

KS3 Computer Science

Logic Gates 1

Name:

Class:

Teacher:

Boolean Logic

Before you start it is important that you know about **Boolean Logic**.

Boolean is based around the logic that something is either **True** or **False**. Think of it like an a light, it can either be **on** or **off**.

Computers follow Boolean Logic as they can only have two states, **True** or **False**. Computers do not understand **maybe**, **slightly** or **possible**.

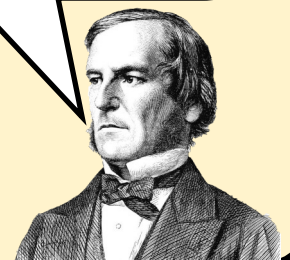
In **Boolean Logic** we use **1** to represent **True** and a **0** to represent **False**.

Computer will use statements and then decide if they are **True** or **False**. Here are some examples of statements and their Boolean value:

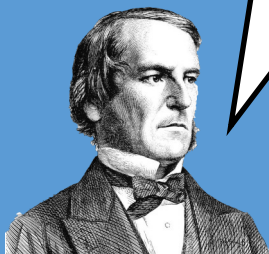
Statement	True/ False	Boolean Value
$2 + 2 = 4$	True	1
China is in Europe	False	0

Hello.

My name is
George Boole
and I developed
Boolean Logic



If you want to see
how important Boolean
Logic is watch this
video.



RTÉ ONE

The Genius of George Boole
Tuesday September 1st at 10.35pm



RTÉ player 0

Activity 1

Knowledge Check

Question 1

Who developed **Boolean Logic**?

Question 2

What does Boolean Logic use? (**You may select more than one.**)

Yes False No True Maybe

Question 3

What value is used to represent **True**?

0 1

Question 3

What value is used to represent **False**?

0 1

Question 4

Complete the **True/False** and **Boolean Value** in the table below:

Statement	True/False	Boolean Value
$2 + 2 = 5$		
A day is 10 hours long.		
A square has four sides.		
Paris is the capital of France		
Red is a primary colour		

Question 5

Make **two** statements, one of which has a Boolean value of 1, and one of which has a Boolean value of 0.

Boolean value 0 statement:

Boolean value 1 statement:

ACTIVITY 2: House Point

Who Was I?

Write a short biography about George Boolean.

You could include the following areas:

- When was he born?
- When did he die?
- What education did he have?
- Where did he work?
- Why is Boolean Logic so important today?
- What else was he responsible for apart from Boolean Logic?

