Load the program from here:
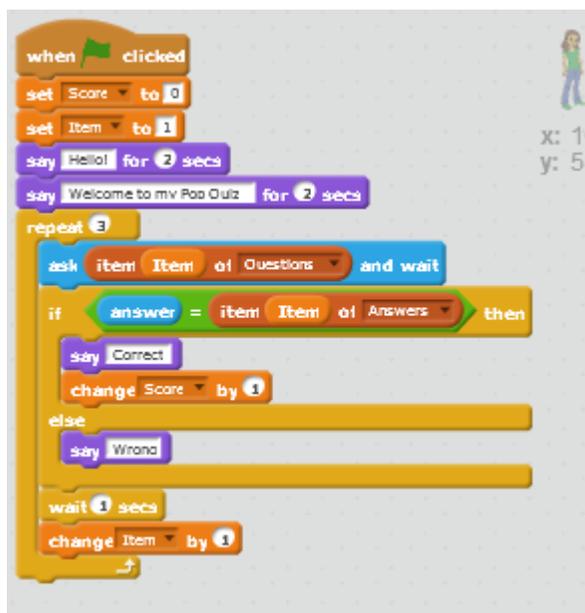
http://scratch.mit.edu/projects/17013856/

This part of the program loads the data into the list. Change the items in the lists for your questions and answers.

The program looks like this.

Can you see how the loop selects the questions and answers.

Run the program and see if it works.

Challenges

Change the program to ask 5 questions?

Write a new program with two lists; one list is name of person, the second list is tutor group of that person. The user should type in a name and then the program will tell them which tutor group that person is in.

SCRATCH   Variables and Lists

Computers can remember things quite well. They do however need to be told how to what to do. This project explores the idea of variables and lists—two ways in which computers can store information.

Load the program at: http://scratch.mit.edu/projects/17013325/

What do you think this program will do?

The Score is a *variable*—a place where the computer will remember an item of data.

You create a variable by clicking on the   Data   set of blocks.

Click on the green flag and see if the programme works.

Challenge 1

Add two more questions to the programme with the presenter telling you the correct answer and the score at the end.

Challenge 2

Can you change it so that the variable score takes one away if you get a wrong answer?
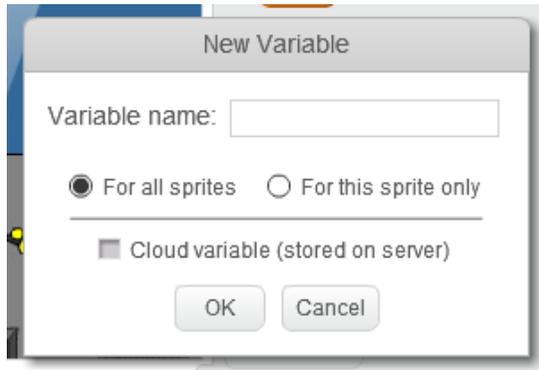
To add a little excitement to the quiz we are going to add a timer.

First click on the **Data** block and then on the Make a variable option.
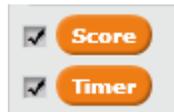
From this option you first need to give the variable a name.

New Variable

Variable name: _____

○ For all sprites   ○ For this sprite only

☐ Cloud variable (stored on server)

OK   Cancel

It is always good to give a variable a good name that we remember later.
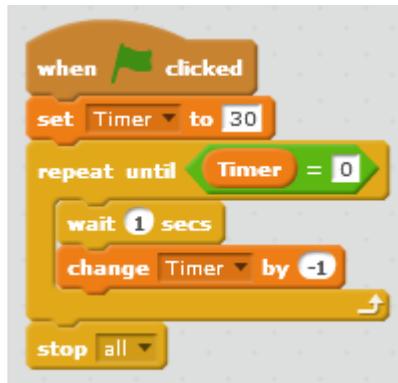
We will call our Timer. Then click on OK.

If there is a tick in the box next to the variable it will appear on the screen.

☑ **Score**
☑ **Timer**

Now create this piece of programming.

when ⚑ clicked
set Timer to 30
repeat until Timer = 0
  wait 1 secs
  change Timer by -1
stop all

Run the program and see if it works.

We can stop the quiz after the person has scored a certain number of points by adding these blocks to our programme.

when ⚑ clicked
set Timer to 30
repeat until Timer = 0
  if Score > 1 then
    say You have got the qualifying score for 2 secs
    stop all
  wait 1 secs
  change Timer by -1
stop all

Add these blocks which show how a variable can be used in a mathematical equation.

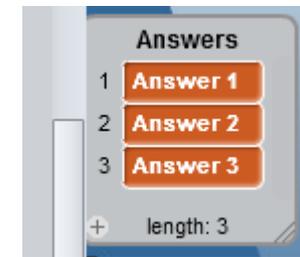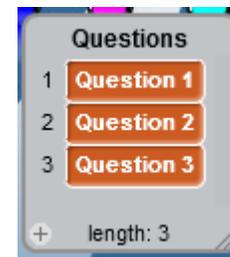*We have looked at variables: how the can be used to store thing in the computers memory. You have be shown how to create a variable, change the variable and to use it to make decisions.*

Using Lists

It is quite cumbersome have to duplicate each block of programming to create each question.

There is another method that does not use variables but does use Lists. A list is a collection of items of data.

Questions
1 Question 1
2 Question 2
3 Question 3
+   length: 3

Answers
1 Answer 1
2 Answer 2
3 Answer 3
+   length: 3

To be able to use the lists we need to create another variable to make sure we have the right item in the list. We will call this variable Item

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