***Explain Computational Thinking (CT)***

***Explain for stages of Computational Thinking***

***1. Decomposition***

***2. Pattern Recognition***

***Then Explain Terms:***

***1.Variable***

***2.Constant***

***3.Key Processes***

***4.Input***

***5.Outputs***

Computational Thinking is the process of tackling a problem more efficiently and better understand the issue/task at hand.

There are four stages to computational thinking, these are:

***Abstraction:***

This also consists of getting goals completed as soon as possible by looking at the most important tasks at hand when dealing with a to-do list and highlighting key details of the plan by using brainstorming as well.

An example of this in the real world is the true minimalism of the tube map

***Decomposition:***

This consists of breaking down problems to smaller sections which further assist on solving issues quicker and making them more manageable.

An example of this in the real world is when you set up a chronological goal list with check boxes so when you get stuck on one of tasks you can always move to the next one without missing out on something because you forgot to go back to it.

***Algorithm Design:***

Algorithms is developing a step-by-step solution to the problem, or the rules to follow to solve the problem. A sequence of logical instructions for carrying out a task. In computing, algorithms are needed to design computer programs. They allow things like computers, smartphones, and websites to function and make decisions.

An example of Algorithm: The recipe for baking a cake. The method we use to solve a long division problem. The process of doing laundry.

***Pattern Recognition:***

When you find a pattern of something being repeated so for example you find a sequence of numbers in a pattern, if you find pattern of repetition for example you can problem solve easier than it would be to go over the same information. It is also easier to limit how many patterns there are so the work rate would be faster as you would have to go through less information.

An example of this is when in a sequence of numbers, you can recognise have a pattern on them as you read them you see the numbers go in order largest to smallest from 9 to 0 then go smallest to largest continuing from the last digit to go back up to 9. The pattern is that the number sequence bounces from 9 going down by one to 0 then back up to 9 by one.

***Variable:***

A variable in is a name that is a reference to an object that is a location to save data into binaries. It must start with a \_ but not a number and it must not be including any spaces but use \_ instead of spaces.

***Constant:***

A constant is a type of variable which cannot be changed and usually used to declare and assign for different assignments.

***Key Processes:***

Key processes are those that have maximum impact on the quality or successful outcomes of a product, service, or organization.

***Input:***

Interact with or send information to the computer. An example of an input device can be a keyboard.

***Output:***

An output device is any piece of computer hardware equipment which converts information into a perceptible form. An example of an output device is a monitor.