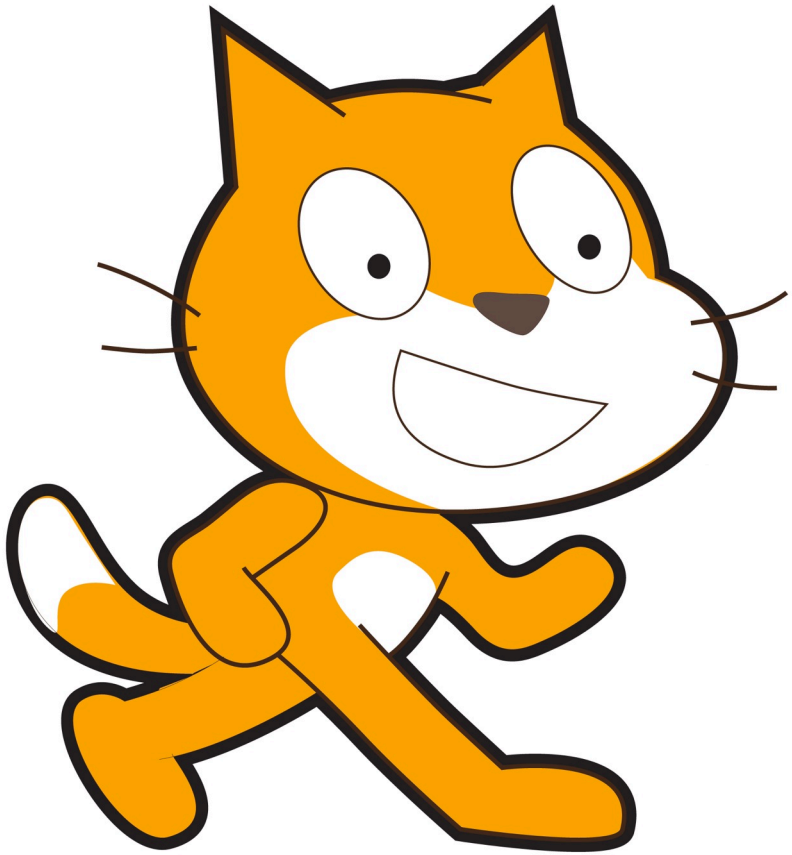


technocamps

Kinect2Scratch

Scratch Re-cap

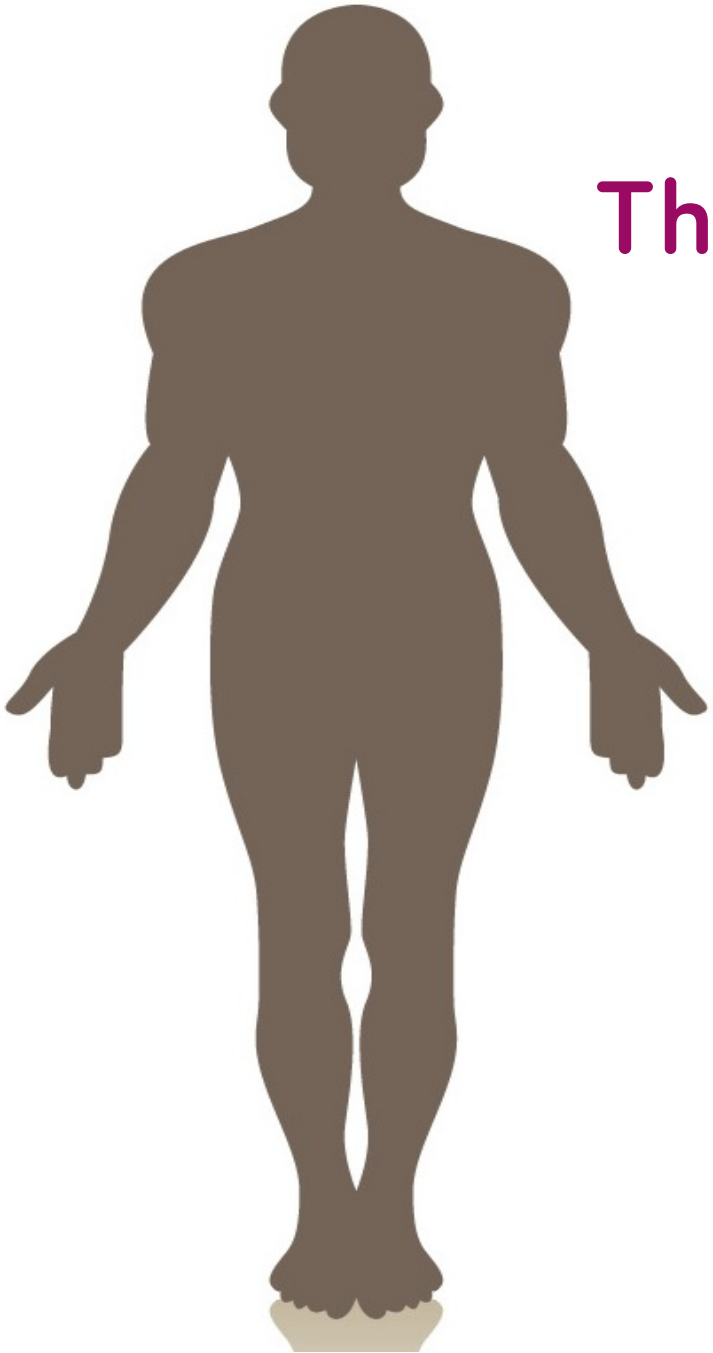
- Have you used Scratch before?
- Do you remember what the software interface looks like?
- Do you remember how to use Scratch?
- How do you make the sprite do different things?
- What sorts of games have you made?



What is a Kinect sensor?

Introducing the Kinect

- Who has heard of the Kinect?
- What platform is it mostly used for?
- What does it do?



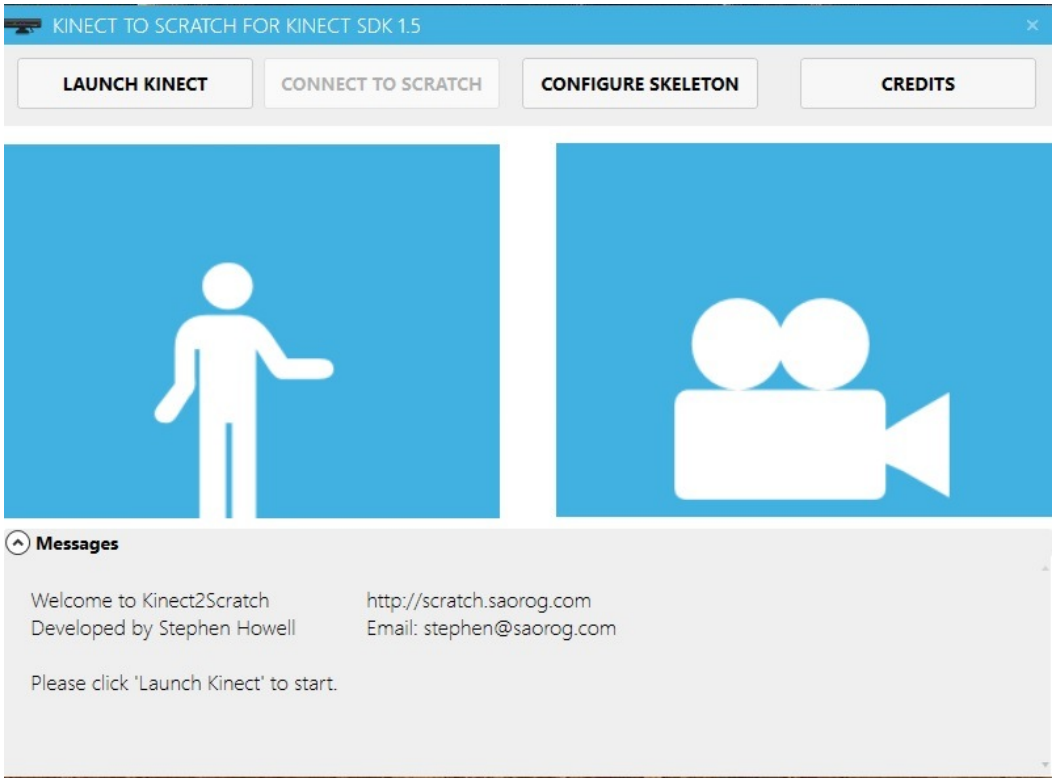
The Kinect

The Kinect unit contains the following input sensors:

- RGB camera
- 2 depth sensors to create a continuous 3D image
- Multi-array microphone (4 microphones that can recognise the player's voice from the noise in the room).

Kinect2Scratch

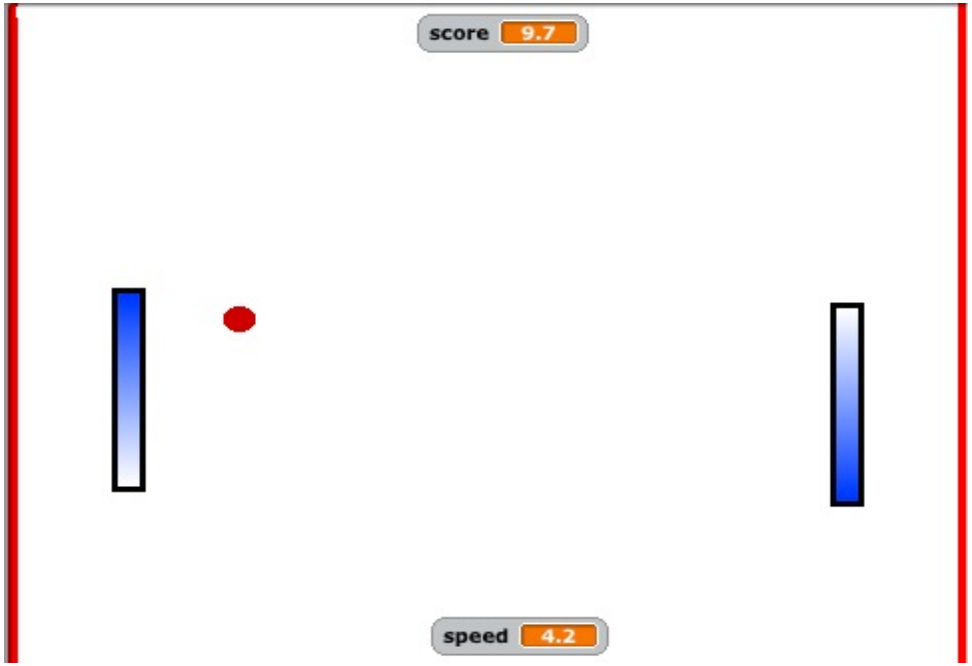
This application allows Scratch to use the Kinect sensor as a visual input, similar to a webcam!



Let's have a go...

A Paddle Game...

Together we are going to create our paddle game. Take a look at this example...



Let's begin!

New Sprites

First we need to add some new sprites:

- **Left and Right paddle**
- **A ball**
- **A colourful, visually attractive background**
- **“Winner” costume for the stage to change to once it wins**

To do this you can either “Paint new Sprite” or “Choose new Sprite from file”.

The Paddle Movement

The Paddle can only move up and down, according to the position of the mouse cursor to begin with.

Swap the “mouse y” command to the code block shown on the right to use the Kinect sensor instead of the mouse cursor.

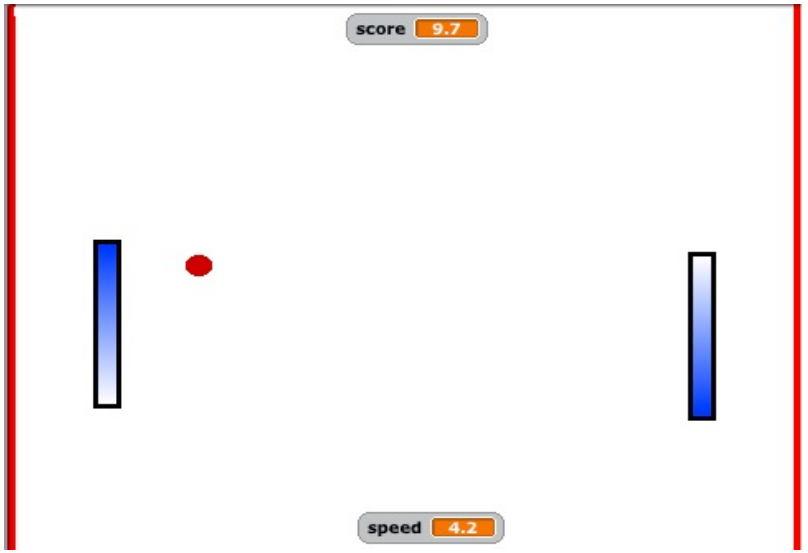
The other Paddle

How do you think you could apply the code and knowledge gained from the previous slide to implement code for the other Paddle?

Next..

We need to implement the following:

- A moving ball
- The ball must reflect off the paddles
- A score
- A background that changes when a player has won



technocamps

Post-Day Questionnaire

Don’t forget to save your work!

All of our software is OPEN-SOURCE
(Free and available to download)

It can all be found on our Technocamps website:
www.technocamps.com