



Computing

Year 5

Term 6

Programming & Control: Selection

Key Question: How is selection used when programming?

National Curriculum Objectives:

- 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
- use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs

Vocabulary

Selection, condition, count-controlled loop, outcomes, conditional statement (the linking together of a condition and outcomes), algorithm, program, debug, algorithm, input, outcome, implement,

Prior Learning:

- In Y5 T3 the children learnt about selection in physical computing. In this unit the children will continue to develop their understanding of selection when programming.
- In Y2 T6 the children used Scratch Junior to create a simple quiz.
- Throughout Key Stage 2 the children have had experience of using block coding in Scratch. Through this they should understand the concepts of 'sequence' and 'repetition',
- When creating branching tree databases in year 3 the children had experience of asking yes/no questions. In a branching structure which they will use to create quiz questions.

End Point:

The children will use their knowledge of writing programs and using selection to control outcomes to design and program a quiz in Scratch

Use end of unit assessment quiz

Safe and Responsible Use:

use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Digital Literacy Skills:

- Develop typing speed
- open, resize, reorganise and close windows,
- use a range of software

Knowledge:

I know:

- how selection is used in computer programs
- that a condition can only be true or false
- that a count-controlled loop contains a condition
- that a condition-controlled loop will stop when a condition is met
- that when a condition is met a loop will complete a cycle before it stops
- that selection can be used to branch the flow of a program
- that a loop can be used to repeatedly check whether a condition has been met
- the importance of instruction order in 'if... then... else...' statements

Skills:

I can:

- identify and modify conditions in a program
- choose a condition to use in a program
- compare a count controlled loop with a condition-controlled loop
- create a condition-controlled loop
- use a condition in an 'if... then...' statement to start an action
- use selection to switch program flow
- design the flow of a program that contains 'if... then... else...'
- identify the outcome of user input in an algorithm
- identify ways a program could be improved

Cross Curricular Links:

Questions created in their quiz could link to a wider curriculum area and be based upon a theme, e.g. Ancient Greece.

Oracy:

- provide sentence stems for evaluating programs
- paired work for designing, implementing and improving a quiz
- types of questions

1. Key Questions:

2. How can photos be changed on the computer, and how can that affect our feelings about the way we look?
3. How are 'selection' and 'conditions' used in computer programs?

4. How can condition statements be used to create two outcomes?
5. How can condition statements be used to answer questions?
6. How can selection be used to create an interactive quiz?
7. How can selection be used to create an interactive quiz?
8. How can selection be used to create an interactive quiz?