

Welcome to Code Club!



About Code Club!

Welcome back to Code Club!!!

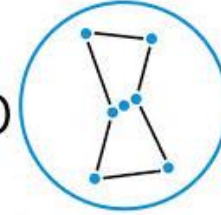
Stargazer Mission

Balloon Kit on Order

Balloon/Parachute



OrionGroup



Raspberry Pi Sensor Hat

Thermometer, Pressure Sensor (Barometer), GPS, 434Khz Radio Transmitter

Raspberry Pi Camera Module

Configure the Raspberry Pi & Hat.

Make an antenna for the Radio Transmitter

Mount our camera on the Payload box

Decorate the box! And pick a mascot!

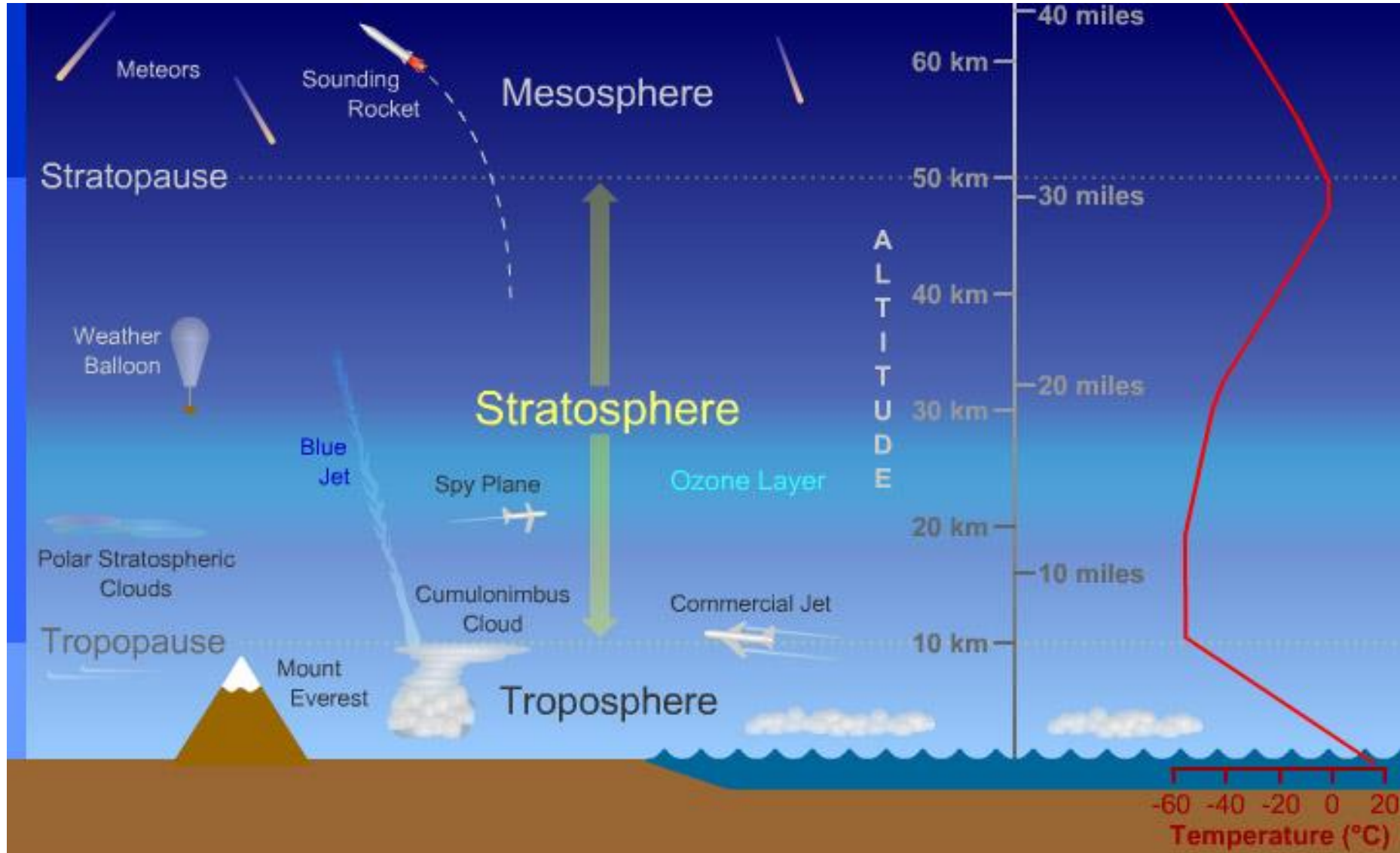
Weigh the Balloon/parachute/payload

Test the parachute!!!!

Test our tracking/telemetry

Apply for launch permission!

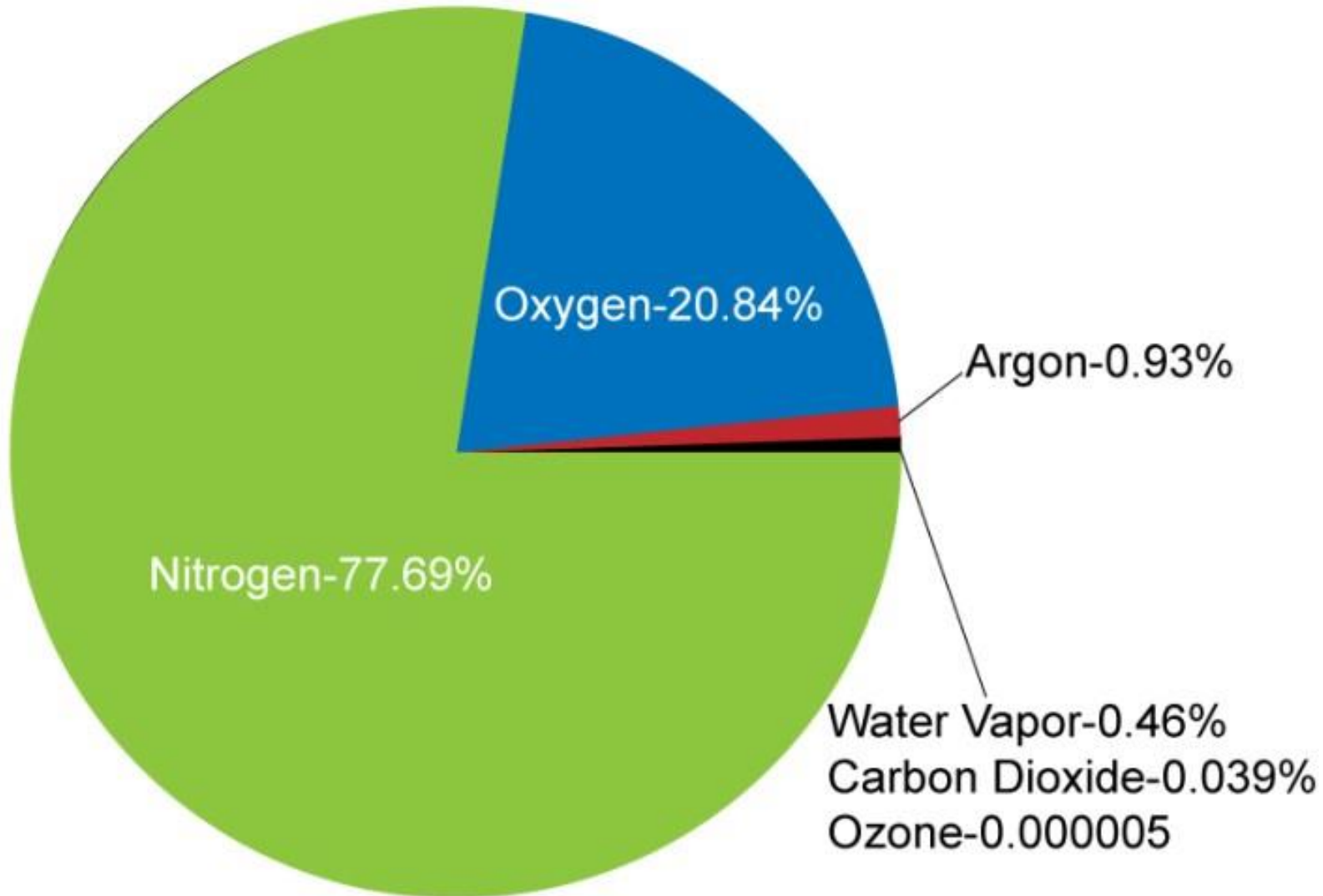
Stargazer Mission



Troposphere



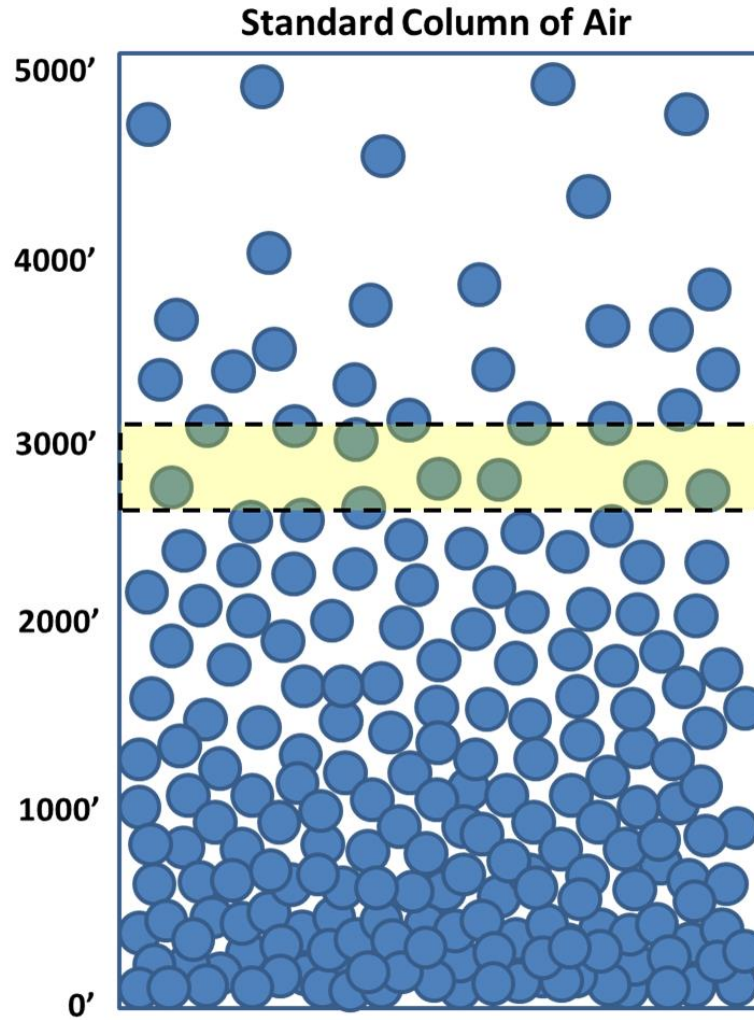
Gaseous Composition of the Troposphere



Troposphere

Further away from the center of the earth, and less air pushing down from above

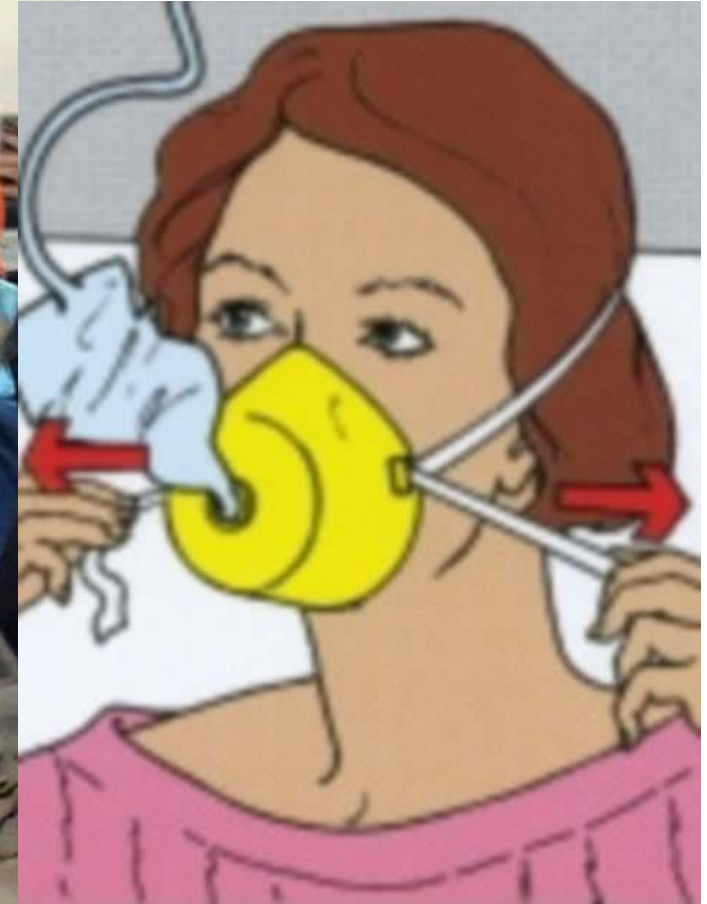
More air pushing down from above – squishes the molecules together



● Air Molecule



Southwest - Flight 1380



ALWAYS WATCH THE SAFETY BREIFING!!!!!!

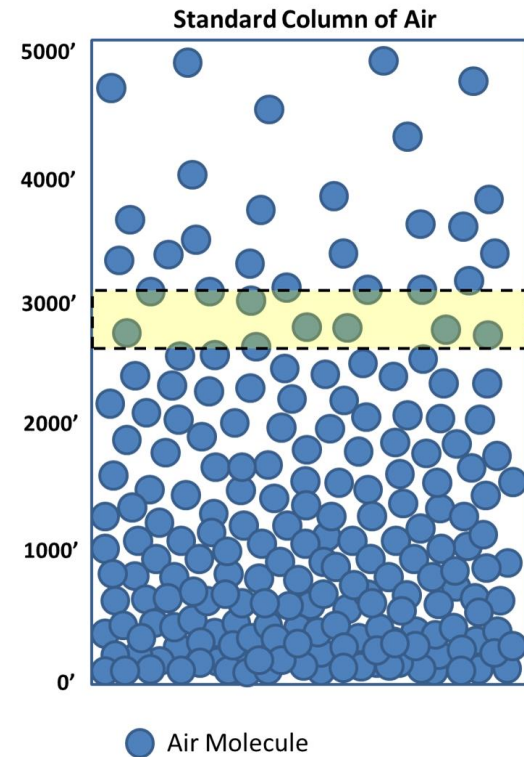
Air Pressure – Working out altitude

14.7 lbs per Square Inch
(about 7kg)

1 “Atmosphere”
1,013 Millibars
29.98 HectoPascals

One Millibar = 30 feet (about 9m)

1 hPa = 8m



613

$$1013 - 613 = 400$$

$$400 \times 30 = 12,000 \text{ feet}$$

1,013

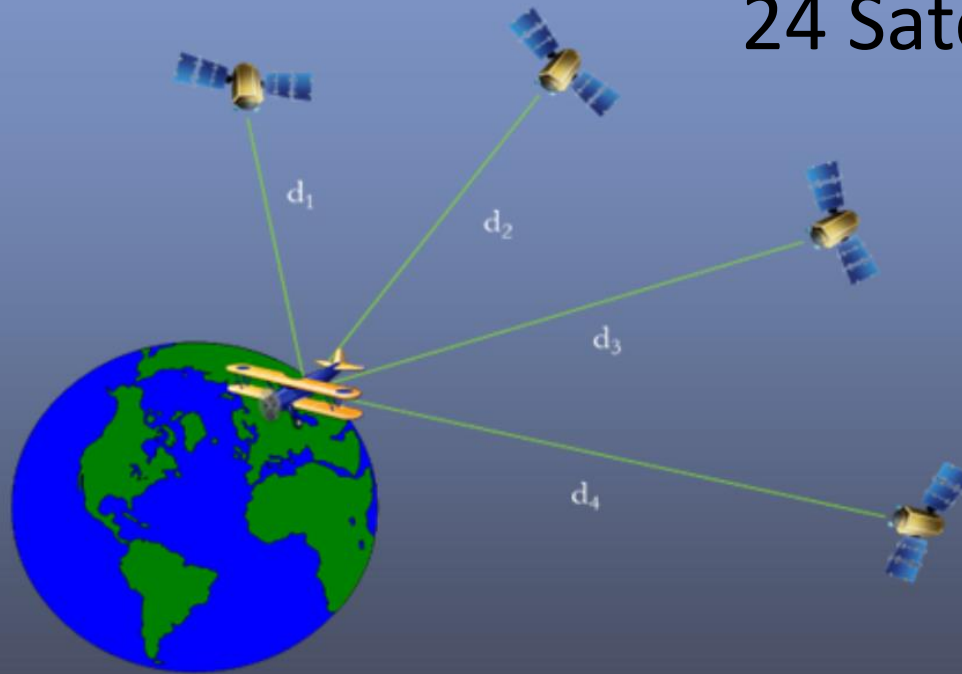
● Air Molecule

Other ways to work out altitude - GPS



GPS Solution

24 Satellites



GPS can be difficult at high altitudes

Gives position, as well as altitude, which is handy, as we want our balloon back!

Activities this week...

Scratch – Module 1
Project 6 – Boat Race

Scratch – Module 2
Project 1 – Memory Game

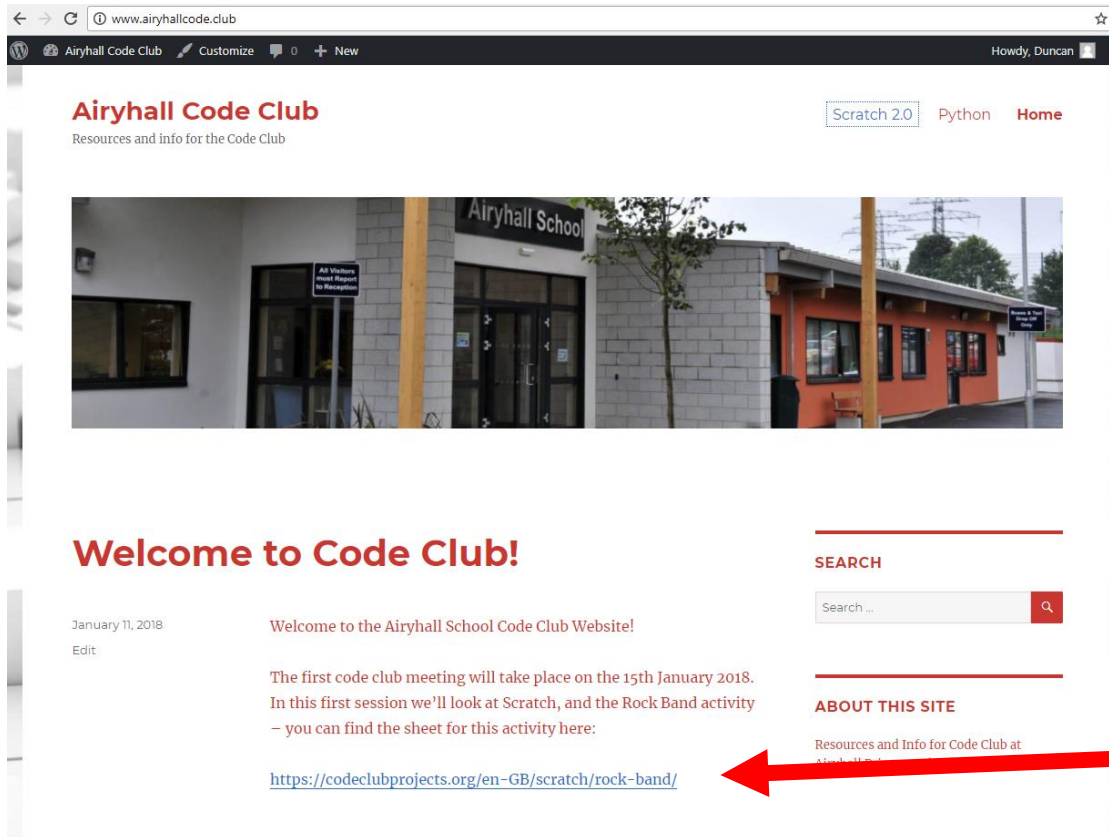
Raspberry Pi + SenseHat
Python Programming



Today's Activity

Open up a new browser **TAB**, and go to:

http://airyhallcode.club



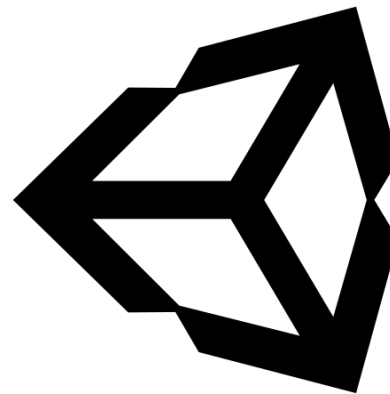
Click the link for the activity notes!

Next Week

360 Cameras



Virtual Tour of the School Using cameras & Unity



unity



CODE CLUB