

GCSE Computer Science

Example lesson plan for introducing data types

Component 2 – specification content section 3.1.1

This lesson plan can be used in conjunction with AQA's [Example Scheme of Work](#)

Length of Lesson

1 hour

Context

Introduction to data types – Lesson one

Resources

- A collection of paper cups, a selection of different shaped sweets, eg Smarties, Jelly tots, Jelly babies, marker/whiteboard pens
- An interpreted language such as Python

Lesson Objectives

1. Understand what a data type is
2. Understand what data types exist

Teaching and Learning Activities

5 mins Register and other admin

- 10 mins
- Recap on what variables and constants are from the previous lesson
 - Get 4 students to label cups with their initials as in the last lesson
 - Put 3 sweets in one cup and 2 in the second (all of the same kind)
 - Assign the expression $\text{cup 1} + \text{cup 2}$ to cup 3 and show that this is easily achieved as before (use the same kind of sweet in cups 1 and 2)
 - Now assign $\text{cup 1} / \text{cup 2}$ to the cup 4. As the answer is now 1.5 how will the students assign the correct value to the cup using their original sweets? They cannot. Introduce the idea of using one of the other types of sweet to overcome this problem
 - Discuss the concept of a data type

- 40 mins
- In small groups get the students to think about the different types of data that may exist. They have already come across integer and real (although you may not have used these terms yet)
 - Show students how to declare variables of different types and assign values using an interpreter for their language. (If an interpreter does not exist then frame these in a simple program.) Introduce integer, real, string, character and Boolean as a minimum
 - Students to solve simple expressions provided on a worksheet using the

interpreter

5 mins Issue and explain homework: Students are to create a revision guide for variables, constants and data types that can be used by other students. The guide can be in any format, eg poster, leaflet, presentation, flashcards