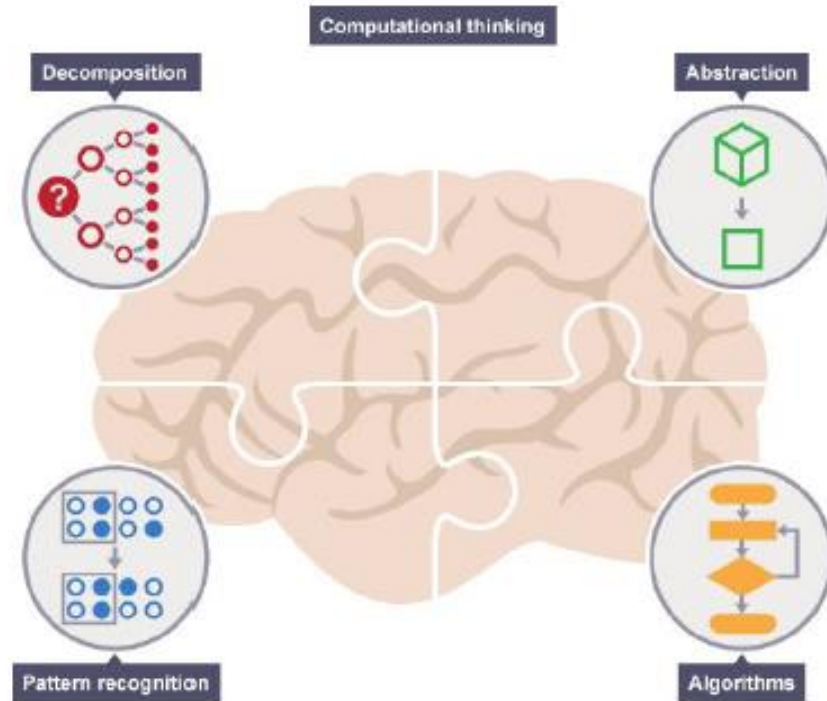


# Year 9 Computational Thinking Knowledge Organiser

Computational Thinking Vocab	
<b>Computational Thinking</b>	A problem-solving approach that uses techniques from computer science. These techniques include abstraction, decomposition and the development of algorithms. Computational thinking skills are not exclusively used to develop computer systems.
<b>Abstraction</b>	The removal of unnecessary information from a problem in order to make it more solvable.
<b>Decomposition</b>	Breaking a large problem down into smaller solvable problems. The smaller parts can sometimes be solved in a recursive fashion and run repeatedly.
<b>Pattern Recognition</b>	Finding the similarities or patterns among small, decomposed problems that can help us solve more complex problems more efficiently.
<b>Algorithm</b>	A set of instructions which can be followed in order to solve a problem.
<b>Program</b>	Sequences of instructions for a computer.
<b>Programming</b>	The process of writing computer software.
<b>Flow chart</b>	A diagram that shows an algorithm or process, made up of boxes representing steps, decision, inputs and outputs.
<b>Pseudocode</b>	A method of writing up a set of instructions for a computer program using plain English. This is a good way of planning a program before coding.



## Example program written in Pseudocode:

```

OUTPUT 'What is your name?'
INPUT user inputs their name
STORE the user's input in the name variable
OUTPUT 'Hello' + name
OUTPUT 'How old are you?'
INPUT user inputs their age
STORE the user's input in the age variable
IF age >= 70 THEN
    OUTPUT 'You are aged to perfection!'
ELSE
    OUTPUT 'You are a spring chicken!'
    
```