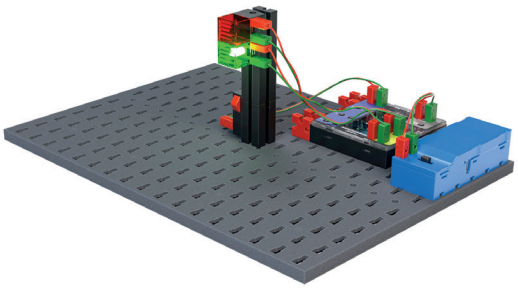
Model 2: Traffic light
Objectives and classification



Overview
The first sensor is presented in this model: a push button. Students learn about the structural element „condition“ in Scratch and program a demand-controlled switch. You will also learn how to create sounds with Scratch.

Topics
What is a „digital sensor“? What is a condition? How does a push button work? How do you program a traffic light controller?

New component: the push-button
Please refer to the tutorial for the button.

Learning objectives

- Understanding a push-button as a „digital sensor“
- Condition as a structural element of a programming language
- Programming of a demand-dependent time control (traffic light switching)

Time required
Setting up and wiring the traffic lights takes about half an hour of class time.

The „pedestrian traffic light“ task is based on model 1 and requires half a lesson. The „traffic lights on demand“ tasks require up to one lesson depending on previous experience.

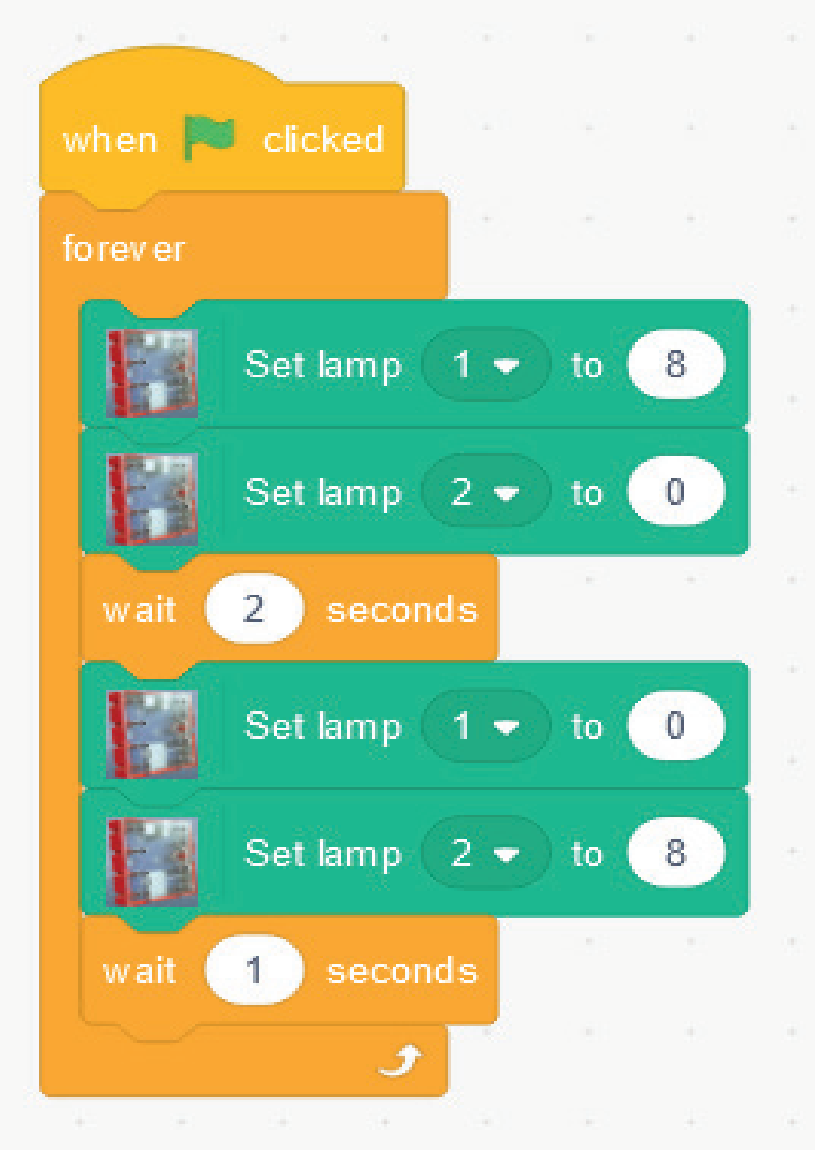
The „Traffic lights for the blind“ task can be used as an additional task for students with particularly quick comprehension skills or experience with Scratch. Its completion is not a prerequisite for subsequent tasks.

Tips and hints
The programming is based on the flashing light from model 1. The sample solutions can be found directly in the app

Solutions and notes

Your pedestrian traffic light program

Solution Pedestrian traffic light:



Pedestrian traffic light.sb3

Solutions and notes

Your on-demand traffic light program

Solution on-demand traffic light:

On-demand traffic light.sb3

Solutions and notes

Programming tasks Model 2: Traffic light

Solution for your traffic light program for the blind:

traffic light for the blind.sb3