

Lesson 1

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Lesson 6

Principles

Application

Define the terms decomposition, abstraction and algorithmic thinking.

Recognise scenarios where each computational thinking technique is applied.

Apply decomposition, abstraction and algorithmic thinking to solve a problem.

Describe the difference between algorithms and computer programs.

Identify algorithms that are defined as written descriptions, flowcharts and code.

Analyse and create flowcharts using the flowchart symbols.

Use a trace table to walk through code that contains loops, selection and lists.

Use a trace table to detect and correct errors in a program.

Define the searching problem: finding the position of an item in a list of items.

Describe how linear search is used for finding the position of an item in a list of items.

Perform a linear search to find the position of an item in a list containing sample data.

Describe how binary search is used for finding the position of an item in a list of items.

Perform a binary search to find the position of an item in a list containing sample data.

Compare the features of linear and binary search and decide which is most suitable in a given context.

Interpret and analyse the code for linear search and binary search.

Trace code for linear search and binary search with input data.

Identify factors that could influence the efficiency of a linear search implementation.

Key:

Concept

Skill

Links:

Direct prerequisite

Scaffolding not direct prerequisite

