Logic Gates

Building blocks of all digital circuits

AND

OR

NOT

XOR

AND Gate

which only outputs a 1 if all inputs are 1.

A	B	C
0	0	0
0	1	0
1	0	0
1	1	1

OR Gate

which outputs a 1 if at least one input is 1

A	B	C
0	0	0
0	1	1
1	0	1
1	1	1

NOT Gate

inverts the input. If it's 0, it becomes 1, and if it's 1, it becomes 0.

A	Y
0	1
1	0

XOR Gate

which outputs a 1 only when the inputs are different

A	B	C
0	0	0
0	1	1
1	0	1
1	1	0

A	B	C	Output (Light On/Off)
0	0	0	0
0	0	1	1
0	1	0	1
0	1	1	0
1	0	0	1
1	0	1	0
1	1	0	0
1	1	1	1

Three-Way Light Control Circuit

Thank You