

ICT at Camden

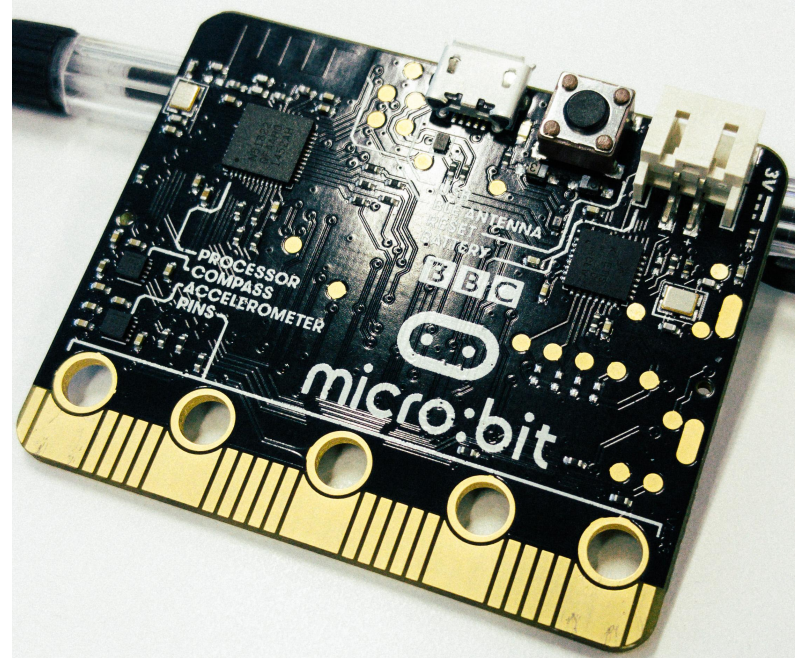
- 40 minutes per week in Year 7
- Taught cross-curricular in years 8 and 9
- Option at GCSE, alongside the GCSE Computer Science option

Curriculum in KS3 consists of: Computing, Digital Literacy and ICT

- Use of Google Apps for Education used throughout the school
- Facilities include computer rooms, chromebooks, Macs used in music

Computing -

- Coding
- Physical Computing
- Components of a computer
- Introduction to networking



Digital Literacy and ICT

- E-Safety
- Understanding and using a range of devices appropriately
- Use of different software packages and apps

SCRATCH



Office Microsoft®

Scheme of work

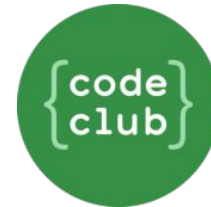
Areas covered in year 7:

1. ICT @ Camden School for Girls – Familiarisation with the school network and Google for Education
2. Game design in Scratch – This unit teaches pupils about functions, variables and objects in programming using object orientated programming to create a series of games
3. Introduction to Binary - This unit gives pupils an insight into the inner workings of a computer both from a physical point of view (such as looking at the components that make up a computer and their roles) as well as looking at some of the theory behind computers
4. Inside a computer and Networking – Pupils learn about the components that make up a computer system and how these are connected.
5. Spreadsheets – Pupils are taught how to build a spreadsheet solution for a range of contexts, gaining an understanding of implementing a solution with a range of data, formulae, graphs and charts
6. Web development – Students learn how to code in HTML5 and CSS and work as part of a group to design and create a website
7. BBC Micro:bit – Pupils are taught how to program using the BBC Micro:bit

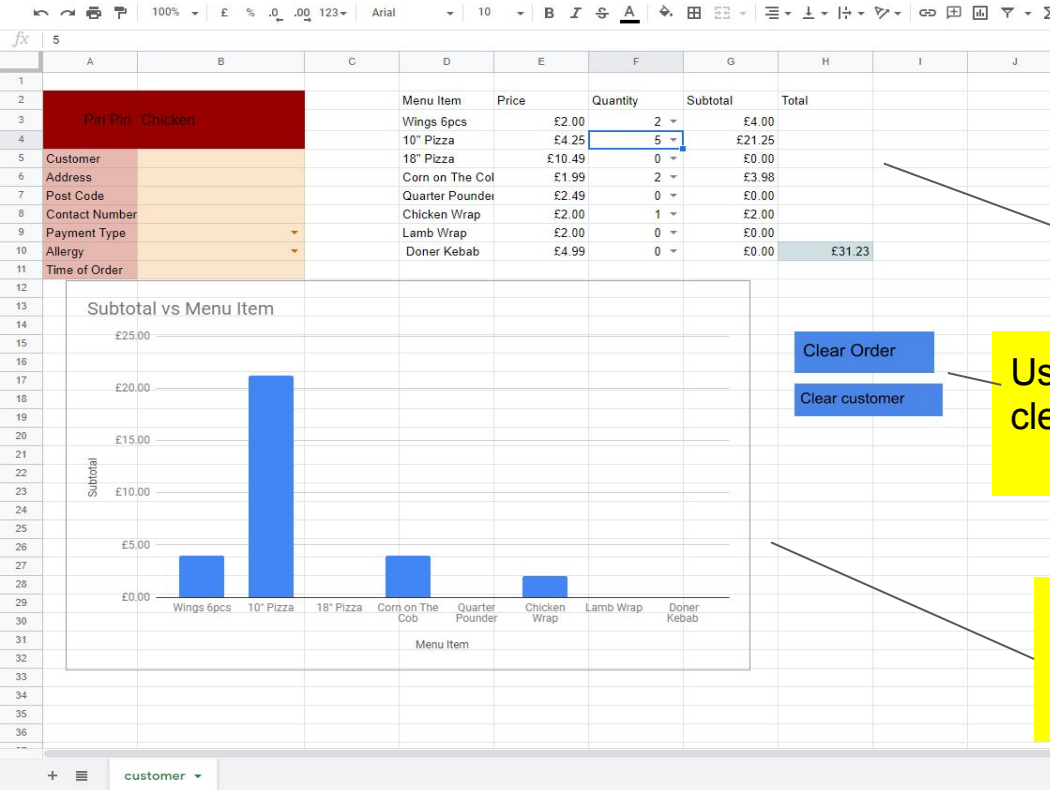
Extra Curricular

In the ICT department we offer a range of extra curricular opportunities for students to participate in:

1. Lego robotics club
2. Amazon AWS APPS competition
3. BEBRAS Computational thinking competition
4. Code club
5. Matrix Challenge
6. Cyber discovery programme
7. TFL Innovate



Examples of student work - Spreadsheets



Students are asked to create a food ordering system on a spreadsheet which includes a range of skills

Use of Formulas, Drop down combo boxes, lookups and mathematical formulas

Use of Macros to clear the system

Use of charts and graphs to summarise the order

Examples of student work - Micro:bit

Creating an animation using images and text on the Microbit

```

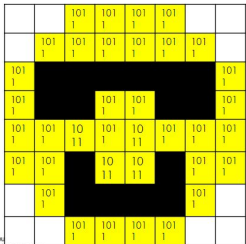
from microbit import *

pattern1 = Image("00000:09090:00000:90009:99999")
pattern2 = Image("00000:99099:00000:00000:99999")
pattern3 = Image("90009:09090:00000:99999:90009")

display.scroll("Aaaaagh!!!!")
display.show(pattern3)
sleep(10000)
display.scroll("Seriously?!")
display.show(pattern2)
sleep(10000)
display.scroll("It's ok, I forgive you")
display.show(pattern1)
    
```

10 11111

1. Make your own Image in binary
2. Then swap with your partner and get them to work out what it is



Binary Code	Colour	Name
0000	Black	Black
0001	Maroon	Maroon
0010	Green	Green
0011	Olive	Olive
0100	Navy	Navy
0101	Purple	Purple
0110	Teal	Teal
0111	Silver	Silver
1000	Gray	Gray
1001	Red	Red
1010	Lime	Lime
1011	Yellow	Yellow
1100	Blue	Blue
1101	Magenta	Magenta
1110	Cyan	Cyan
1111	White	White

Creating images in binary

www.computerscienceuk.com

```

from microbit import *
import random
    
```

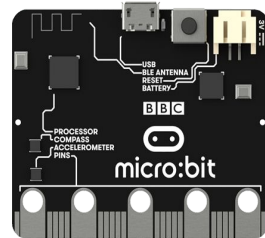
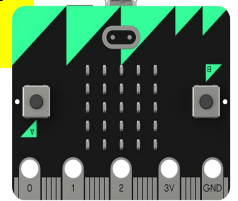
```

answers = [
    "It is certain",
    "It may happen",
    "Without a doubt",
    "Yes, definitely",
    "Absolutely",
    "As I see it, yes",
    "Most likely",
    "I don't see it",
    "Yes",
    "Signs point yes",
    "Not sure, try again",
    "Ask someone else",
    "Better not tell you now",
    "No clue",
    "Concentrate and ask again",
    "Don't count on it",
    "My reply is no",
    "My sources say no",
    "Possibly",
    "I honestly don't know",
]
    
```

Creating a Magic 8 ball using the accelerometer on the Microbit

```

while True:
    display.show("8")
    if accelerometer.was_gesture("shake") :
        display.clear()
        sleep(1000)
        display.scroll(random.choice(answers))
    
```



Students in Action

