Automated Maths Quiz

A Scratch quiz creation program designed for KS2 pupils

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Maths Quiz Elements

Create a program which asks the user random multiplication questions. If the user types the right answer they will be congratulated and their score will be increased by 1. If the user types the wrong answer they will be told the correct answer. The score will be reported after each question.

Programming Elements

- Simple variable to hold the score
- Increasing the variable if the user gets an answer right
- Printing the variable when reporting the score to the user
- Randomly selecting two numbers and placing them within two variables called num1 & num2
- Multiplying the num1 & num2 and putting the solution into a variable called total
- Comparing the users answer to the variable total
- Selection of pathway (if or else) depending on the answer to the question
- Simple typed input by the user of the quiz
- Repeating (iterating) the question 10 times

Choose a single sprite to ask the questions

You can keep the cat.

If you are keeping the cat move to the next slide.

If you want another character right mouse click on sprite1 and left click on delete.

Choose a new sprite from file.

I recommend a sprite that has a mouth to ask questions, people or animals would be ideal.

Starting the quiz, creating a variable to hold the score in and setting the score to zero to start with

Start the quiz by inserting a green flag start block in sprite scripts

when 🚩 clicked

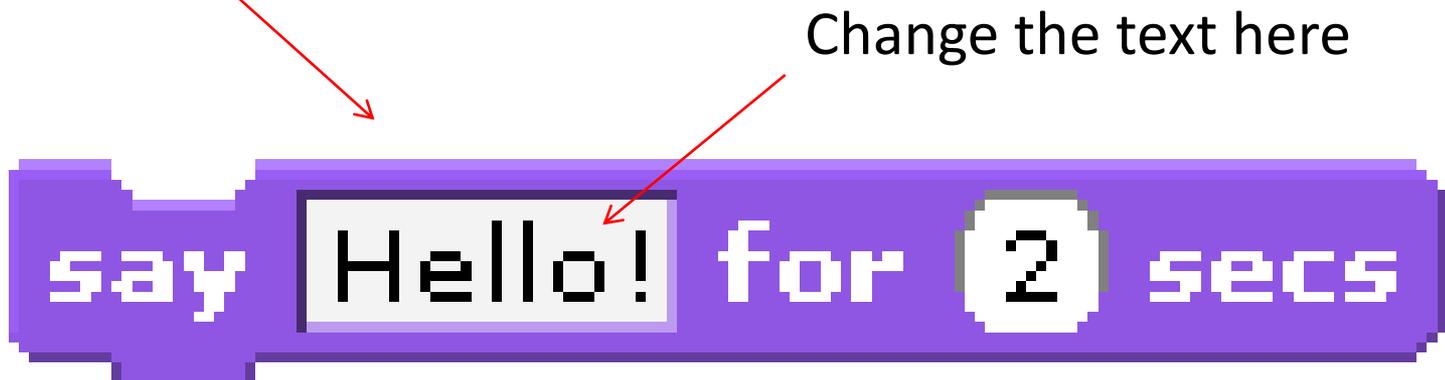Make a variable by selecting variables in blocks and clicking on make a variable. Name it score.

Motion	Control
Looks	Sensing
Sound	Operators
Pen	Variables

Make a variable

Set variable score to zero by inserting this block underneath the start block

set score ▾ to 0

Introducing the quiz to the user using say commands

In this program we are using just one block of code. All instructions attach underneath the last instruction created

From the looks blocks use one or two say commands to welcome users to the quiz

Change the text here

Make 3 new variables by selecting variables in blocks and clicking on make a variable.

Name them **num1**, **num2** & **total**

Create 3 new variables

num1 will hold our first number
num2 will hold our second number
total will hold the answer after num1 and num2 are multiplied

New Blocks

pick random number between first and last number — `pick random 1 to 10`

multiply two numbers using * — ` * `

set variable to — `set num1 to 0`

Choose random numbers and put them inside variables **num1** and **num2**. Multiply **num1** and **num2** and put the result into **total** variable.

`set num1 to pick random 2 to 5`
`set num2 to pick random 1 to 12`
`set total to num1 * num2`

Generate a random number between 2 and 5 and put in into variable **num1**

Generate a random number between 1 and 12 and put in into variable **num2**

Multiply **num1** & **num2** and put the result into total variable

```
Make a variable
Delete a variable
☑ num1
☑ num2
☑ score
☑ total
```

To test your work so far tick all of the variables so they appear on the screen. Run your code. Does **num1** multiplied by **num2** equal **total**?

joins things
need 3 of these

Your code so
far should look
similar to this

Ask the user to multiply
number inside **num1** by
number inside **num2**

If the users answer is the
same as the answer inside
total variable increase
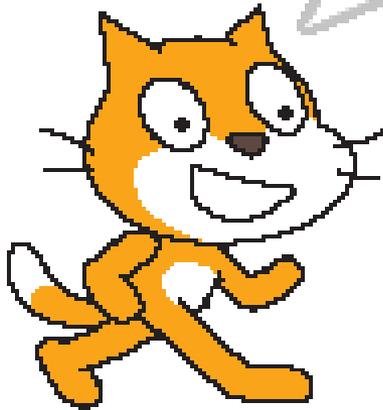**score** variable by 1 and
say correct

Else the users answer is not the same as the
answer inside variable **total** say Wrong, the
answer was number inside **total** variable

Ask the user the question and check if their answer is the
same as the one stored inside the **total** variable

The say block joins text saying *Your score so far is* with the *number* inside variable score and then adds the text *out of 10* at the end.

Let the user know what their score is

Repeat the question 10 times

Place most of your code inside a repeat 10 loop. If you get it right the quiz will generate 10 random questions and record the score as the user plays.

Finishing touches

- You may want to add a more interesting background by importing a background on stage.

- You may want to add a sound when a question is correct and another when it is wrong.

- You will want to test your program by getting other people to play test it.

Final Question

Although this is a good quiz these is one thing that can go wrong with it. What do you think that is?