

## Algorithms - GCSE Computer Science video from BBC Teach

NARRATOR: We all live with computers, but getting the most out of them, getting them to do what you need, can be kind of difficult.

But if you can understand how they process things, a computer can be the most useful housemate you'll ever have.

ADA: (CHANTS) Give me an A... Give me an L...

NARRATOR: If you want a computer to do something, you have to tell it exactly what to do.

ADA: Give me an O...

NARRATOR: They only understand lists of clear instructions, called algorithms. Algorithm looks like a scary word, but it's just a series of steps.

We use algorithms all the time. When making a journey, or making music, or learning a dance...

ADA: Come on, dance with me!

NARRATOR: A dance is an algorithm. First you work out all the different actions you might need.

(LIVELY DANCE MUSIC)

An algorithm needs to have a start, an end and a set of clear instructions in between.

One way of writing an algorithm is as a flowchart. Flowcharts use symbols to represent how the system works and help the programmer come up with the right set of instructions.

And remember, computers are only as good as the instructions you give them.

ADA: (TUTS) I see what the problem is.

NARRATOR: If they're not in the right order, then the pattern of steps will be wrong and things might not go well.

When you write an algorithm, you have to try and think of everything that might happen.

You might need to add something called a decision. Now we have a dance algorithm with a start, a clear set of instructions and some decisions, we're in business.

(LIVELY DANCE MUSIC)

Algorithms. Sets of clear instructions that achieve tasks.