

GCSE Computer Science



Why Should I Study Computer Science?

- You want to learn about how computers work
- You want to learn how to program to computers
- You like solving puzzles and thinking logically
- You want to learn about how computer technology is evolving and changing

Programming

```
import random
import time

def displayIntro():
    print('''You are in a land full of dragons. In front of you,
you see two caves. In one cave, the dragon is friendly
and will share his treasure with you. The other dragon
is greedy and hungry, and will eat you on sight.''' )
    print()

def chooseCave():
    cave = ''
    while cave != '1' and cave != '2':
        print('Which cave will you go into? (1 or 2)')
        cave = input()
```

LEARN THE SKILLS

```
You are in a land full of dragons. In front of you,
you see two caves. In one cave, the dragon is friendly
and will share his treasure with you. The other dragon
is greedy and hungry, and will eat you on sight.
```

```
Which cave will you go into? (1 or 2)
```

```
1
```

```
You approach the cave...
```

```
It is dark and spooky...
```

```
A large dragon jumps out in front of you! He opens his jaws and...
```

```
Gobbles you down in one bite!
```

```
Do you want to play again? (yes or no)
```

Programming – work out what this does

There's only one way to survive this game

Which way should you go?

Left – a spider eats you

Right – a baby dragon turns you into toast

Ahead – you are swept out of the cave on the river

What Will I Study?



- Python programming and skills in algorithm building
- Computing science theory topics such as networking, cybersecurity, how computers are made and what their different components do



What Will Computer Science Lessons Be Like?

- For programming you'll be hands on with Python working through a series of exercises and challenges to build up your knowledge and skills
- For the theory sections you'll be using your notes to complete workbooks that will challenge your understanding and get you to think about how computer systems work

How Will I Be Assessed?

1 Data

(a) Identify the smallest unit of measurement.

(1)

- ☐ A bit
- ☐ B byte
- ☐ C kibibyte
- ☐ D nibble

1 A program simulates the roll of a dice. The program uses a random number generator to create a random integer, between 1 and 6, to represent the roll.

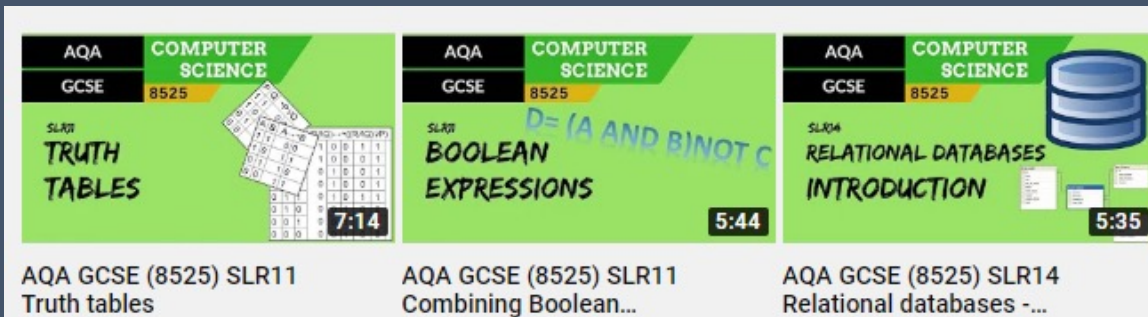
Open file **Q01**.

Amend the code to add or complete lines to:

- import the random library
- create one variable
- create one constant
- assign the result of a library call to a variable
- display a message and the contents of a variable on the screen.

- Exam 1: a written paper with a mixture of short to medium length questions covering topics such as networking and computer systems
- Exam 2: a live programming exam with a mixture of Python and theory questions

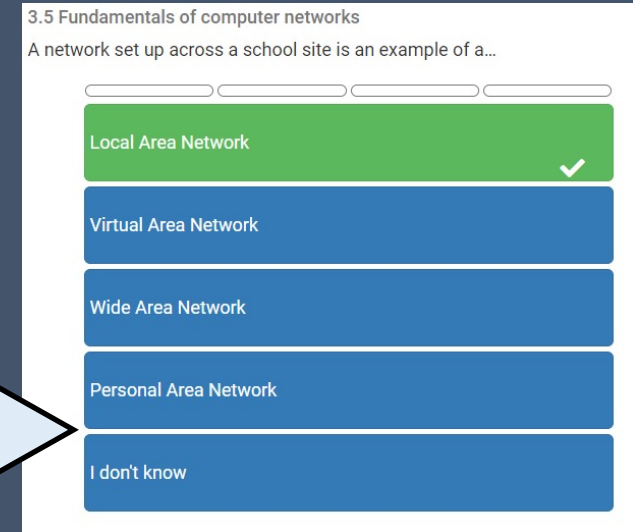
What Does Work Look Like In Computer Science?



Turn videos into your own structured notes to use in class to complete workbooks to practice your knowledge and skills



PRACTICE —> REVISION



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```


How Do I Find Out More Details?



- Speak to the subject lead: Mr Leigh
- Email Mr Leigh at leighv@wallingfordschool.com
- Speak to older students who are already taking the course