



Lesson: If the Animals Could Sing Composition Project

OVERVIEW

Using *Eye of the Hawk* by Susan Botti as an inspiration, students will create a short original piece of music whose melody is inspired by a selected animal and uses aleatoric techniques to accompany the melody.

LEARNING GOAL

Students will:

1. Reflect on the characteristics of a selected animal and how the characteristic(s) can be interpreted as a musical composition.
2. Determine what instrument's sound best embodies the animal's characteristic(s).
3. Devise an aleatoric accompaniment for the melody.
4. Compose a short original musical composition.

RESOURCES & MATERIALS

- Manuscript paper or computer musical notation program
- [Aleatoric Music and Nontraditional Musical Notation handout](#)
- [If the Animals Could Sing Composition Project handout](#)

PROCESS

Students will:

1. Determine which animal will be the inspiration for the piece.
2. Identify the characteristic(s) of the animal that will be embodied in the melody.
3. Select which instrument will perform the melody.
4. Create an original melody.
5. Determine what kind of accompaniment will best support the melody and which instrument(s) will perform the accompaniment.
6. Create an accompaniment using either traditional or graphic notation, or both. An information handout about aleatoric music is provided if the students need more information about graphic and nontraditional notation to complete the project.
7. Notate the piece by creating a score and parts.
8. Record or perform the piece.

ASSESSMENT

The following sample rubric is provided to demonstrate how the compositions may be graded.

CATEGORY	5	3	1	R - Redo
Formal Musical Notation	Musical notation clearly indicates what the performer should play at all times.	Musical notation clearly indicates what the performer should play most of the time.	Musical notation is ambiguous or hard to decipher in many places.	Musical notation does not clearly communicate the composer's intentions..
Aleatoric Notation	The aleatoric notation and directions clearly indicate the composer's intentions for the performers.	The aleatoric notation and directions are mostly clear in indicating the composer's intentions for the performers, but some notation and/or directions are questionable.	The aleatoric notation and directions only provide the performer a vague idea of what the composer intended for the performers, but in many places the performers have to guess what the composer means.	The aleatoric notation and directions are completely unclear and do not provide useful information for the performers.
Musicality	The composer made effective choices in applying musical elements and instrumentation.	The musical effect of the piece is generally well done, but would be improved with limited revising/editing.	The musical effect of the piece would be greatly improved with extensive revising/editing.	The piece is poorly constructed and should be completely redone.
Project Objectives	The relationship between the animal the composer selected and the musical choices made in creating the composition are strong and easy to perceive.	There is a relationship between the animal the composer selected and the musical choices made in creating the composition, but some of the choices in either the melody or the accompaniment were questionable.	There was little perceivable relationship between the animal selected and the musical choices made in creating the piece.	No evidence that the composer understood the objectives of this project in the final composition.
Project Completion	The composer effectively completed all components of the project.	The composer completed the assignment, but there was not consistent attention paid to all the components.	The composer completed the melody or the accompaniment, but not both.	The composer did not complete the assignment.

ALEATORIC MUSIC AND NONTRADITIONAL MUSICAL NOTATION

Composers of the 20th and 21st centuries have dramatically stretched notions of what can be considered to be musical sounds. They include sounds from unusual sources in their pieces or use traditional instruments in unusual ways. They also do not feel bound to use the 12 semitones traditionally contained within an octave. With the addition of new approaches to creating music comes the need for new ways to notate the desired musical effects.

We often think of a composer as being the sole creator of a musical composition. In the 20th century, some composers moved in the direction from musicians being the performers of the pieces that the composer created to the musicians, and even the environment where the performance takes place, to be the co-creator of the piece. The performers have an influence in what sounds ultimately become a part of the piece and every performance is different. **Aleatoric music** is music where some element of what is performed is left to chance and/or the decision of what sounds to play are determined by the performer, often with some sort of directions or original type of notation that doesn't necessarily identify specific pitches or rhythms.

The types of aleatoric musical techniques used generally fall into three categories:

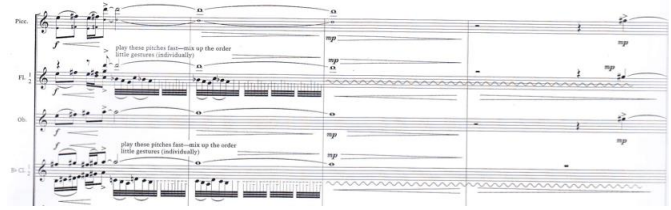
1. The composer uses of some sort of random procedure that is used to select specific pitches and rhythms that make up the piece. This is sometimes referred to as “**chance music**.”
2. The composer creates specific “events” or groupings of notes, but the performer decides how to organize them or in what order to play them. This technique is sometimes referred to as “**open form**.”
3. The composer uses **indeterminacy** through **graphic notation**.

For chance music, a composer may roll some dice, use a randomizing computer program, or use other methods to allow chance to determine the selection and order of pitches and rhythms. In this case, the performer still performs specific pitches and/or rhythms. It is the creation of the piece that is determined by chance – not the performance. John Cage composed a piece titled *Music of Changes* (1951) where he chose pitches by using an ancient Chinese book called *I Ching*, which described a method to determine random numbers. Around 1947-1948, John Cage created the ultimate in chance music. His 3-movement work, 4'33" was performed by a single player or group of players sitting in complete silence. The music was the sounds that occurred in the surrounding environment within the performance space.

Open form music utilizes traditional notation to indicate the specific pitches that the performers are to play, but the speed, order, number of pitches, or number of repetitions the pitches are performed are determined by the performers. In 1964, Terry Riley composed a piece titled *In C*. Although it wasn't written for a specific number of performers, the score suggested that 35 players would be desirable. The piece consisted of 53 short phrases of music that were numbered. Each phrase was from one and a half to 32 beats long and contained specific pitches and rhythms that were to be played in numerical order (although the players could choose to skip some,) but the performers chose when to enter and how many times to repeat each phrase, and when to move on to the next phrase. The piece began with one performer playing the note C at a steady pulse to establish the tempo.



Susan Botti uses open form techniques and graphic notation in *Eye of the Hawk*. In several places throughout the piece, she provides some groupings of specific pitches, but then directs the performers to “play these pitches fast – mix up the order little gestures (individually.)”



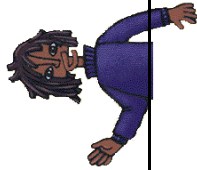
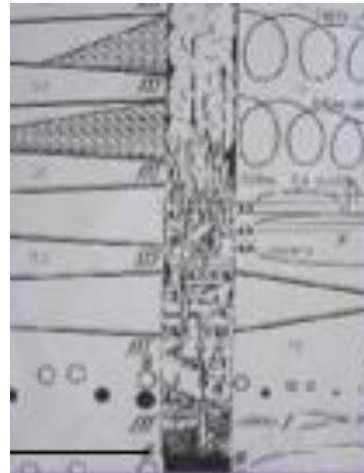
The earliest musical notation used to represent musical sounds began with squiggles, lines, and dashes that eventually developed into shapes. Shapes evolved into specific notes. With the addition of new sounds to musical compositions, some 20th century composers have returned to the use of shapes to symbolize the sounds they want to be performed in their pieces. Indeterminacy is a technique that a composer uses where there is no specific pitches or rhythms provided for the performers. Composers have to create their own original symbols and instructions to guide the performers in creating musical sounds. Graphic scores abandon standard musical notation for geometric shapes or designs that suggest how sounds are to be performed.

In his orchestral piece about the WWII bombing victims in Hiroshima, *Threnody to the Victims of Hiroshima*, composer Krystof Penderecki used triangles and straight and wavy lines in the string parts to notate the sounds he intended. Other composers of orchestral pieces that have used graphic notation include György Ligeti, and Karlheinz Stockhausen.

Susan Botti is not the only composer to create a work for band that includes graphic notation. Michael Colgrass used graphic notation in *Old Churches*, in this case a squiggly line, to indicate a “murmuring” sound. Other band composers have also used graphic notation to have performers create sounds that cannot be symbolized with more traditional notation.



In his work for concert band, *Symphony #1: In Memoriam Dresden – 1945*, Daniel Bukvitch portrays the bombing of Dresden on the night of February 13, 1945 and the resulting “Fire Storm” that killed 150,000 men, women and children. *Symphony #1* is composed in four movements. The piece builds to the fourth movement where the sounds of a “Fire Storm” are recreated. A variety of graphic symbols are used to indicate whistling, blowing air through instruments without mouthpieces, lightly tapping the lips of performers mouths while making a “shh” sound, and whispering, mumbling, speaking, shouting and then screaming the German words, “hilfe, feuer, raunch, faeuertaufe and feuer sturm.” To emphasize the emotional climax of the “Fire Storm,” Bukvitch uses a drawing of Dresden burning.



As composers continue to include sounds never used before in musical pieces, they will continue to create new ways to represent those sounds. In some cases, the notation may “jump off the page” and symbols may not be confined to being printed on paper. Creativity and innovation will be required for composers to realize the sounds they imagine as music - and musical notation will continue to evolve accordingly.

References:

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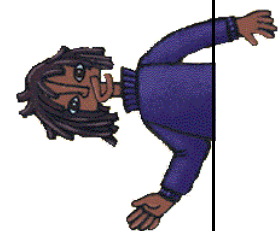
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IF THE ANIMALS COULD SING COMPOSITION PROJECT

Susan Botti uses the image of a hawk soaring over the Hudson River Valley in Upstate New York as an inspiration for her piece *Eye of the Hawk*. There is a rich musical tradition of composers writing pieces that are inspired by or represent creatures from the animal kingdom. Camille Saint-Saëns wrote a 14-movement piece called *The Carnival of the Animals* about lions, elephants, kangaroos, swans, and other animals. Prokofiev included a tune that occurred every time the wolf showed up in *Peter and the Wolf*. The 20th-century composer, Olivier Messiaen wrote *Catalogue d'oiseaux* (*Catalogue of Birds*), 13 pieces for piano inspired by birds as the title and subject matter. Many other examples from various eras and genres of music exist.

Sometimes a composer uses specific notes and rhythms to represent objects and ideas. At other times, the composer provides more general directions and leaves the musical sounds that occur to chance, referred to as aleatoric music. In *Eye of the Hawk*, Susan Botti uses both. Notice in the excerpt that follows how she provided a group of notes and then some instructions on how the notes are to be performed. Every time the piece is performed, the music will sound a little different based upon how the musicians interpret and apply the composer's directions.



For this project you will compose a short original piece of music that depicts an animal of your choice. Once you select an animal, think about what characteristics of the animal will be represented in the music and what musical elements will best embody those characteristics. How will you use melody, tempo, dynamics, or articulations to represent the appearance, movement, personality, or other attributes of the animal? What instrument's sound do you think works the best to perform your melody? Will your representation of the animal

be literal or more abstract? Once you have created your melody, you will create an aleatoric accompaniment to go along with the melody. The accompaniment should relate to or support the characteristic represented in the melody you created, while leaving room for the performer(s) to influence the piece by how they interpret the directions you give them. For the accompaniment you may use traditional music notation with directions on what to do with the notes, graphic notation (shapes and symbols that represent sounds without specific pitch or rhythm indicated,) or both.

Follow these steps:

1. Determine which animal will be the inspiration for the piece.
2. Identify the characteristic(s) of the animal that will be embodied in the melody and consider how the musical elements will depict those characteristics.
3. Select which instrument will perform the melody.
4. Create an original melody.
5. Determine what kind of aleatoric accompaniment will best support the melody and which instrument(s) will perform the accompaniment. If you need more information about aleatoric music, an information sheet is available with more background information. Also consider the ideas for creating aleatoric music provided below.
6. Create an aleatoric accompaniment using either traditional or graphic notation, or both.
7. Notate the piece by creating a score and parts.
8. Record or perform the piece.

IDEAS FOR CREATING ALEATORIC MUSIC

- Design shapes, lines, or pictures that somehow represent the kinds of sounds you want performers to create. Be sure to provide a key or written instructions to guide how the **graphic notation** should be interpreted (indeterminacy.)
- Experiment with finding combinations of pitches that complement the melody you created and provide instructions how to use those pitches to accompany the melody to create a piece using **open form** techniques.
- Set up a table or grid (see below) that associates a specific pitch with number from 2 to 12 and then roll a pair of dice to select the pitches that you will use to make up your melody and the order that the pitches will occur. Or you could take the title of your piece and set up a similar grid that associates a specific pitch with each letter of the alphabet and use that **chance technique** to select pitches for your melody. You could use similar techniques to determine rhythms and other musical elements

2	3	4	5	6	7	8	9	10	11	12
Bb	C	D	Eb	F	G	A	B	Ab	E	F#



Have fun and be creative in "making your animal sing!"

