Learning graph 2
KS4 - Algorithms

Sorting algorithms

- **Principles**
  - Define the sorting problem: arranging a list of items in a specific order
  - Explain the significance of sorting in relation to searching
  - Describe how bubble sort is used for ordering a list of items
  - Describe how insertion sort is used for ordering a list of items
  - Describe how merge sort is used for ordering a list of items

- **Application**
  - Traverse a list of items, selecting pairs that are out of order
  - Perform bubble sort to order a list containing sample data
  - Insert an item into an ordered list of items
  - Traverse code for bubble sort and insertion sort
  - Merge two ordered lists of items into a new ordered list
  - Trace code for bubble sort and insertion sort with input data
  - Identify factors that could influence the efficiency of a bubble sort implementation
  - Interpret algorithms and suggest improvements

**Resources are updated regularly — the latest version is available at:** ncce.io/tcc

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