Music Blocks Lesson Plan
Canon

Age:

7-12 years

Lesson duration:

90 minutes
- Introduction: Follow the Leader (10m)
- Part 1: Phrase Maker/Actions (20m)
- Break (5m)
- Part 2: Canon (20m)
- Break (5m)
- Part 3: Timbre/Transpositions (20m)
- Performance/Critique (10m)

Number of students:

Up to 10.

Rationale:

Students will learn about the musical concept of a Musical Canon: a canon is a compositional technique where a melody has imitations played after a short delay. They'll also explore the Phrase Maker and the concept of an action (subroutine) in computing.

Objectives:

Students will learn about a powerful tool in musical expression and its parallel in computation. Students will be able to utilize subroutines in programming and in composition.

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 musical concept of a canon.

Start by choosing one student to be the leader. Have them start counting from one to ten on a steady beat. Ask the other students to echo the leader. Repeat the exercise, but now, have the students delay by one beat. Repeat the exercise, but now, have the students delay by two beats. (It may help to designate one student as the conductor, who keeps beat and indicates when the followers come in.)

Repeat the same exercise, using a different student as a leader, who will sing do-re-mi… where the followers begin as the leader sings 'mi'.

Sing *Row Row Row Your Boat* with the students.

Discuss what is going on.

Play Bach's *Aria in Cantata* and see if the children can hear the canon. (https://musicblocks.sugarlabs.org/index.html?id=1560112479218661)

Part 1:

Phrase Maker/Actions

1. Ask the students to drag the Phrase Maker Block from the Widgets Palette.
2. Have them guess as to what it might do.
3. Have them create a musical phrase that they enjoy.
4. Export the phrase as an Action Block.
5. Have them place a Repeat Block inside a Start Block and an Action Block inside the Repeat Block.
6. The group should listen to the compositions.

Break

Part 2

A. Canons

1. Drag a second Start Block from the Action Palette and repeat Step 4 from above.
2. Hit the Play Button to hear both voices at once.
3. Drag a Silence (rest) Block from the Rhythm Palette.
4. Hit the Play Button to hear both voices at once. Observe what happens.
5. Try adding a third Start Block with a different delay.

Break

Part 3:

Timbre/Transpositions

1. Explore different instruments by putting the notes inside the action into a Timbre Block (from the Tone Palette).
2. Grab a Scalar Transpose Block from the Pitch Palette.
3. Put one of the Action Blocks inside of the Scalar Transpose Block. Observe what happens.
4. Try different transpositions in each of the follower Start Blocks.
5. The group should listen to the compositions.

Performance/Critique:

1. Have each student perform their composition.
2. Engage in a discussion about the randomness: Is it fun? Is it musical? Is it interesting? Does it get boring? How would you change it?

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
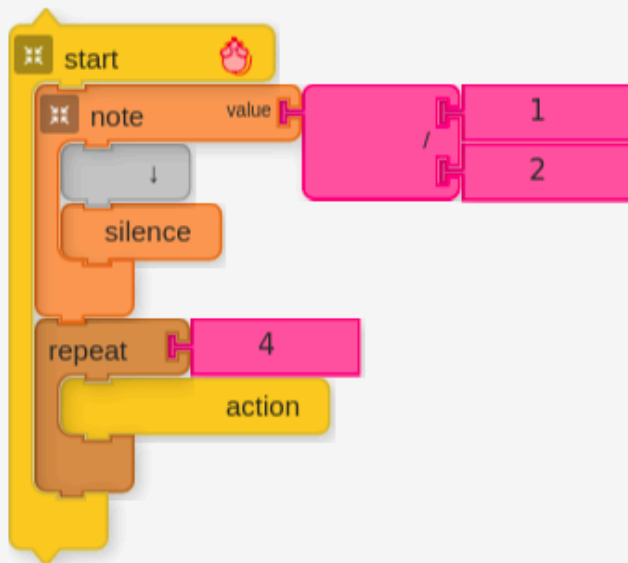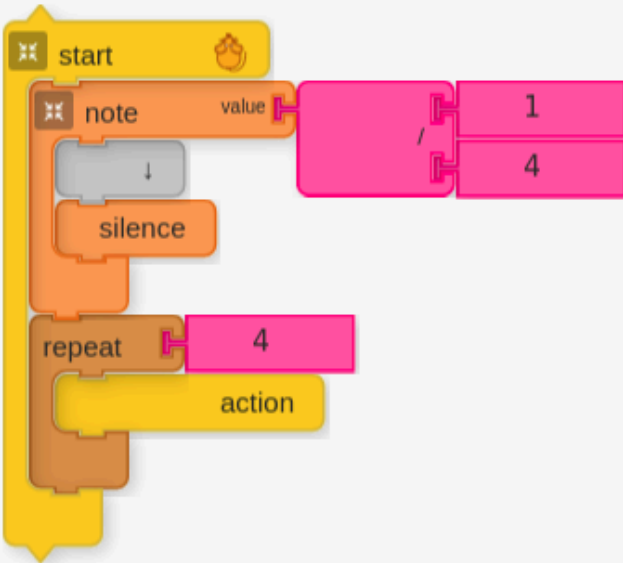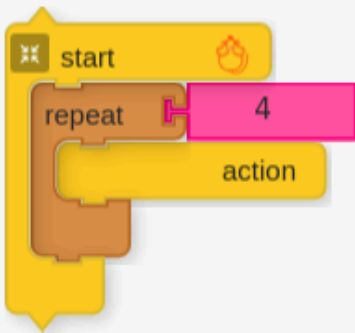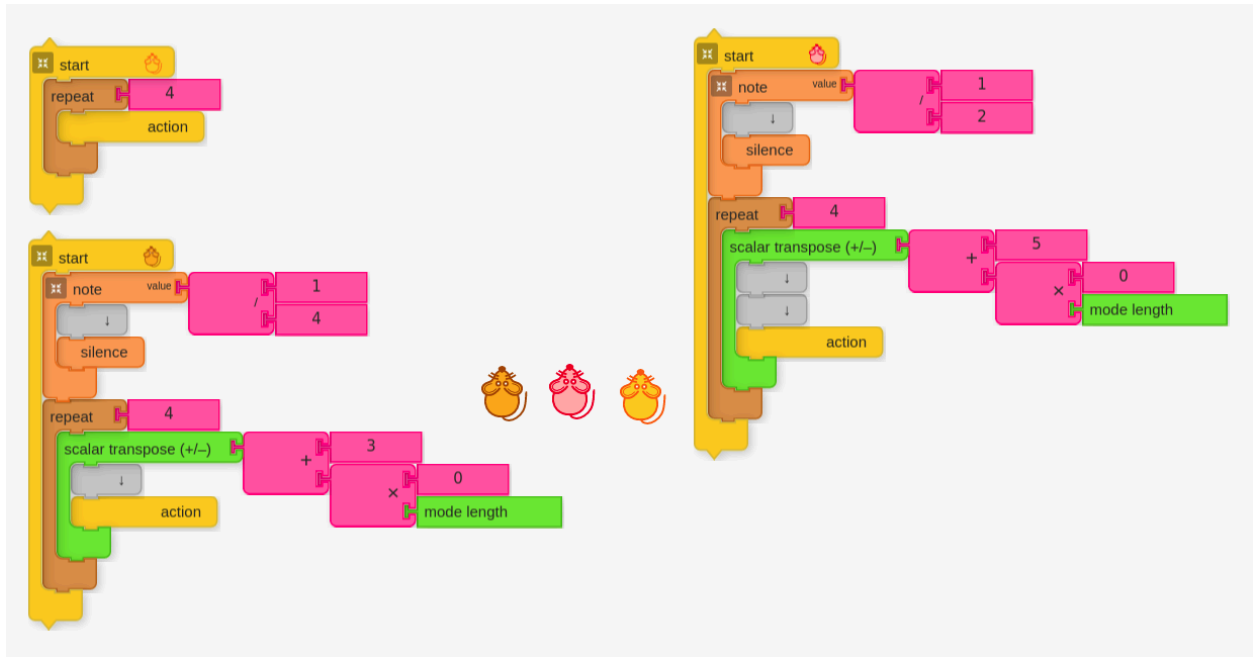- The use of transpositions to make changes that remain familiar.

Materials:

- Music Blocks software

Assessment:

- Observe participation.
- Examine the code.
- Do the compositions use a canon?

	note	1	2	3	4	5	6	7
	ti_4	■						
	la_4		■					
	sol_4			■				■
	mi_4				■		■	
	re_4					■		
◯	snare drum							
🐭	forward 100							
🐭	right 90							
	note value	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{2}$