



Lesson Plan: Adventures in Aleatory – an Introduction

INTRODUCTION

Aleatory, from *alea*, a Latin word for dice, is one of the compositional techniques that Tawnie Olson uses in *Pop!*. Though usually associated with contemporary music, the idea is much older. Musicians and composers in the 18th century called it dice music. One approach to creating aleatory music two hundred years ago was to roll the dice to determine which measures of music would be performed or notes to include in a melody.

A key principle in aleatory music is that it leaves some aspect(s) of the performance of a piece to chance. Though the composer might give performers a choice of when or what to play, when to start and stop, and how to play what the composer has written down, it is the players who choose how they will do it. Consequently, every performances of aleatory music will be different in some way.

In this lesson, students will be introduced to aleatory music, explore the main ideas, define the term, and listen to aleatory pieces by Henry Cowell and John Cage.

LEARNING GOAL

By examining the **aleatory** section in *Pop!*, listening and responding to two short aleatory pieces, discussion, and viewing a video resource from *12tone*, students will develop their understanding of aleatory music.

NATIONAL CORE MUSIC STANDARDS FOR THIS LESSON

Responding

- Anchor #7: Analyze how the structure and context of varied musical works inform the response
- Anchor #8: Support interpretations of musical works that reflect creators'/performers' expressive intent

RESOURCES

- Electronic image of Page 18, Letter K from the *Pop!* [conductor's score](#) for the band to view
- Recordings: "[Anger Dance](#)" by Henry Cowell, [Imaginary Landscape No. 4](#) by John Cage at, and [Pop!](#) by Tawnie Olson
- Video: "[Making Music with Dice](#)"

PROCESS

Introduce the term, aleatory

1. Electronically display page 18, Letter K, from the conductor's score of *Pop!* (see last page of document). Ask students to examine the details on the page and describe what they see. Here are some prompts for discussion:

- What do you notice on this page for *Pop!*?
- Does it look like a typical page of a band conductor's score? (If students aren't familiar with how a conductor score looks, may have to show other examples.)
- What stands out on the page?
- Why is there a paragraph at the top of the page? What is its purpose? (Read it out loud. It provides directions)
- How long will this section last?
- How do you know what notes to play? Should they be played in the order written?
- Other comments or questions.

Help students understand that Letter K is where composer, Tawnie Olson, gives players choices about how the music in this section will sound. The students have control over:

- Which pitches to play from the scale she provides, and in what order.
- How much space to leave between the notes (Olson just says, "leave lots of space between the notes.")
- When, where to get louder and faster. And, after a cue, how much and how quickly to decrescendo.
- How to space their notes apart.
- Percussionists can select the instrument to use.

2. Wrap up by stating that this section is an example of **aleatory music**. (write term on the board.) Ask students to summarize what this means. Help them puzzle it out this BIG IDEA by thinking about how Olson leaves her music wide open at this point, leaving how it sounds to the chance choices of 40 or 50 players, not to notes and measures she's written.

3. Provide a director's definition of aleatory and its roots from personal experience, or use the information on the right. Post definitions on the wall as you continue to rehearse *POP!*.

Listen to more aleatory music

1. Listen and respond to other examples of aleatory music.
- The "[Anger Dance](#)" by Henry Cowell. Before listening, read Cowell's own words about the piece:

"The 'Anger Dance' was composed at a time when I had been very much annoyed by the fact that a doctor to whom I showed a bent-up leg suggested that it should be cut off immediately. And since I didn't in the least approve of this, and thinking of it over and over again made me

Aleatory comes from a Latin noun, *alea*, which referred to a certain game played with dice. It was first an English word in the 16th century as a term to describe uncertainty; things dependent on questionable odds, such as the roll of the dice. It eventually came to describe that which happens by accident or chance. In music, aleatory describes music in which some parts or aspects of the work are left for the performers to determine what, when, or how to play. Also called chance music.



more and more angry, I stomped home on my crutches, and the phrases of the “Anger Dance” went through my mind louder and louder as I walked home.”

- Listen, then add this piece of information:
When it was published in 1963 by Folkways (*Henry Cowell: Piano Music*), Cowell’s notes directed players to determine **how often** to repeat each phrase, “...depending on how angry the player is able to feel.”
- Ask students why this music is considered aleatory music. (Though the composer wrote the notes, the performer determines how often to play each phrase and how long or short to make the piece.)
- *Imaginary Landscape No. 4*, composed in 1951 by John Cage, is a work for 24 performers, 12 radios, and a conductor. It is the fourth movement in the set of *Imaginary Landscapes*. There are no instruments used in the 4-minute, one movement piece. The score is written for 12 radios in the hands of the 24 musicians. During the piece, one musician tunes the radio to various stations, and the other determines the dynamics (amplitude) – how loud and soft the radio will sound. Whatever is being broadcast in the community at the time of day of the performance becomes the sound material for the piece. This might include music (any genre), talk shows, sports broadcast, or even the white noise in between stations. The experience of the radios phasing in and out, the variety of content being broadcast, and the dynamics involved creates the musical performance. In a concert hall, *Imaginary Landscape No. 4* provides an interesting, unique experience of “chance” music for both musicians and audience.
 - There are multiple recordings on YouTube. [Here’s one to try.](#)
 - Allow time for the deep discussion. What parameters were set by the composer? What choices did the pair of musicians make?
 - Students will likely have a wide variety of opinions about Cage’s piece being considered a piece of music. Take time to have this interesting discussion. Or divide into groups, and assign half the groups to write a paragraph (one per each group) supporting the idea that *Imaginary Landscape No. 4* **is** music, and the other half to write paragraphs that the piece **is not** music.

Watch a video about aleatory

Excellent summary of aleatory created by *12Tone*, “[Making Music with Dice](#).” View it before using it to make sure it suits your learning goals. Four minutes long, you can watch it in class, or post the link on the band website and make it a homework assignment.

12tone is a free online education channel that covers all sorts of musical topics, like harmony, arranging, and composition, and aleatory. They produce new videos weekly with a goal to inspire a love of music and music theory in “as many people as possible.” Supported by patrons and audiences, patron support provides the developer the incentive to continue the clever videos.

Create an aleatory piece

Students can compose a short original piece for their own instrument applying aleatoric techniques in the “[Aleatory Composition Project](#)” included with this BandQuest® curriculum.

EXTENSIONS

- Terry Riley's *In C*. Composer Terry Riley provides a set of 53 short, numbered musical phrases, some as short as a half beat, and some up to 32 beats long. Players select phrases to play, and how often to repeat it before selecting another. They are also encouraged to start playing at different times, even though they might be playing the same phrase as is another performer. These performer choices make *In C* an aleatory piece. Listen to *In C* [here](#) (a 40 minute performance) or [here](#) for a video of a live performance (29 minutes).
- Students can search the web for other aleatory pieces and select on that interests them. After they listen to their chosen piece, they will write a brief summary that includes 1) the music's title and composer, 2) where to find it on the web, and 3) a paragraph about how the music fits into the definition of aleatory music.
- View [Aleatory Art](#) at The Aleatoric Art Gallery.

Resources

- Great Video "[Making Music with Dice](#)"
12tone is an online education channel that covers all sorts of music theory topics, like harmony, arranging, and composition. Patron supported, they produce a new video every week. Their goal is to inspire a love of music and music theory in as many people as possible.

Listen to other aleatory music:

- Henry Cowell *Mosaic Quartet* (String Quartet No. 3, 1934), which allows the players to arrange the fragments of music in several different possible sequences.
- "[Chance Composition, Making Music with Dice](#)" fast explanation of Chance Music. Also [this video](#) on graphic notation. The home page can be found [here](#).
- Play with [Mozart's Dice game "Minuet."](#)

Pop!

Pitched instruments: play any of the pitches indicated, staccato, in any octave. Begin by playing softly and leaving lots of space between notes. Then get louder and play faster, like a pot of popcorn when it gets going. At the conductor's cue, start getting softer and spacing out the notes more and more, like a pot of popcorn when nearly all the kernels are popped. Stop when the conductor cues m. 149. It might be helpful to designate section leaders, and have the section wait to enter until after they have played. It is also helpful to talk to the people next to you to make sure you don't play the same thing that they do (everyone should play a unique pattern). Percussion of indefinite pitch: make a similar shape (non-sustained notes moving from soft, slow to fast, loud to soft, slow, like a pot of popcorn) on any instruments you wish, avoiding unison playing and making sure that the rest of the band can always be heard.

ca. 20-60"

K

Picc.

Fl 1

Fl 2

Ob.

B♭ Cl 1

B♭ Cl 2

Bs. Cl.

Bn.

A. Sx.

T. Sx.

B. Sx.

ca. 20-60"

K

B♭ Tpt. 1

B♭ Tpt. 2

F Hn.

Tbn.

Bar.

Tuba

Xyl.

Mar.

Vib.

Perc. 1 (Bongos)

Perc. 2 (Claves)

Perc. 3 (Cowbell)

Perc. 4 (Guero)