



Activity

EVO'S MUSICAL TOUR AND COMPOSER

CREATED BY

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TOPICS

Music, Programming

GRADES

12

METHOD

OzoBlockly

DURATION

minutes

Evo's "Musical Tour" and "Composer"

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Introduction

The purpose of this activity is to provide young students, grades 3 through 8, with an exciting musical experience. The student begins by loading Evo with an OzoBlockly program for which Evo takes the student on a musical tour. The tour starts with Evo demonstrating the scale of notes that he has learned in school. Then he plays a couple of his favorite nursery rhyme songs as well as a Christmas carol. Finally, he makes a midnight stop at the most iconic landmark in England—the “Big Ben” clock tower. Figure 1 shows the Ozomap that Evo uses for his musical tour. A large copy of this map, which can be copied for student use, is found on the last page of this document.

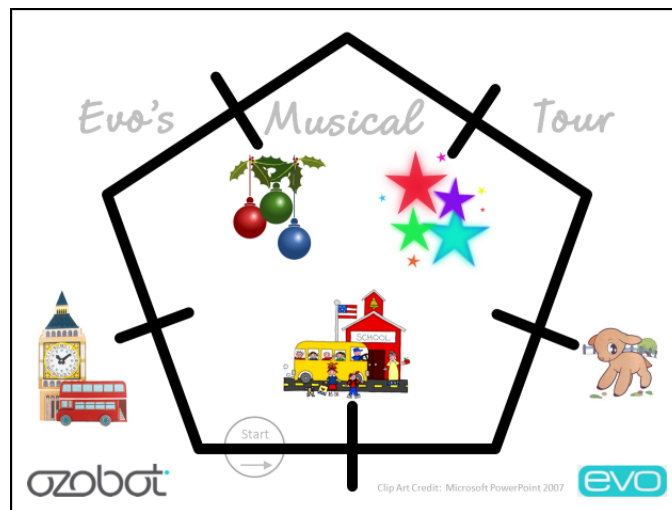


Figure 1

After students have finished the tour, they are then challenged to compose a song of their own using a special OzoBlockly composer template program. This program makes composing very easy—simply by copy/pasting notes (as predefined functions) and indicating, for each note, whether it is a quarter, half, or whole note. Many students will use 4/4 (4 beats per measure/quarter note gets 1 beat) or “common” time, the most prevalent time signature in music.

Figure 2 shows the standard 88-key piano with the octaves identified from C1 through C8, with C4 being middle C. Evo’s “Play Note” range goes from C5 through B8. Evo’s “Composer” range, B5 through F7, is roughly in the middle of the “Play Note” range and also includes all sharps/flats (black keys) in the range. The

“Composer” range was set to avoid low volume pitches in octave 4 and very high pitched frequencies that might be annoying to some. The range was also limited to assure that students could compose songs as large as approximately one hundred notes in size without Evo running out of memory.

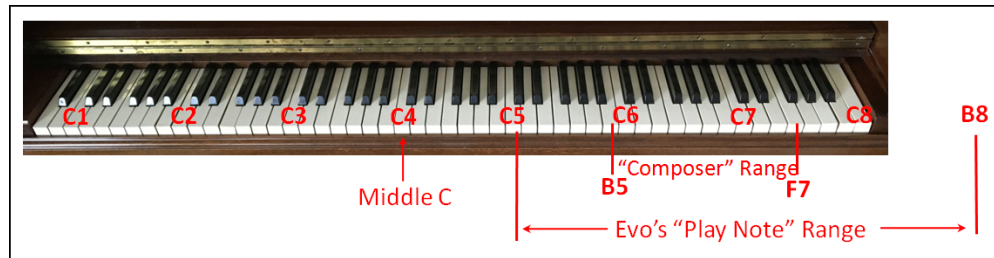


Figure 2

Running “Evo’s Musical Tour”

1. Load the OzoBlockly program *MusicalTour.ozocode* onto Evo. This program is one of the files accompanying this document.
2. With Evo turned off, press the button once to turn Evo on. Evo’s front light should show light blue.
3. While the lights are light blue, double-press the button. The top light will turn red.
4. While it is red, you have three seconds to place Evo on the start location on the Ozomap facing the direction shown by the arrow.
5. Evo will then move to the intersection by the clip art of the school and play the notes in sequence from lowest pitch to highest pitch that he learned in school.
6. He will then move to each of the remaining four intersections, stop, and play a song that he has learned at school.
7. Finally, Evo will return to school, stop, and turn off.

Creating a Song with the “Song Composer”

1. Open the OzoBlockly program *SongCreatorTemplate.ozocode*. Scroll as necessary until the OzoBlockly workspace appears as shown in Figure 3. Also make sure to click on *evo* in the upper left corner of the window so that Evo is selected as the robot.

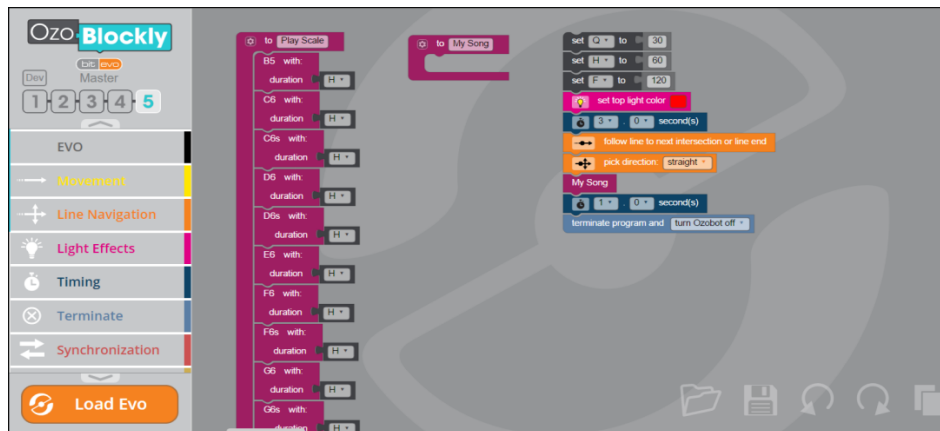


Figure 3

2. You will see a function called *Play Scale* on the far left of the workspace. This contains all of the notes in composer's range from B5 through F7 (see Figure 2). The notes in this function are intended to be copied and dragged into the empty function called "My Song". This is accomplished by left-clicking a note, selecting *Duplicate* from the dropdown, and then dragging the copy to "My Song".
3. The default setting for each note is a half-note, indicated by the letter "H" on the bottom right of each note. This can be changed to a quarter-note (Q) or whole-note (W) by clicking on the down-arrow and selecting either Q or W, as desired for your composition.
4. You can repeat a group of notes by introducing a loop. You can add Q, H, and W note rests by the use of a "wait x 10 ms" block. See Figure 4 as an example of a short composition using all of these features.

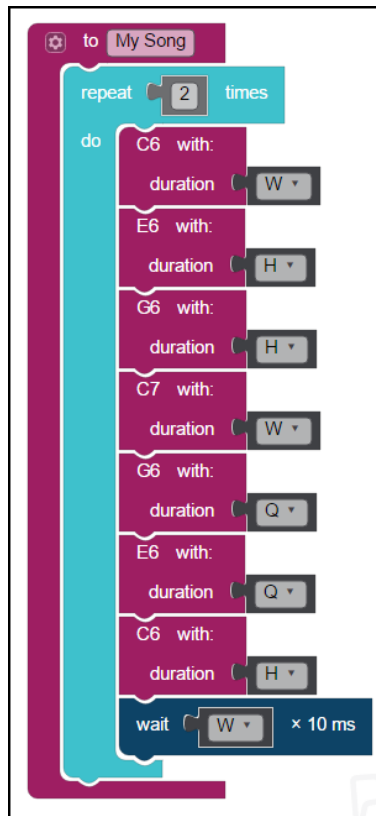


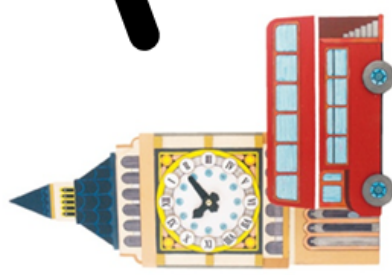
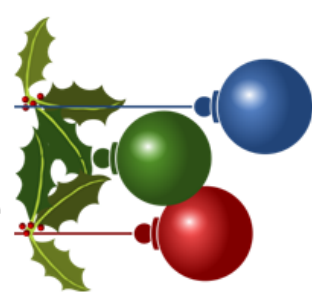
Figure 4

5. Load the OzoBlockly program with your song onto Evo clicking the Evo button on the lower left corner of the OzoBlockly screen.
6. With Evo turned off, press the button once to turn Evo on. Evo's front light should show light blue.
7. While the lights are light blue, double-press the button to start the program. The top light will turn red.
8. While it is red, you have three seconds to place Evo on the start location on the Ozomap facing the direction shown by the arrow.
9. Evo will then move to the intersection by the clip art of the school and play your song. After completing the song, Evo will stop and turn off.
10. Congratulations—you are now a **composer**!

Student Activities

- If you haven't already done so, take a look at the OzoBlockly music lesson entitled "Evo Teaches Notes and the Keyboard". This is a great aid in teaching and helping youngsters learn music terminology.
- Get the students **motivated** by letting them run and play the program "Evo's Musical Tour". Ask them to identify, by name, each of the four songs that Evo plays on his Tour. (Note that the Christmas song is "Good King Wenceslas", a popular carol dating back for centuries.) Also note that the next page of this document contains an Ozomap for Evo's Musical Tour.
- Get the students **creative** by asking them to compose and play their own tunes on Evo using the program "Song Creator".
- **Challenge** the students to make an Evo arrangement of "Hail to the Chief".
- **Double-challenge** students to compose an arrangement of "Frère Jacques" and play it as a **round** with a pair of Evo's. (See the video entitled *Frere Jacques* <https://youtu.be/oUVv1hMg7OU>) Also note that the last page of this document contains an Ozomap that could be used for this challenge.
- Using the "Song Creator", come up with some **original** ideas of your own to encourage students to learn about music—the universal language!

Evo's Musical Tour



ozobot

evo

Clip Art Credit: Microsoft PowerPoint 2007

Frère

Jacques

