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## 1 Tutorial

## 1.1 Introduction to BabyTown

```
Min Size Accepts Returns
3 (Left 1) (Right 1)
```

**Instruction Text** Place an input on the left and an output on the right. Then connect them by using bus pieces to extend the range of the input signal.

**Completion Text** You did it! The easiest level in the game! Hopefully the game gets harder than this (Right?). Those pieces we were playing with a moment ago are called Gates, because they stop or allow the flow of a signal. This signal is represented by an electric blue current in ABED.

Upon Completion Unlock circuit 'NOT', Unlock level '1.2'

#### 1.2 Is Nice?

**Instruction Text** Having completed 'Introduction to Babytown', you should now have a a new gate called a 'Not' gate. Now we are going to test out our new gate. Place an input on the left and an output on the right as before. This time, create a Not gate in the center instead of a Bus.

$$\begin{array}{ccc} & \text{Input} & \text{Output} \\ \textbf{Tests} & 0 & 1 \\ & 1 & 0 \end{array}$$

Completion Text Another success! A Not gate negates the signal coming from the input. So if the input of a Not gate is off, it will output on, and vice versa. In general, the input of a gate is on the left and the output is on the right. But as we will see, we are by no means restricted to one input/output.

## 1.3 My First Three-way!

**Instruction Text** Oh boy, two inputs? Create an Or gate and place inputs at 3, 0 and an output at 1. Remember to rotate the input so the signal is facing the Or gate.

	Input	Output
	00	0
Tests	01	1
	10	1
	11	1

Completion Text Now we're getting somewhere! An 'Or' gate will output a signal if one or more of its inputs is turned on, otherwise it outputs nothing. Imagine of a waiter asking Would you like milk OR sugar in your coffee? Gates can have as many inputs/outputs as they damn well please, with one condition: there must at least one. Obviously.

- 2 Basic Gates
- 3 Mux and Demux
- 4 Binary

## 4.1 Neo is One Backwards!

```
Min Size Accepts Returns
4 None (Right 4)
```

**Instruction Text** Now that you have a Display, we can start to learn about binary!

Tests Input Output
None 0001

Completion Text

# 5 Number Fun

Min Size Accepts Returns
4 None (Right 4)

**Instruction Text** 

Tests

Completion Text