Jerry Clay Academy
Subject Unit Overview

Subject: Computing   Year Group: 6   Term: Autumn 2

Core Learning of This Unit: We are computational thinkers

- Develop the ability to reason logically about algorithms
- Understand how some key algorithms can be expressed as programs
- Understand that some algorithms are more efficient than others for the same problem
- Understand common algorithms for searching and sorting a list.

Prior Learning:

Pupils thought about recipes as sequences of instructions in Unit 1.2: We are TV chefs.

Pupils thought about the sets of rules for some simple computer games in Unit 2.2: We are game testers.

Pupils used logical reasoning to detect and correct errors in programs in Unit 3.2: We are bug fixers.

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

National Curriculum Statements:

- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems.
- Use sequence, selection, and repetition in programs; work with 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.

Key Vocabulary:

- Abstraction
- Algorithm
- Binary search
- Decomposition
- Dive and conquer
- Graph
- Greedy algorithm
- Linear search
- Quicksort
- Search
- Search algorithm
- Selection sort
- sort