

# Coding with Scratch: Questions and Quizzes

Computing | Year 4 | Planning Overview

## Introduction

In this unit about *Coding with Scratch: Questions and Quizzes*, children will learn what a quiz is and the features that make them exciting. They will then create their own multiplication quizzes on Scratch, using a variety of Scratch blocks. The children will have the opportunity to experiment with adding various effects to make their quizzes more visually appealing and interactive. The unit is completed by the children creating a competitive multiplication quiz, creating variables and using Sensing and Operators blocks.

Accompanying this unit is a helpful [Knowledge Organiser](#). The Knowledge Organiser collates the subject knowledge for the unit and is used throughout this unit.

It is advisable that teachers create a teacher's account in Scratch and create a space to see your class' work. Creating a teacher's account allows you to see each child's work in one space. For further information about Scratch teacher accounts and getting started please visit [Scratch Teacher Accounts](#)

Further support with using Scratch can be found in our [Scratch Support Page](#)

## Hardware and Software

### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

### Software:

- Scratch Online accessed via [Scratch](#)

## Health and Safety

Children should be encouraged to have good posture and sit up to the computer. Children should not spend extended periods of time looking at the screen. Ensure safe and responsible use of portable digital devices, discouraging children moving around the classroom with technology. Make sure that food and drink are kept away from all electronic items.

### Scratch Safety

Showing or creating the flashing sprite effect could be problematic for children with conditions such as epilepsy. Discretion is advised.

## Home Learning

In this task, children will be presented with sections of code from an algorithm. The children will deconstruct the code and explain what happens to the sprite when the algorithm is executed.

In this task, children will have the opportunity to research quizzes at home. They can identify features that makes the quiz appealing, its aim and different types of questions used.

## Disclaimer

### External Links:

We hope you find the information on our website and resources useful. This resource contains links to external websites and/or external apps. Please be aware that the inclusion of any link in this resource should not be taken as an endorsement of any kind by Twinkl of the linked website and/or app, or any association with its operators. You should also be aware that we have no control over the availability of the linked pages and/or apps. If the link is not working, please let us know by contacting TwinklCares and we will try to fix it although we can assume no responsibility if this is the case. We are not responsible for the content of external sites and/or external apps.

## Assessment Statements

By the end of this unit...

### Working Towards the Expected Level:

- With support, children can understand and explain conditional statements and use if...then and if...then...else blocks in code.
- Children can select the appropriate blocks, including repeat loops, Sensing blocks and Operator blocks, to create a multiplication quiz.
- Children can explain how some simple algorithms work and identify errors within an algorithm.
- Children can suggest ways to add effects to improve a multiplication quiz for the player and implement some of these within an algorithm.
- With support, the children are able to create variables and implement these variables in code.

### Working At the Expected Level:

- Children can understand and explain what conditional statements are, using if...then and if...then...else blocks in code.
- Children can select appropriate blocks for a desired outcome, including using repeat loops, Sensing blocks and Operator blocks to create a multiplication quiz.
- Children use logical thinking to explain how algorithms work and are able to detect and correct errors in algorithms and programs.
- Children can add effects to improve a multiplication quiz and enhance the experience for the player.
- Children can create variables and implement these variables in code.

### Working At Greater Depth:

- Children are able to confidently explain what conditional statements are, using if...then and if...then...else blocks in code.
- Children can independently select appropriate blocks, including using repeat loops, Sensing blocks and Operator blocks to create a multiplication quiz.
- Children can confidently: use logical thinking to explain how algorithms work; solve problems by decomposing them into smaller parts and detect and correct errors in algorithms and programs.
- Children can work independently to add a variety of effects to improve a multiplication quiz and enhance the experience for the player.
- Children can confidently create and use variables within their code.

## Lesson Breakdown

### 1. Let's Quiz!

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

To understand how to use and compare different types of quizzes.

### Resources

#### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

### Additional Lesson Information and Possible Misconceptions

The 'Identify the Blocks' slide on the [Lesson Presentation](#) could be used as a pre-assessment opportunity. Children are asked to select and explain which Scratch blocks they feel would be most appropriate for a quiz.

### 2. A Short Quiz

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

To be able to use duplication and sequencing to create a short quiz.

### Resources

#### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

#### Software:

- Scratch Online version accessed via

### Additional Lesson Information and Possible Misconceptions

This lesson contains an Adult Guidance document and it is recommended that it is read prior to the start of the lesson.

### 3. Brilliant Backdrops and Super Sprites

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

To be able to make a quiz more visually appealing by adding backdrops and changing sprites.

#### Resources

##### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

##### Software:

- Scratch Online version accessed via \_\_\_\_\_

#### Additional Lesson Information and Possible Misconceptions

This lesson contains an Adult Guidance document and it is recommended that it is read prior to the start of the lesson. It is also important to note that solutions provided are one possible solution and children may produce their own fully-working code.

### 4. Scores, Sounds and Special Effects

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

To use special effects, sounds and scores to enhance a quiz.

#### Resources

##### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

##### Software:

- Scratch Online version accessed via \_\_\_\_\_

#### Additional Lesson Information and Possible Misconceptions

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## 5. Ready, Steady, Go!

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

To create a new racing quiz using Operators, Variables and Sensing blocks.

## Resources

### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

### Software:

- Scratch Online version accessed via

## Additional Lesson Information and Possible Misconceptions

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## 6. Race to the Finish

Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.

Use sequence, selection, and repetition in programs; work with variables and various forms of input and output.

Using logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.

To add additional features to complete a multiplication quiz.

To review a multiplication quiz.

## Resources

### Hardware:

- PC devices, such as laptops, Chromebooks and/or tablets

### Software:

- Scratch Online version accessed via \_\_\_\_\_

## Additional Lesson Information and Possible Misconceptions

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