Unit 6.2 - We are computational thinkers| Year 6 Computing | Autumn 1

I should already know

In Unit 5.5: We are adventure gamers pupils were introduced to the idea of a graph linking locations in an interactive adventure game

By the end of the unit, I will:

- Use Google Maps to find the shortest or fastest route between two places
- Find optimum routes on a simplified map
- Work out the smallest number of coins needed to make an amount of change
- Record algorithms for random, linear and binary search

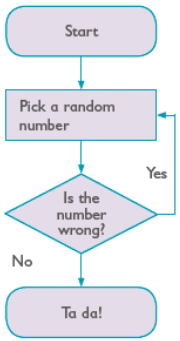
Questions I will be able to answer by the end of the unit:

- What is a **binary search** algorithm?
- How do you find the **shortest** or **fastest** route between two places?
- Which is the most **efficient** algorithm?
- Which Scratch **algorithm** will help to find the smallest number of coins in change?
- What is the **difference** between binary, linear and random searching?

Key Vocabulary

Algorithm:	a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective
Binary search:	search algorithm that identifies repeatedly which half of the list of possible elements the target belongs to
Linear search:	search algorithm that looks at each element in turn to see if it meets the criteria
Decomposition:	breaking a problem down into smaller parts
Search:	to identify an element of a list that meets specified criteria
Sort:	to put a list into order

Random search:



Linear search: