Music Blocks Lesson Plan
Conditionals

Age:

7-12 years

Lesson duration:

90 minutes

- Introduction: Simon Says (10m)
- Part 1: If/Then (20m)
- Break (5m)
- Part 2: Scalar Step (20m)
- Break (5m)
- Part 3: Explorations (20m)
- Performance/Critique (10m)

Number of students:

Up to 10.

Rationale:

Students will learn about the computational concept of a conditional and explore it within the musical concept of a scalar step.

Objectives:

Students will learn about a fundamental tool in computation, the conditional. Students will be able to utilize the conditional in the creation of interactive compositions.

LESSON

Introduction:

Begin by asking students to sit in a circle and explain that in today's lesson they are going to learn about the concept of a conditional: if this is true, then do that.

Start by choosing one student to be the leader. Have them play Simon in a game of Simon Says. Repeat the exercise, but now have the students clap whenever Simon doesn't "say".

Discuss what is going on: Wen Simon “says”, do something. When Simon doesn’t “say”, don’t do anything or do something “else”.

Part 1:

If/Then/Else

1. Ask the students to drag the If/Then/Else block from the Flow Palette.
2. Have them guess what it might do.
3. Have them drag the Mouse Button block from the Sensor Palette.
4. Have them guess what it might do.
5. Have them put two different Note blocks inside the If/Then/Else block and attach the Mouse Button Block to the ‘if’ slot.
6. Place the If/Then/Else block inside of a Forever Block.
7. Explore and make observations.

Break

Part 2

A. Scalar Step

1. Sing (or play) a sequence of notes: Do, Re, Mi, or Mi, Re, Do.
2. Ask the students if you are going up or down in the scale.
3. Repeat until they can explain the idea of going up or down.
4. Mix it up and have the students indicate when you are going up or down.

B. Scalar Step Block

1. Drag two Scalar Step blocks from the Pitch Palette.
2. Replace the pitches inside the Note Blocks in the program created in Part 1 with the Scalar Step Blocks.
3. Change the argument to one of the Scalar Step blocks to -1.
4. Add a starting Note Block before the Forever block.
5. Explore and observe.

Break

Part 3:

Explorations

1. Add other blocks to the conditional and see what happens. Try changing volume, tempo, etc. (Some students may want to explore other conditionals, using the Boolean blocks and other sensors, such as Cursor x and Cursor Y.)

Performance/Critique:

1. Have each student perform their composition.
2. Engage in a discussion about conditionals. How else can you use them?
What are some other conditions than Mouse Button that might be fun to incorporate?

Key events:

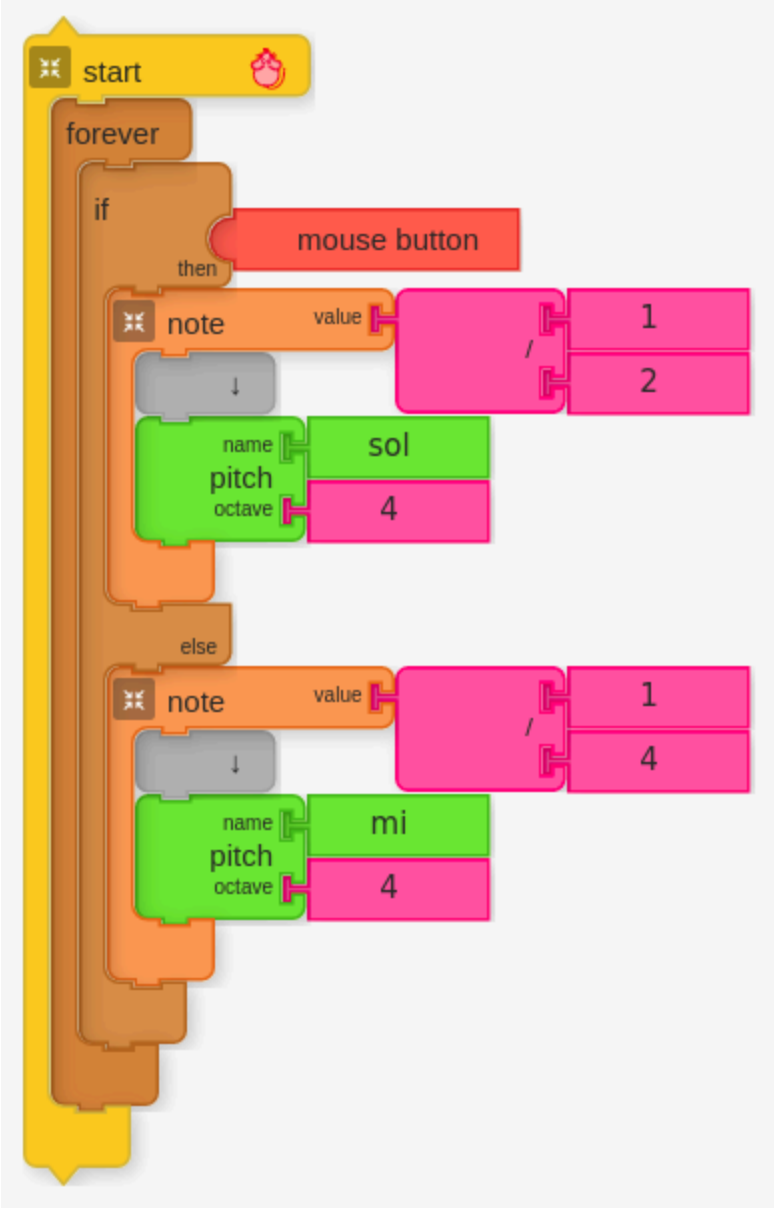
- Introduction of key concepts- lead and follow
- The use of action blocks to share code (melody)
- The use of the rest to create a delay
- The use of transpositions to make changes that remain familiar.

Materials:

- Music Blocks software

Assessment:

- Observe participation.
- Examine the code.
- Do the students use conditionals? Do the students use scalar step?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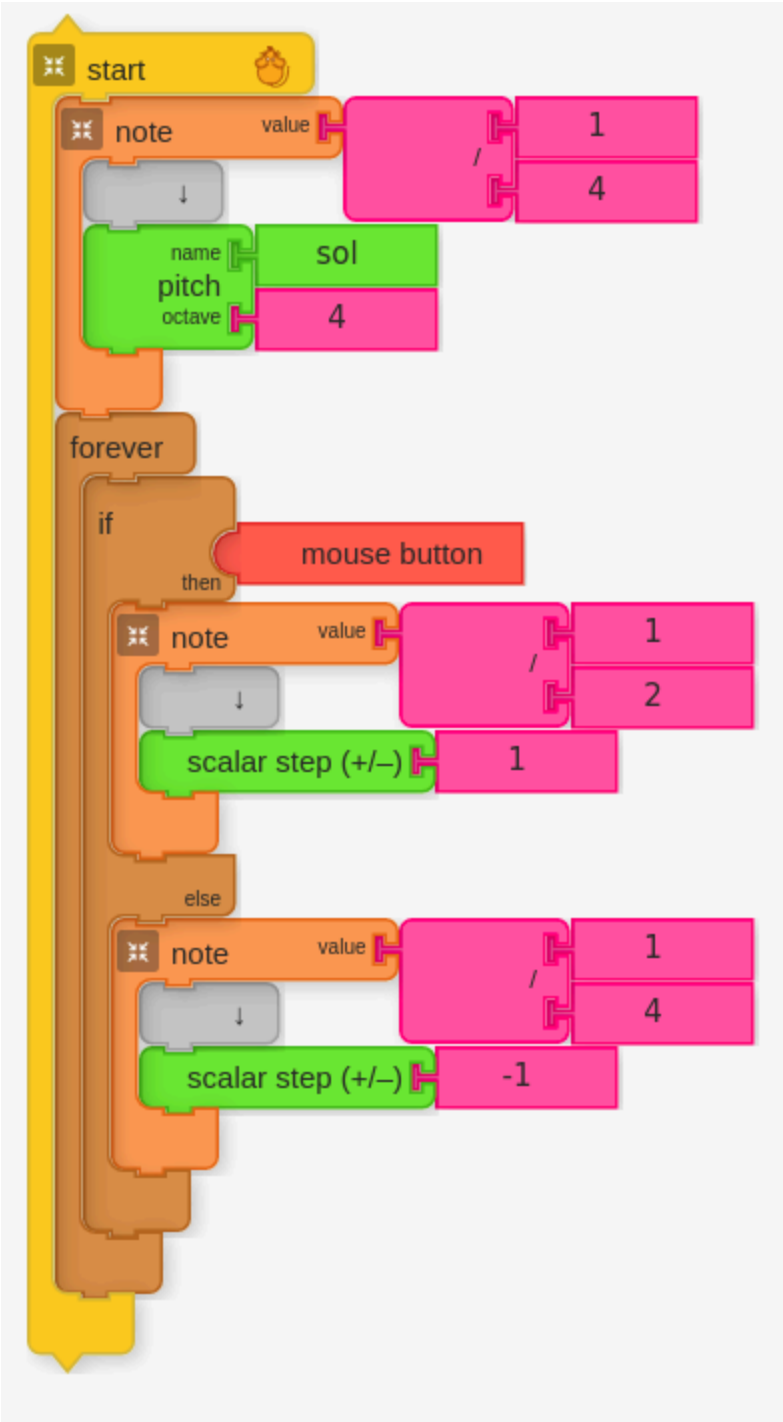

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