



Concept	Algorithms
Target Learners	Kids between 10-16 years old
Questions to simplify the concept	What are Algorithms? Algorithms are steps in a <u>specific orders</u> , based on <u>mathematics</u> and <u>logic</u> , to <u>solve</u> a certain <u>problem</u>

#### Activity to build experience VAKT

In the beginning of the activity show the learners the air conditioner's remote control, and as them: I have a temperature problem in the classroom, what should I do?

Lead them to say that the first step is to turn it on. After that ask again, what now?

Use questions to lead them to say that we need to adjust the temperature based on whether it's hot or cold... "IF" it is hot we turn it on Cold mode, "IF" It's cold we put it on Heat mode.

After adjusting the emperature, we usually add an instruction: leep ode, wipe...

Use questions to lead kids to categori e orders to: Turn on off , Choice "IF" , Instructions.

Use a remote that has buttons with these shapes: Turn off Circle , Choice "IF" Diamond, Instructions Rectangle.

Use this Analogy to draw the same steps in a diagram using those shapes.

With the students, try changing the order of some steps, ask them if it can work? they will say no, it needs to be in a SPECIFIC ORDER.

Ask them can we adjust the heat before turning it on? and lead them with questions to say that the steps need to be LOGIC.

#### Questions to deduce definition

What to do to adjust the temperature in the classroom? Can we switch the steps? Can we use heat mode when it's hot? can anyone else use these steps to adjust the temperature?

#### Definition

Algorithms are LOGICAL STEPS in a SPECIFIC Order. They are written in a diagram mode, and anyone can use them to solve a SPECIFIC Oroblem.

They were invented by a Muslim scholar and named after him.



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Definition