



# Music Blocks Lesson Plan

## Switch

Age:

7-12 years

Lesson duration:

60 minutes

- Introduction: The Switch (15m)
- Part 1: Exploring Switch (20m)
- Break (5m)
- Part 2: A Conductor (15m)
- Performance/Critique (10m)

Number of students:

Up to 10.

Rationale:

Students will learn more about using the switch construct from programming.

Objectives:

Students will understand how to use the switch/case/default to trigger different effects in an interactive setting.

## LESSON

Introduction:

Begin by asking students to sit in a circle and explain that in today's lesson they are going to learn more about a switch.

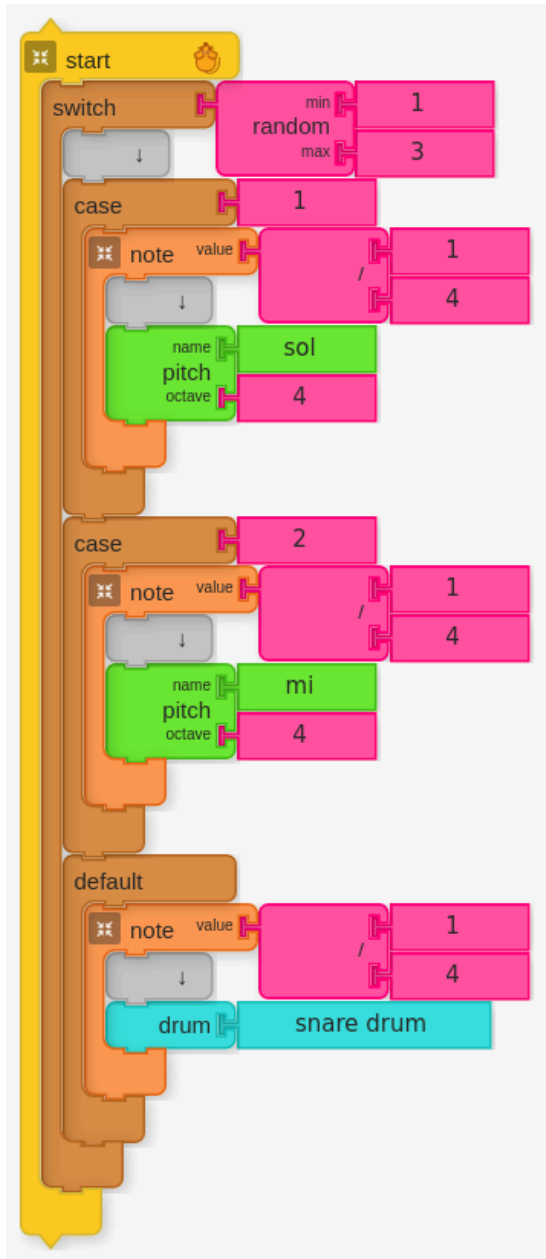


When a train comes to a switch in the tracks, it can go straight or turn. A switch in a program is something similar: the value passed to the switch tells the program which track (or case) to run.

We will use the Switch block in Music Blocks to play a different drum on each beat in measure.

## Part 1: Exploring Switch

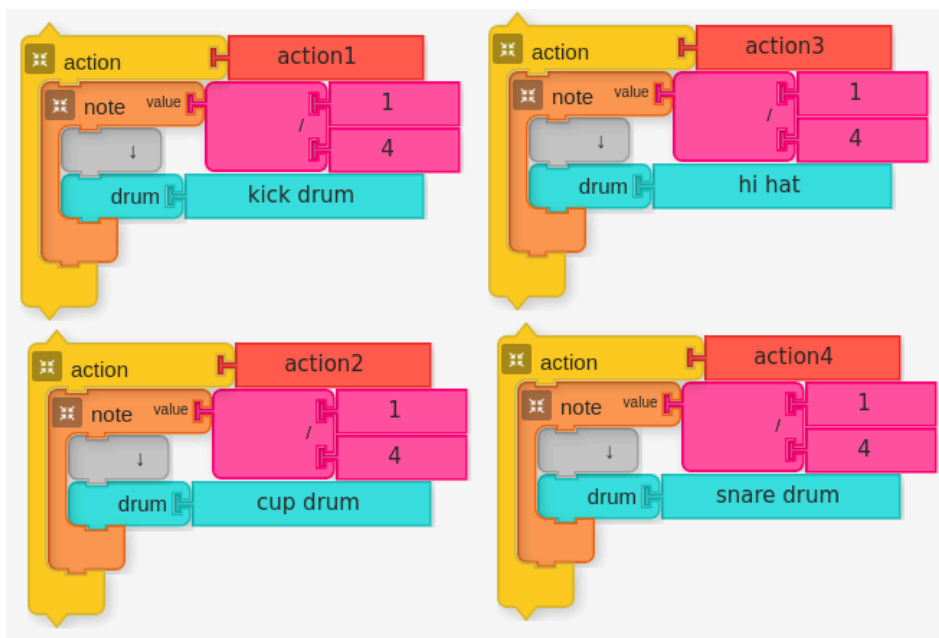
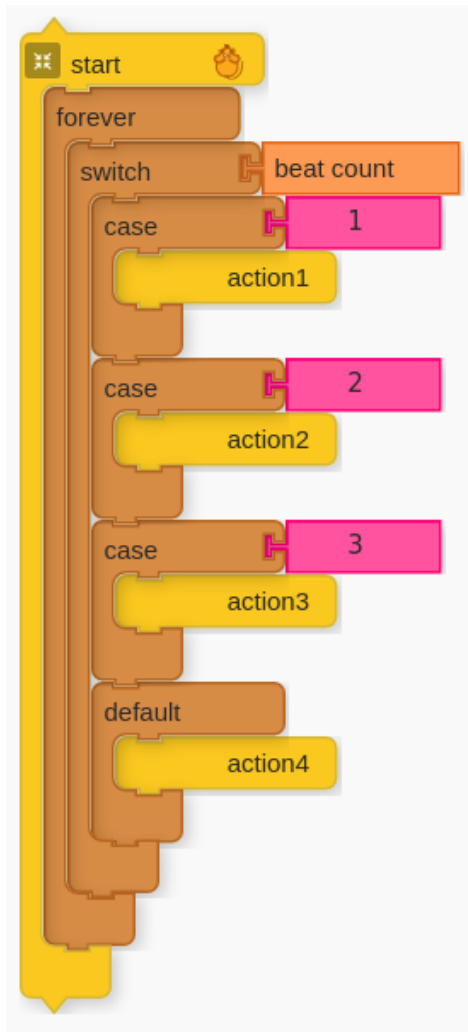
1. The Switch block is found on the Flow palette. (You need to be in Advanced Mode.)
2. Inside the Switch block are Case blocks, which define different actions, depending upon the value passed to the Switch. If the value doesn't match any case, then the Default action is taken.
3. In the example below, a random number between 1 and 3 is passed to the Switch block:  
Case 1: Play sol  
Case 2: Play mi  
There is no Case 3, but the default action is to play a snare drum.



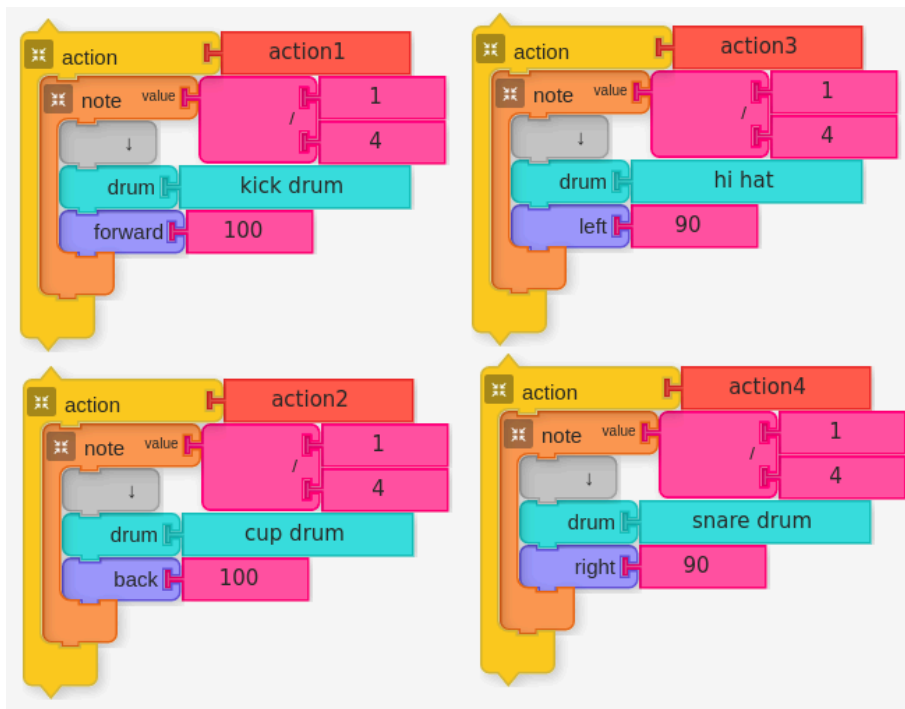
Break

## Part 2: A Conductor

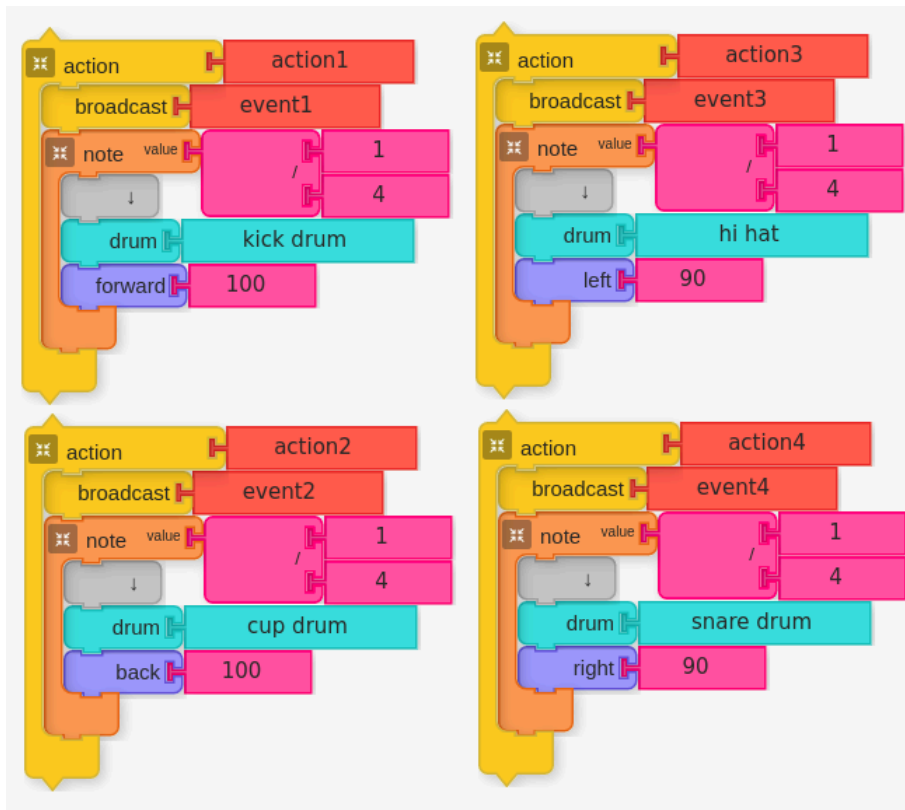
1. Write a program that continuously plays a different drum sound with each beat. (Use the Beat-value block from the Meter palette with the Switch block.)



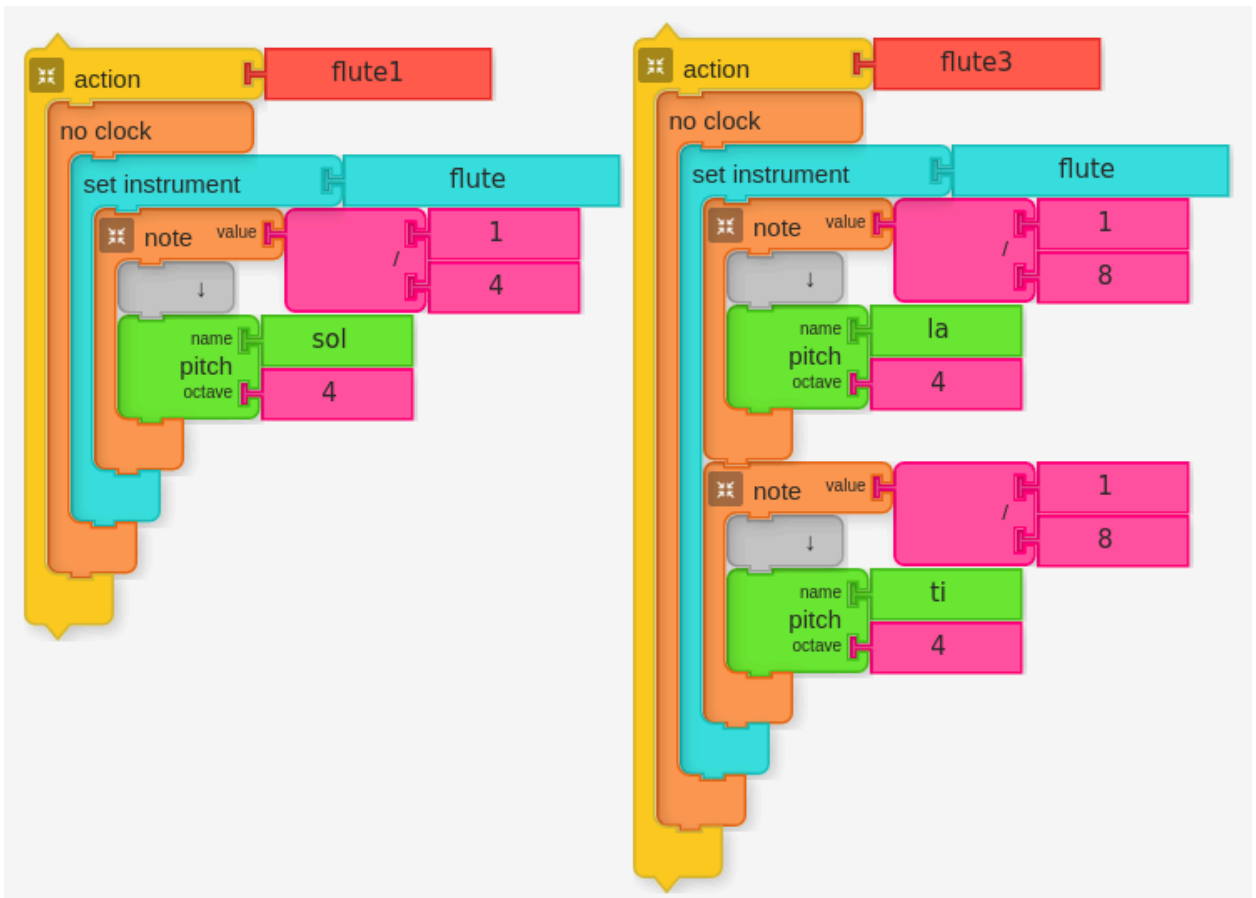
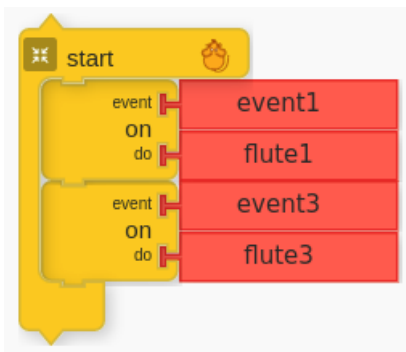
2. Add some graphics to “animate” the conductor’s baton.



3. Broadcast events from the conductor to the orchestra.



4. The other members of the orchestra listen for the events.



### Performance/Critique:

1. Have each student show their “conductor” program.
2. Engage in a discussion about their different approaches.

### Key events:

- Introduction of key concepts: switch and beat.
- The students create their own conductor.

### Materials:

- Music Blocks software

### Assessment:

- Observe participation.
- Does the program perform as expected?
- Is the Switch block used appropriately?



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