

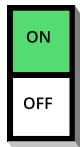
Binary Pixel Art

You've arrived at Logicland!

Lex wishes you a warm welcome to Logicland! At Logicland, Lex loves using logic when thinking and making decisions. To kick off your exciting journey on this planet, Lex will introduce you to the wonders of binary.

What is Binary?

Binary is the **language** computers use to **represent information**. Binary only uses **two digits: 0 and 1**. Just like how we use English to communicate and remember information, computers use binary!



1 = True

0 = False

(Binary is similar to a light bulb switch!)

Specifically, computers use electronic signals that have two states: **1 meaning true** and **0 meaning false**. Computers use binary to assign these signals as true or false to store and represent information.

Why do Computers use Binary?

Computers use binary because it's **simple** and easy to manage! Binary is a quick way to represent an electronic signal's **on and off states**. Compared to systems like decimals (ten digits: 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9), it makes more sense for computers to communicate using binary (two digits: 0 and 1)!

Put your Detective Caps On!

Lex recently received several paintings from his talking computer, Lexa. However, Lexa only speaks in binary, so Lex needs your help translating them! Using colored pencils, follow the binary code below to reveal the pictures. Use **0 to represent a blank pixel** and **1 to represent a colored pixel**.



blank pixel



colored pixel



What are pixels?

Pixels are super tiny squares that come together to display all sorts of images on a digital screens!

Lexa's Binary Paintings

0	0	0	0	0	0	0	0	0
0	0	1	0	0	0	1	0	0
0	1	1	1	0	1	1	1	0
0	1	1	1	1	1	1	1	0
0	1	1	1	1	1	1	1	0
0	0	1	1	1	1	1	0	0
0	0	0	1	1	1	0	0	0
0	0	0	0	1	0	0	0	0
0	0	0	0	0	0	0	0	0

1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	1
1	1	0	0	1	0	0	1	1
1	1	0	0	1	0	0	1	1
1	1	1	1	1	1	1	1	1
1	0	0	1	1	1	0	0	1
1	1	0	1	1	1	0	1	1
1	1	1	0	0	0	1	1	1
1	1	1	1	1	1	1	1	1

1	1	1	1	0	1	1	1	1
1	1	1	0	0	0	1	1	1
1	1	0	0	0	0	0	1	1
1	0	0	0	0	0	0	0	1
1	1	0	0	0	0	0	1	1
1	1	0	0	0	0	0	1	1
1	1	0	0	1	0	0	1	1
1	1	0	0	1	0	0	1	1
1	1	0	0	1	0	0	1	1

