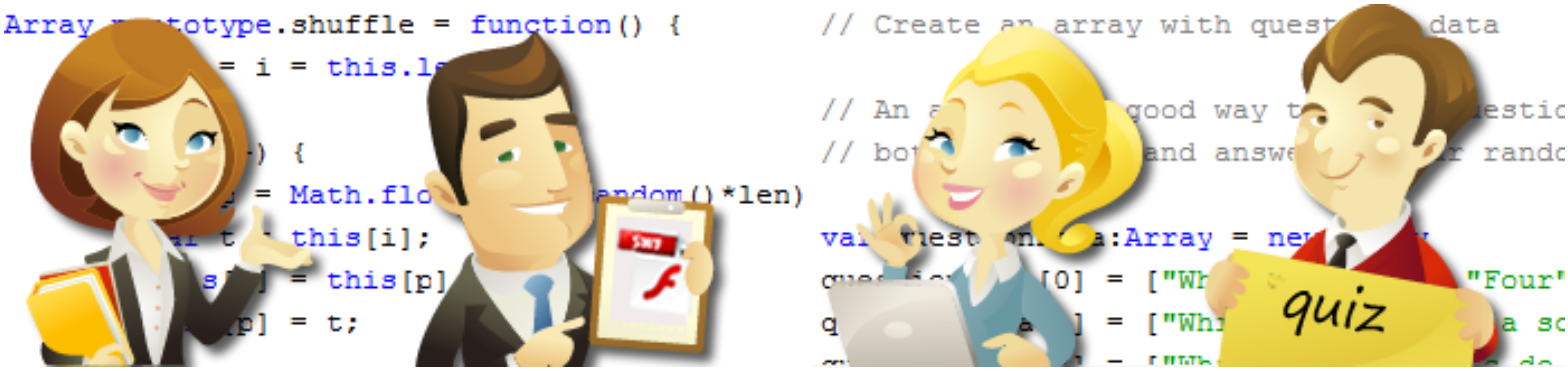
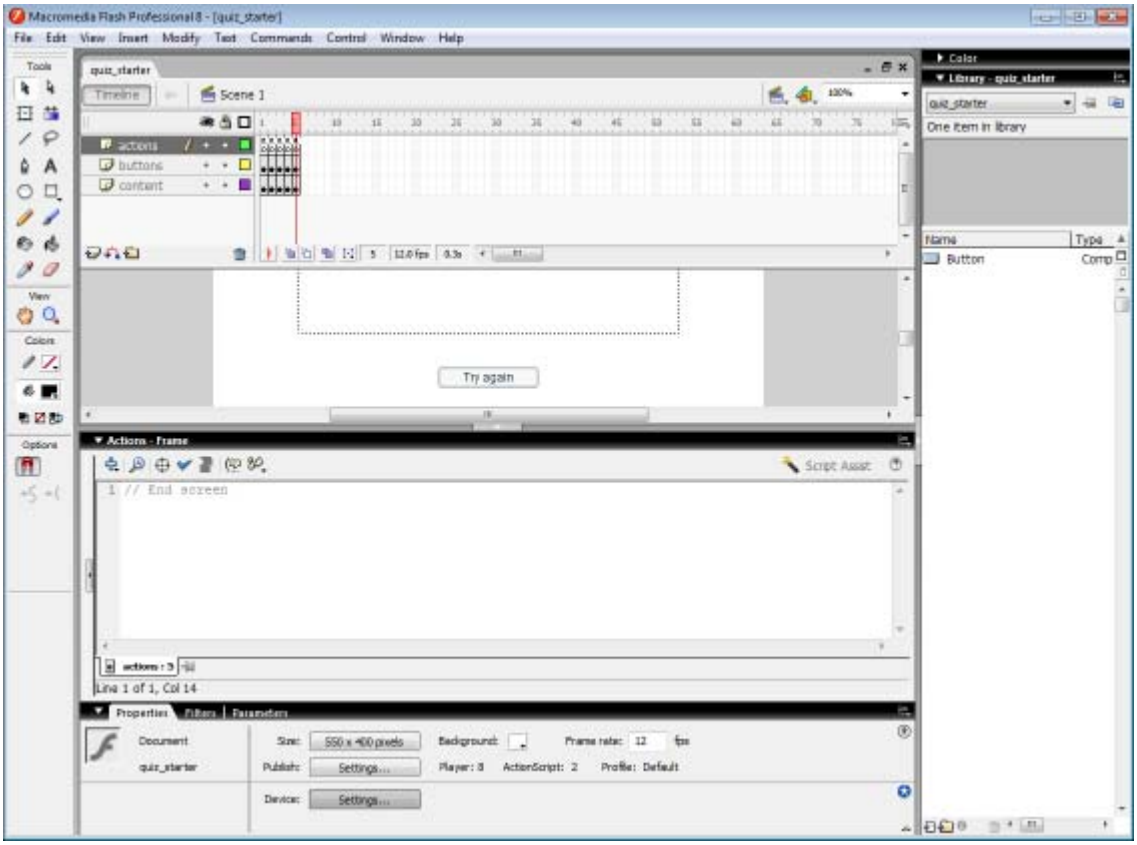
Creating a quiz using Flash



These instructions will help you create your own Flash quiz using Actionscript. Follow the instructions at first but then customise and develop your quiz yourself.

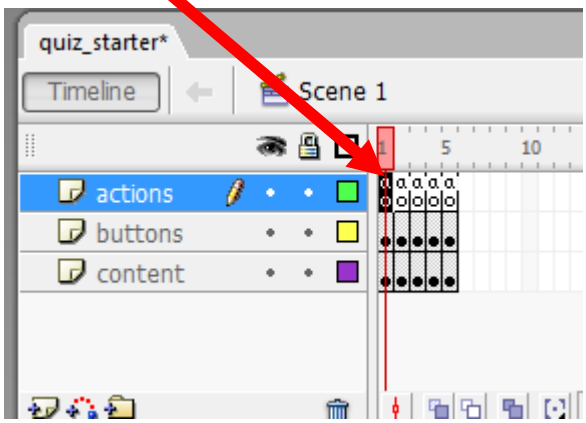
1. Load the **starter template** – your screen should look something like this:



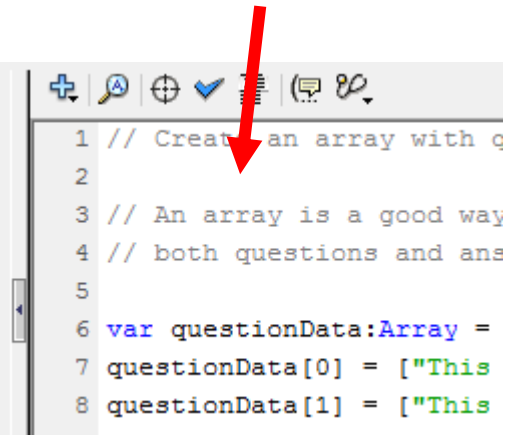
Can you see the **Actions** panel near the bottom of your screen?

If not, press the F9 key to make it appear.

2. Click on the top layer of the first frame



You should see code appear in the Actions panel.



Depending on your screen size, you can just drag the **Actions** panel to make it larger.

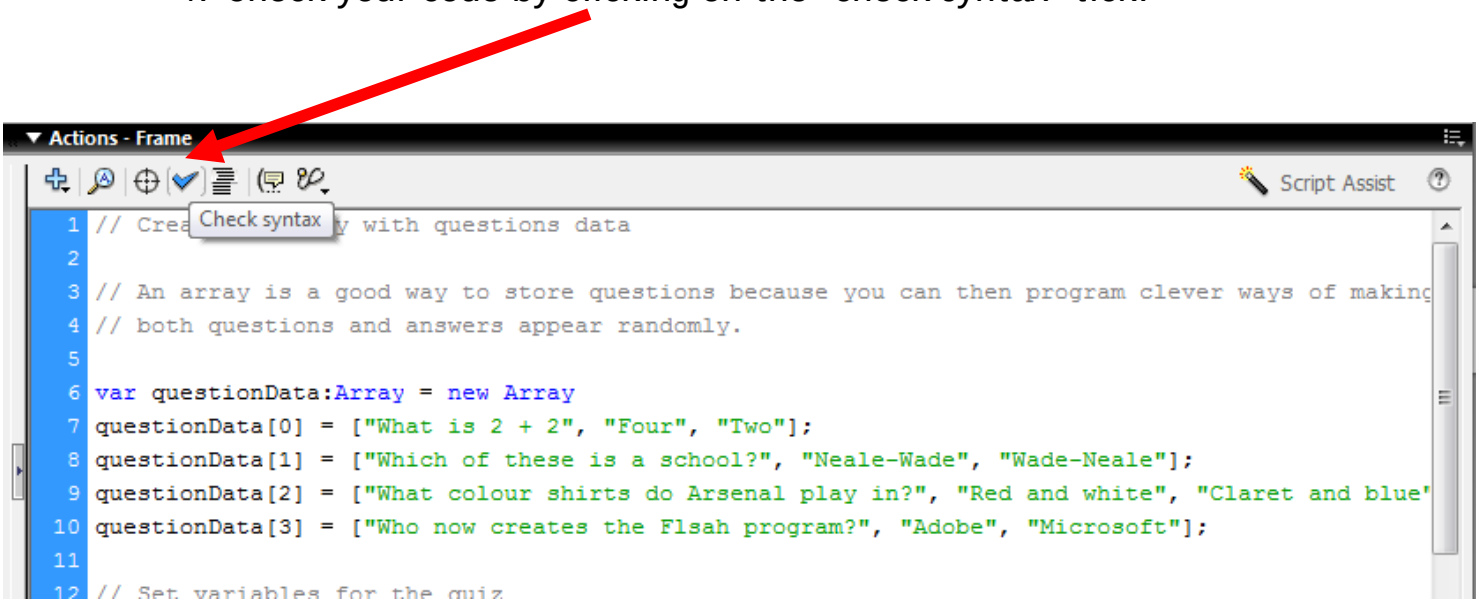
Go ahead – resize it – make my day!

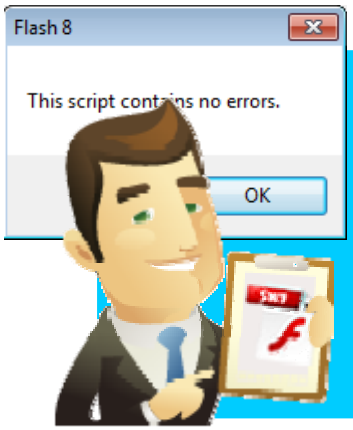
3. Look carefully and find the 'Array' code – this shows quiz data for four questions.

Edit the code so you have your own questions. You need four questions with a correct & incorrect answer.

Need some help with your questions? Don't worry too much - just ask something quick & simple.

4. Check your code by clicking on the ‘check syntax’ tick:

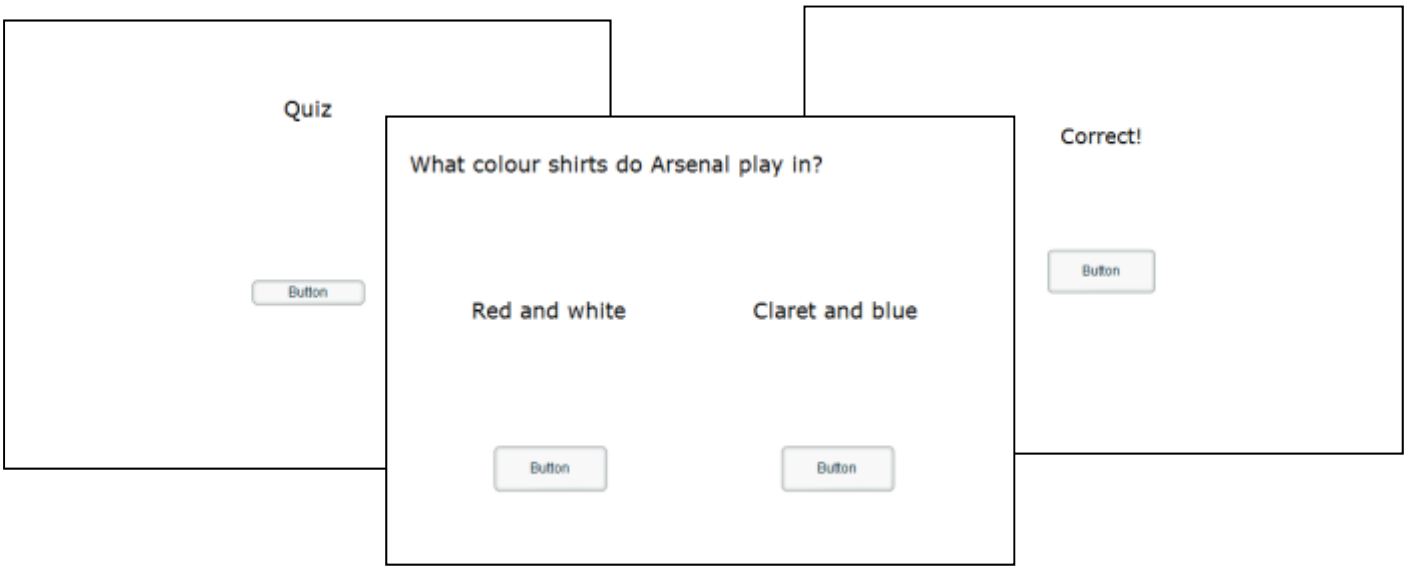




If you do encounter an error, check your code carefully. Make sure you haven’t deleted any speech marks or removed any commas.

The Actionscript editor actually ‘colour-codes’ your Actionscript – use the colours to spot your error…

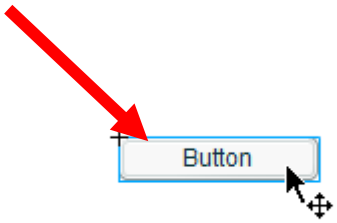
5. Save your work (File > Save As…) and test your quiz out by pressing the F12 key.



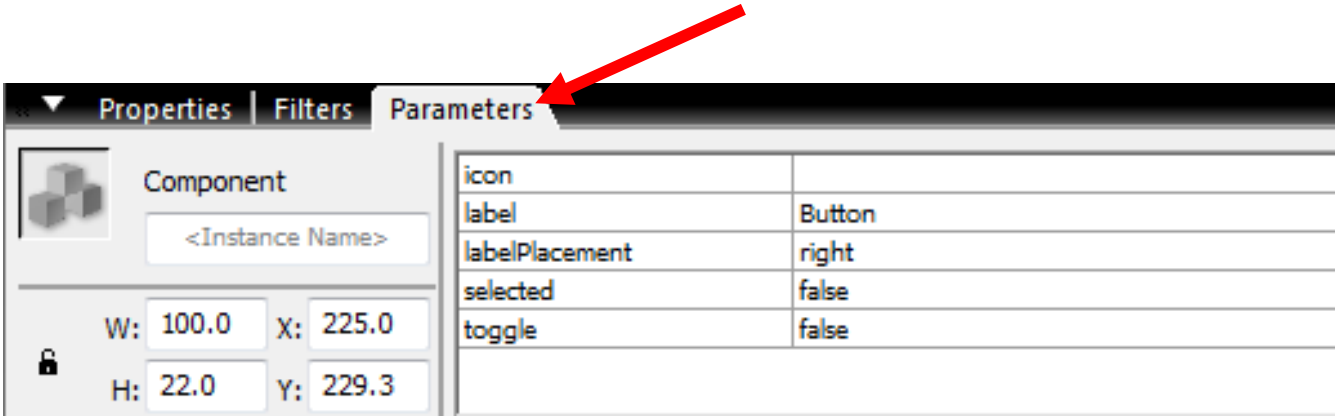
6. Assuming everything has worked out you've probably noticed a few issues with the quiz:

- All the buttons say 'Button'
- Every time you play the quiz the questions & answers are in the same place
- No score is recorded
- It also looks incredibly boring

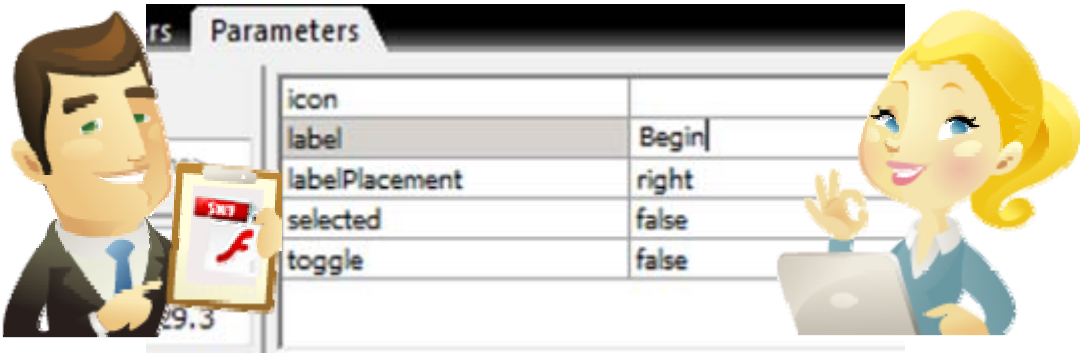
7. Press the F9 key to hide the Actions panel. Select the button on the first frame:



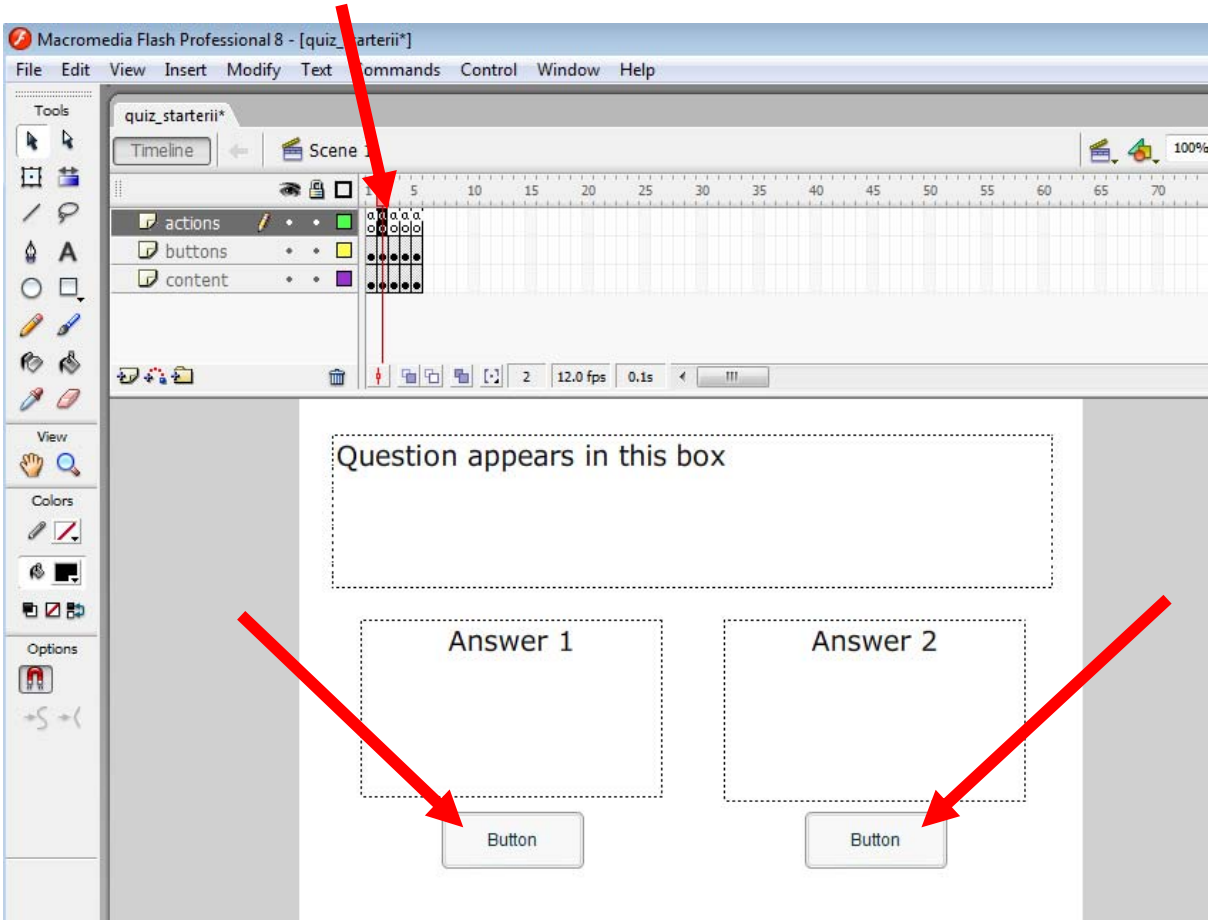
8. Near the bottom of your screen, select the 'Parameters' tab.



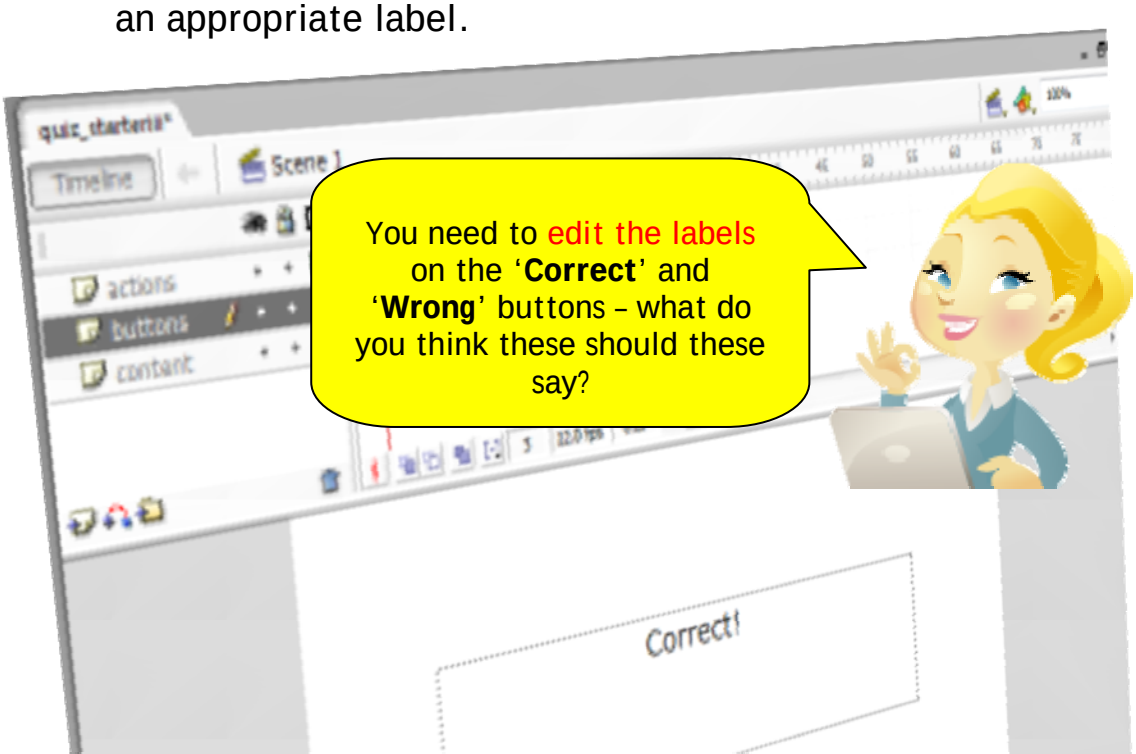
See if you can work out how to change the label on the button. This button needs to say something like 'Begin' or 'Start'.



9. Now click on the second frame. Here there are two buttons underneath the two answer boxes. Change the labels of these buttons so they both say 'Select'.



10. Continue through the next frames and make sure each button has an appropriate label.



You've now improved the buttons – now time to improve all the other issues with the quiz.

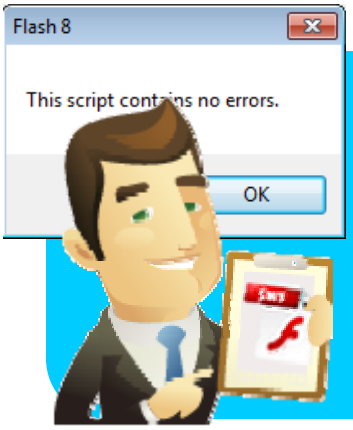
Next – doing some programming (and no, you cannot copy & paste the code).

11. Go back and select the top layer of the first frame. Press the F9 key to make the Actions panel appear again.

12. Add the following code to the top of the Actionscript:

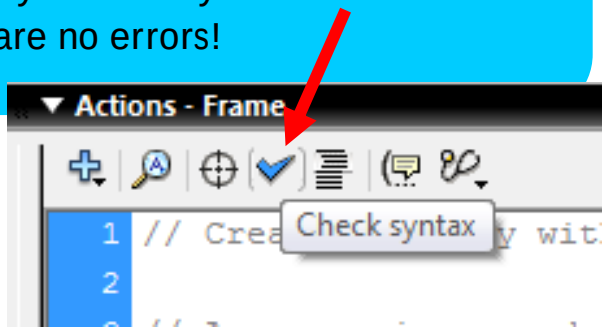
```
// Code to enable 'shuffling' of arrays
// shuffle array prototype
Array.prototype.shuffle = function() {
    var len = i = this.length;

    while (i--) {
        var p = Math.floor(Math.random()*len);
        var t = this[i];
        this[i] = this[p];
        this[p] = t;
    }
};
```



Just as you did earlier – check your code for errors. It is very easy to miss a character out that will change the entire code.

Check your code carefully – even if you do click on the tick and are told there are no errors!



13. The code – if you've typed it correctly – creates a new command called '.shuffle' that will randomly sort an array.

    To make it work, additional code is needed after the question data. Find the space after the question data and add the following:

```
// Shuffle the questions
questionData.shuffle();
```

```
19 var questionData:Array =      Array
20 questionData[0] = ["What      2 + 2", "Four", "Two"];
21 questionData[1] = ["Wh        hese is a school?", "Neale-Wade", "Wade-Neale"];
22 questionData[2] = ["Wha       our shirts do Arsenal play in?", "Red and white", "Claret and blue"];
23 questionData[3] = ["Who       ow creates the Flsah program?", "Adobe", "Microsoft"];
24
25 // Shuffle the questions
26     questionData.shuffle();
27
28 // Set variables for the quiz
29 var questionsDone = 0;
30 var numberOfQuestions = question
```

Press F12 to preview your quiz. Do the questions appear in a random order?

If not, check your Actionscript – something must have gone wrong.

14. Save your work (File > Save).

    The next step is to add additional Actionscript to count the number of correct and incorrect answers.

15. Look back at the first frame Actionscript and find the section that has the comment '`Set variables for the quiz`':

```
28 // Set variables for the quiz
29 var questionsDone = 0;
30 var numberOfQuestions = questionData.length
31
```

You need to add in two new variables which will count the correct and incorrect answers. Add this code underneath:

```
var questionsCorrect = 0;
var questionsWrong = 0;
```

16. Move to frame 3 – and add the following code that will increase the recorded number of correct answers. You need to add this code before the '`stop();`' command.

```
questionsCorrect++;
```

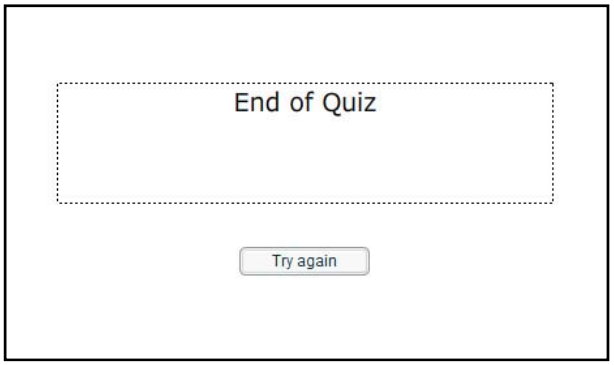
```
1 // correct answer
2 // Stop this frame until the user presses the continue button
3 // Look on the button for the 'continue' code
4 questionsCorrect++;
5 stop();
```

17. Repeat step 16 but for an incorrect answer – make sure you use the 'wrong' variable!

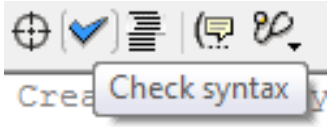
That confusing guidance means you should use the **`questionsWrong`** variable – not the *wrong* variable.

18. Now move to the final frame where it just says ‘End of Quiz’.

    Here we need to show the results of the quiz. We will add a textbox saying how many correct, wrong and then an overall percentage.



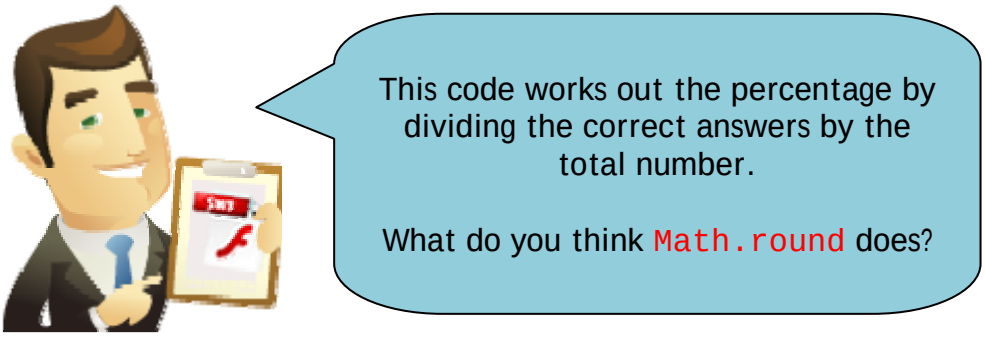
19. Add this Actionscript to Frame 5 – the code should appear all on one line. Make sure you check for errors too!



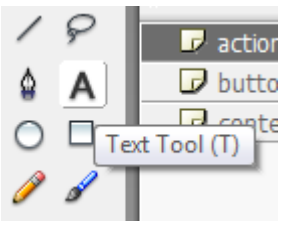

```
var percentage = (Math.round(100*(questionsCorrect /
numberOfQuestions)))+"%";
```

```
// End screen

var percentage = (Math.round(100*(questionsCorrect/numberOfQuestions)))+"%";
```

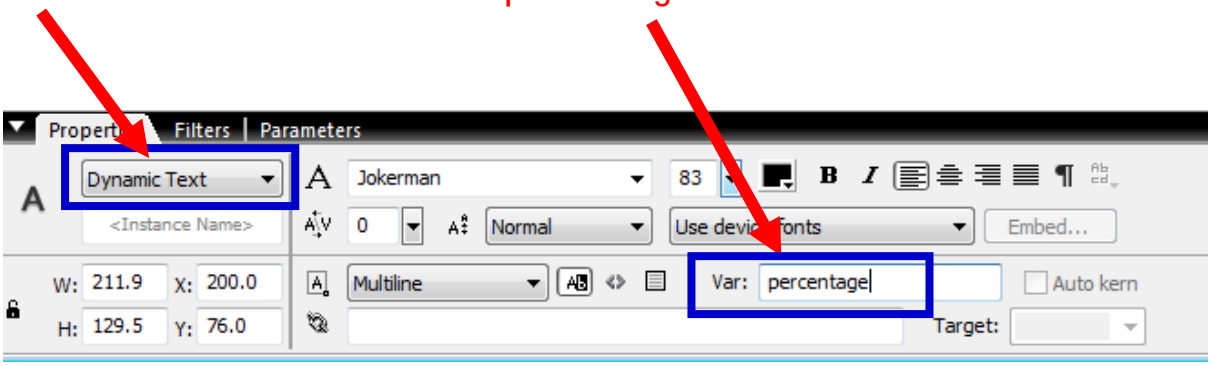


20. Move the textbox saying ‘End of Quiz’ nearer the top of the screen.



Use the text tool to draw a new large textbox – select a funky and large font to use. Make sure the box is wide & tall enough to display ‘100%’

21. In the Properties panel make sure the textbox is set to Dynamic Text. Then add the variable 'percentage' to the Var box.

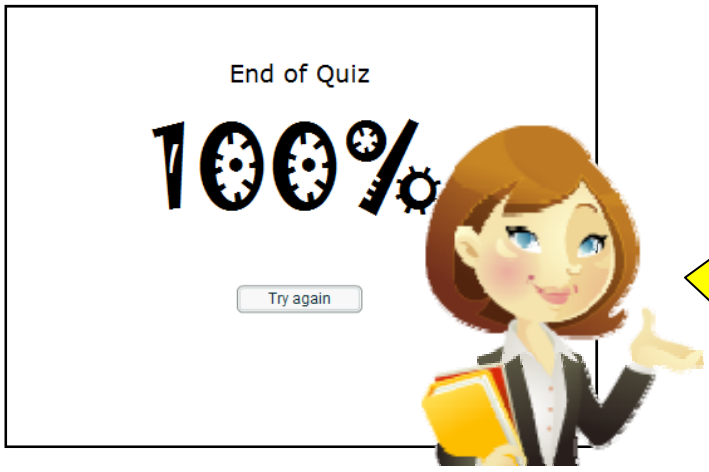


What have you just done? You've made the textbox '**dynamic**' – meaning it can be updated from Actionscript.

You've also told it to display the variable 'percentage'

Just pause for a moment. If you've got this far, then excellent. Give yourself a slap on the back.

You've **fixed the buttons**, made the **questions** appear in a **random order** and got the quiz to display the **final percentage**.



Problem is – even though it is better – the quiz still looks really naff.

This needs to be fixed!

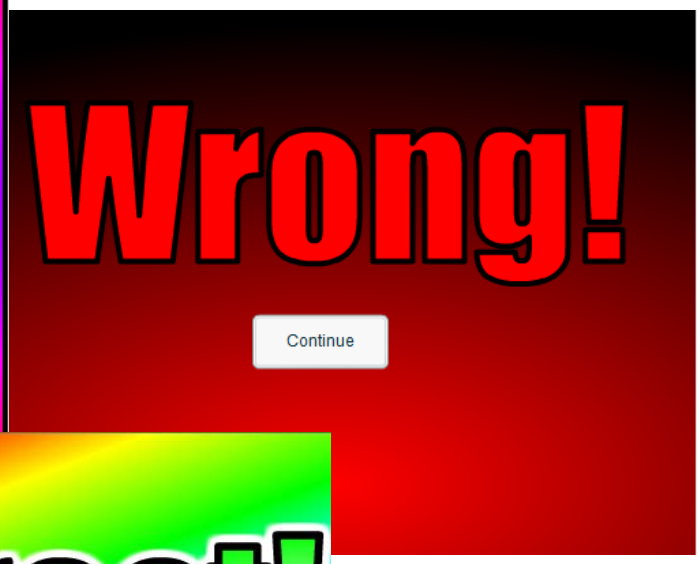
Developing your quiz further

The one remaining problem is the **presentation** of the quiz. You should also make more use of the variables that count the number of correct & wrong answers.

Use the suggestions below for ideas:

Presentation

- Look through the whole quiz and make the whole thing more exciting.
- When someone gets a question correct or wrong you could include animated text or make a daft image appear on the screen.
- Improve the look of the start and end screens too – add images, change the background – make the entire thing more attention grabbing!



Displaying number of correct & wrong answers

- Look back at the section where you added the percentage to the final frame.
- All you actually need to do is create additional textboxes that will make use of the correct / wrong variables.
- You could just add further textboxes to show 'Number correct…' but it would be much better to include graphics instead – perhaps a tick and a cross?
- If you want to get really clever you could provide some dynamic feedback – this would involve 'If' statements that would set an appropriate comment:

```
if (questionsCorrect < 2) {feedback = "Rubbish - you only got 2 correct"}
```

Random answers?

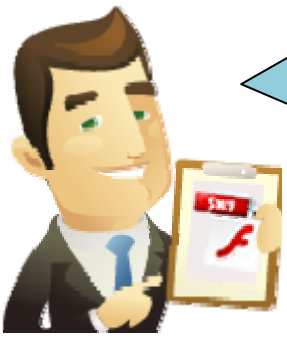
- You have made the questions appear randomly, but the correct answer is always on the left.
- Look at the Actionscript in Frame 2 and edit the 'Show the question' section:

```
// Show the question
question = questionData[questionsDone][0]

var answerShuffle:Array = new Array;
answerShuffle[0] = questionData[questionsDone][1];
answerShuffle[1] = questionData[questionsDone][2];

[redacted]

answer1 = answerShuffle[0];
answer2 = answerShuffle[1];
```



One line has been blanked out – you have to work this out yourself.

Think through what each line does and you'll spot one part of the process is missing – and that is the line you need!