A Practical Introduction to Python

Lesson 1 of 3 - Quiz

Lesson Description

This unit of work is about students exploring and using textual programming in a way that lets them do successful things. It is not about making sure that they understand the syntax for a while loop or an if statement.

In this lesson students will take an existing quiz and try changing different bits in order to explore the way the code works. By the end of the lesson they should understand how to set the question, change the answers and count the score - everything they need to make their own 3-5 question quiz.

Not being one for slideshows I tend to simply demonstrate what I'm talking about in IDLE. This means I have the freedom to change the way the lesson is going, but I also don't have shiny polished resources for you. My best advice would be to try following these instructions yourself until you're comfortable with the principles. From there it's all about troubleshooting syntax errors where the students have mis-typed.

Lesson Objectives

All students should learn:
• How to run Python code
• How to edit Python code

Most students should learn:
• How to correct simple syntax and typing errors
• How to change the values of variables and understand the results

Some students might learn:
• How if statements work
• How to use a counter

Resources

• Software: Python 3.x
• Software: EasyGUI (easygui.sourceforge.net)

• Python Quiz.py
• house.gif

Lesson Outline

Starter

Run the Python Quiz file on the whiteboard. Ask students to answer the question (feel free to camp the "Is it a bird? Is it a plane?" bit). Explain that they are going to use this to create their own quiz.

Task 1

Students should download the Python Quiz.py and house.gif files. If Easygui is not installed then the attached easygui.py file can simply be placed in the same folder and it will work. Once everything is downloaded the students should test the program runs and should then make sure to open it in IDLE so that they can see/edit the source code.

Task 2

You can do this in any order, but blow the instructions up on the whiteboard and ask the students to identify which bit says "Welcome to my awesome quiz". Ask them to change the wording in their programs and then test it.

Other things to change include:
• The "incorrect" message (students love insulting people who get it wrong)
• The "correct" message
• The question (encourage them to leave the picture for now)
• The 4 possible answers (try getting them to have just 3, and then 5, answers)
• The "correct" answer (this is the hardest bit so far. Remember that it is case sensitive.

Task 3

Easygui will only work with gif images, so once students have got the measure of tweaking the code they will need to use a graphics package to convert the jpg they have probably just pinched from Google Images into a gif. The gif file MUST be in the same folder as the Python program file and, again, the filename is case sensitive.

Sadly animated gifs will not work.

Task 4

The challenge now is to get students to create a complete 3-5 question quiz based on whatever they want (by all means give them a theme to work to).

Extension

Students can try adding an if/else or if/elif/else block at the end to give the player a rating based on their score.

Plenary

I always struggle with plenaries, you'll probably do a better job than I would ;-)