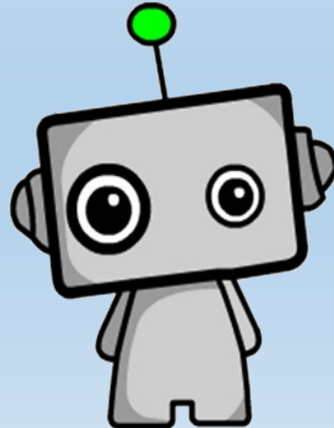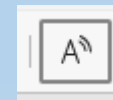# Computational Thinking Quiz!

Instructions

See how much you know by answering the questions.
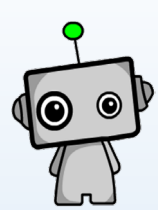
Write your answers down on a piece of paper.

You may want to look at this website before starting:

https://www.bbc.co.uk/bitesize/topics/z7tp34j

Use this button to have the questions read to you

What is Computational Thinking?

Computational Thinking allows us to take a complex problem, understand what the problem is and develop possible solutions.

We can then present these solutions in a way that a computer, a human, or both, can understand.

There are five key techniques to computational thinking:

Decomposition
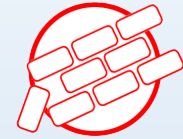
Breaking something into smaller parts.

Pattern Recognition

Looking for similarities and trends.

Abstraction

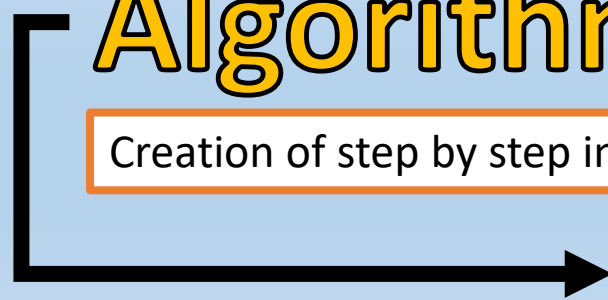Focusing on what's important, ignoring what is unnecessary.

Algorithm Design

Creation of step by step instructions to solve a problem.
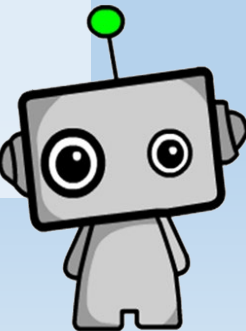
Debugging

Fixing errors within your algorithm.

Question 1

Which of the following parts of Computational thinking can be best described as 'Looking for similarities or trends'?
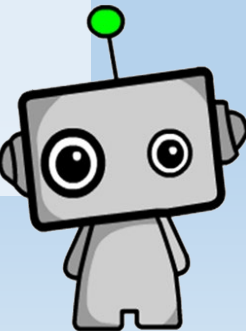
A) Decomposition

B) Algorithm Design

C) Pattern Recognition

Question 2

In terms of Computational Thinking, what does the term 'Decomposition' mean?
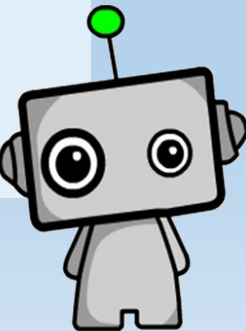
A) Breaking a problem down into smaller, more manageable parts.

B) Looking for similarities and trends within the problem.

C) Tackling a problem without considering all the required tasks.

Question 3

If you were to create a step-by-step sequence of instructions to solve a problem, which Computational Thinking skill would you be using?
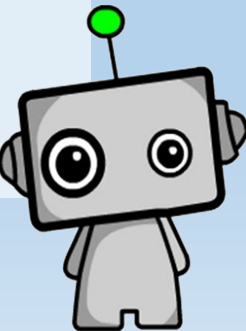
A) **Decomposition**

B) **Pattern Recognition**

C) **Algorithm Design**

Question 4

'Focusing on what's important, ignoring what is unnecessary' is a definition of which part of Computational Thinking?
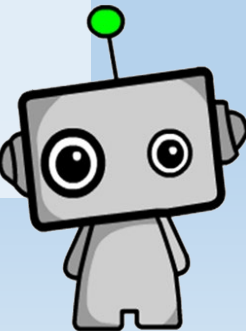
A) **Abstraction**

B) **Algorithm Design**

C) **Pattern Recognition**

Question 5

You are creating a computer game. Which of the following activities below requires decomposition?

A) Creating all the sprites the same style.

B) Considering what parts make up the game: graphics, levels, programming, intro, etc.

C) Creating a demo version of the game.

Question 6

You are preparing for a rugby match against your arch rivals. Your coach starts discussing what tactics were successful and unsuccessful against the same team in the past. What is this an example of:
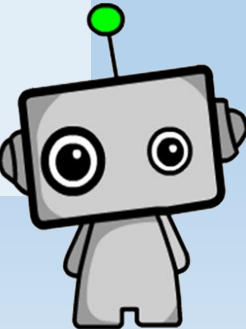
A) **Decomposition**

B) **Pattern Recognition**
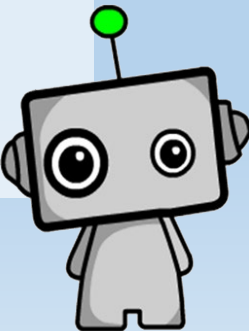
C) **Algorithm Design**

Question 7

You are going on an organised trip with your class. Your teacher gives you an outlined plan of the main activities of the day. This plan is an example of:
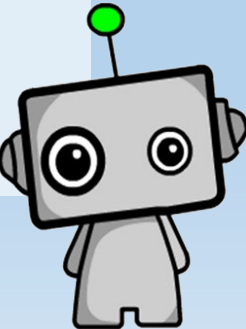
A) Algorithm design

B) Decomposition

C) Abstraction

Question 8

Someone stops you and asks for directions to the nearest shop. You need to give them clear, step-by-step instructions on the quickest route. This is an example of:
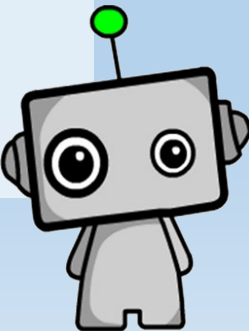
A) Pattern Recognition

B) Abstraction

C) Algorithm Design

Answer to Question 1

Which of the following parts of Computational thinking can be best described as 'Looking for similarities or trends'?
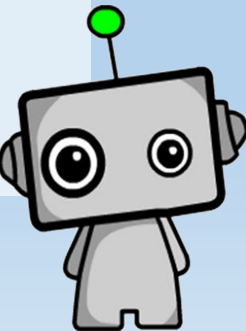
A) Decomposition

B) Algorithm Design

C) Pattern Recognition

Answer to Question 2

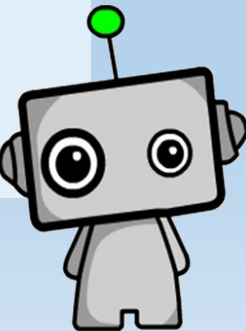**In terms of Computational Thinking, what does the term 'Decomposition' mean?**

A) **Breaking a problem down into smaller, more manageable parts.**

B) **Looking for similarities and trends within the problem.**

C) **Tackling a problem without considering all the required tasks.**

Answer to Question 3

If you were to create a step-by-step sequence of instructions to solve a problem, which Computational Thinking skill would you be using?
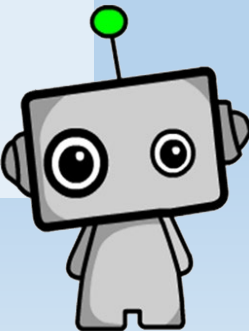
A) Decomposition

B) Pattern Recognition

C) Algorithm Design

Answer to Question 4

'Focusing on what's important, ignoring what is unnecessary' is a definition of which part of Computational Thinking?
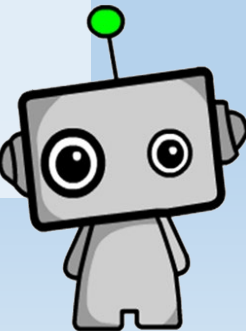
A) Abstraction

B) Algorithm Design

C) Pattern Recognition

Answer to Question 5

**You are creating a computer game. Which of the following activities below requires decomposition?**

A) Creating all the sprites the same style.

B) Considering what parts make up the game: graphics, levels, programming, intro, etc.

C) Creating a demo version of the game.

Answer to Question 6

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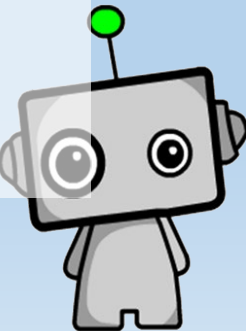
A) **Decomposition**

B) **Pattern Recognition**
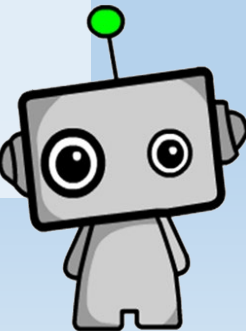
C) **Algorithm Design**

Answer to Question 7

You are going on an organised trip with your class. Your teacher gives you an outlined plan of the main activities of the day. This plan is an example of:
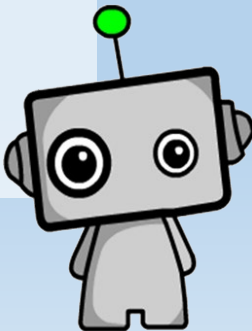
A) **Algorithm design**

B) **Decomposition**

C) **Abstraction**

Answer to Question 8

Someone stops you and asks for directions to the nearest shop. You need to give them clear, step-by-step instructions on the quickest route. This is an example of:

A) Pattern Recognition

B) Abstraction

C) Algorithm Design

All off the answers!

1. C) Pattern Recognition
2. A) Breaking a problem down into smaller, more manageable parts.
3. C) Algorithm Design
4. A) Abstraction
5. B) Considering what parts make up the game: graphics, levels, programming, intro, etc.
6. B) Pattern Recognition
7. C) Abstraction
8. C) Algorithm Design