

# RESIDENCY PLAN

## ARTIST CONTACT INFORMATION

**Name:** Alexandra Papazian

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## RESIDENCY TITLE

**Title:** Parts of a Whole – Using Choreography to Explore Fractions

**Led by:** Education & Community Engagement Staff Member

**For students in grades:** 3-5

## SCOPE

**Number of Sessions:** 3 sessions

**Time length of Sessions:** 60 minutes

**Preferred Timeline:** Mon/Wed/Fri

**Maximum number of classes that can be served:** 4 classes per day

## DESCRIPTION

Fractions are a difficult concept for students to grasp and are best understood using visual or tactile methods. In this residency, students will create dances as a way to examine fractions and practice basic operations with fractions. A teaching artist will help students use their bodies to broaden their math skills in this fun and engaging residency.

In addition to the in-class residency days, teacher(s) will also participate in (1) pre-residency planning discussion and (1) post-residency reflection discussion with the teaching artist.

# RESIDENCY PLAN

## EXPECTED RESULTS

### The students will know:

- The definition of choreography
- The elements of dance
- The components of a dance phrase
- The definition of fraction
- The steps for adding and subtracting fractions of the same denominator
- The elements of fractions

### The students will be able to:

- DA.CR.1(3,4,5)b – Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.
- 3.NF.A1 – Understand a fraction ( $1/b$ ) as the quantity formed by one part when a whole is partitioned into  $b$  equal parts; understand a fraction ( $a/b$ ) as the quantity formed by  $a$  parts of size  $1/b$ .
- 4.NF.B.3 – Understand a fraction  $a/b$  with  $a > 1$  as a sum of unit fractions ( $1/b$ )
- 5.NF.A.2 – Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using a variety of representations, equations, and visual models to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

### The students will appreciate:

- How dancers use math to choreograph dances
- The thinking required to choreograph a dance
- That math is fun
- Their own ability to think and reason through math problems using modeling

## LOGISTICAL FACTORS

**The school must provide:** An open space for movement, a place to display written information (i.e. whiteboard), an online video connection platform if Ballet Arizona's Zoom account is not allowable

# RESIDENCY PLAN

## OVERVIEW OF CLASSROOM SESSIONS

OPTION	DESCRIPTION
Artist Performance/Demo/Exhibit	Teacher(s) will be sent a dance video link to present to the class in preparation for the residency. Teacher(s) should watch the video in-class with their students and lead a pre-residency discussion with their students about dance.

## CONTENT KNOWLEDGE STUDENTS NEED BEFORE THE RESIDENCY BEGINS

- A basic understanding of dance
- A basic understanding of what a dancer does
- The math foundations of addition and subtraction
- A basic understanding of what a fraction is

SESSION	OVERVIEW	TEACHER ROLE During Sessions	TEACHER ROLE Before Next Session
Classroom Session 1	<p>The residency artist will:</p> <ul style="list-style-type: none"> <li>• Introduce the elements of dance: body, time, energy, levels, and space.</li> <li>• Do the Basic Dance Skills Activities</li> <li>• Introduce the definition of choreography.</li> <li>• Do the Name Dance Game to boost movement confidence, have fun, and build foundations for phrase building</li> <li>• Review this lesson and preview the next lesson.</li> </ul>	<ul style="list-style-type: none"> <li>• Observe</li> <li>• Participate</li> <li>• Assist</li> </ul>	<ul style="list-style-type: none"> <li>• Lead a reflection</li> <li>• Provide related instruction – teacher should review fraction foundations with the students</li> </ul>

# RESIDENCY PLAN

SESSION	OVERVIEW	TEACHER ROLE During Sessions	TEACHER ROLE Before Next Session
<b>Classroom Session 2</b>	<p>The residency artist will:</p> <ul style="list-style-type: none"> <li>● Review the last lesson and preview this lesson.</li> <li>● Repeat Basic Dance Skills Activity for warmup.</li> <li>● Introduce components of a dance phrase.</li> <li>● Do Dance Phrase practice to embody the concept.</li> <li>● Introduce the definition of fraction.</li> <li>● Introduce the elements of a fraction.</li> <li>● Do Dance Phrase practice, this time creating a phrase and separating it into parts and having the students identify and setup corresponding single fractions for those parts.</li> <li>● Introduce the steps to adding/subtracting fractions of same denominator.</li> <li>● Do Dance Phrase practice, this time creating a phrase and separating it into parts and having the students identify and practice adding and subtracting fractions of the phrase.</li> <li>● Review this lesson and preview the next lesson.</li> </ul>	<ul style="list-style-type: none"> <li>● Observe</li> <li>● Document activities (photos, written notation)</li> </ul>	<ul style="list-style-type: none"> <li>● Repeat an activity – If teacher is comfortable, repeat dance phrase/number sentence modeling with students</li> <li>● Lead a reflection</li> <li>● Provide related instruction – teacher should review addition and subtraction of fractions with the students</li> </ul>

SESSION	OVERVIEW	TEACHER ROLE During Sessions	TEACHER ROLE Before Next Session
<b>Classroom Session 3</b>	<p>The residency artist will:</p> <ul style="list-style-type: none"> <li>● Review the last lesson and preview this lesson.</li> <li>● Repeat Basic Dance Skills Activity for warmup</li> <li>● Review the definitions of choreography and fraction.</li> <li>● Review the elements of a fraction and the steps for adding/subtracting fractions of same denominator.</li> <li>● Split students into small groups and have each group choreograph an 8 count phrase in preparation for a sharing and discussion session.</li> </ul>	<ul style="list-style-type: none"> <li>● Observe</li> <li>● Document activities (photos, written notation)</li> </ul>	<ul style="list-style-type: none"> <li>● Lead a reflection (if desired)</li> </ul>

# RESIDENCY PLAN

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|--|---|--|--|
|  | <ul style="list-style-type: none"><li>• Facilitate sharing session in which groups share their dance phrases with the audience and then manipulate their phrases using fractions. Both performers and audience members will practice identifying what fraction the dance combinations represent and practice adding/subtracting phrases and re-identifying the new fraction.</li><li>• Facilitate a reflection about the residency.</li></ul> |  |  |
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# **CLASSROOM SESSION #1**

## LESSON TEMPLATE

<b>A. FOUNDATION</b>	
<b>Teaching Artist:</b> Education & Community Engagement Staff Member	
<b>Grade Level:</b> 3-5	
<b>Standards</b>	
<p><u>Art Form:</u> DA.CR.1(3,4,5)b – Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.</p>	<p><u>Other Curriculum:</u> 3.NF.A1 – Understand a fraction (<math>1/b</math>) as the quantity formed by one part when a whole is partitioned into <math>b</math> equal parts; understand a fraction (<math>a/b</math>) as the quantity formed by a parts of size <math>1/b</math>.</p> <p>4.NF.B.3 – Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of unit fractions (<math>1/b</math>)</p> <p>5.NF.A.2 – Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using a variety of representations, equations, and visual models to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</p>
<b>Objectives</b>	
<p><u>Art form:</u></p> <p>Students will KNOW:</p> <ul style="list-style-type: none"> <li>• The definition of choreography</li> <li>• The elements of dance</li> <li>• The components of a dance phrase</li> </ul> <p>Students will BE ABLE TO:</p> <ul style="list-style-type: none"> <li>• Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.</li> </ul>	<p><u>Other Curriculum:</u></p> <p>Students will KNOW:</p> <ul style="list-style-type: none"> <li>• The definition of fraction</li> <li>• The steps for adding and subtracting fractions of the same denominator</li> <li>• The elements of fractions</li> </ul> <p>Students will BE ABLE TO:</p> <ul style="list-style-type: none"> <li>• Understand a fraction as being 1 or <math>x</math> parts out of a whole</li> <li>• Understand a fraction as having a numerator and a denominator</li> <li>• Use modeling to be able to solve addition and subtraction problems of fractions of the same denominator</li> </ul>

**LESSON TEMPLATE**

<b>Students will APPRECIATE:</b> <ul style="list-style-type: none"><li>• How dancers use math to choreograph dances</li><li>• The thinking required to choreograph a dance</li></ul>	<b>Students will APPRECIATE:</b> <ul style="list-style-type: none"><li>• That math is fun</li><li>• Their own ability to think and reason through math problems using modeling</li></ul>
<b>Materials Required</b> An open space for movement, a place to display written information (i.e. whiteboard), an online video connection platform if Ballet Arizona's Zoom account is not allowable	
<b>Room Set-up Required</b> Open floor with room to move around safely	

## LESSON TEMPLATE

**B. LESSON TIMING**

<b>INTRODUCTION</b>	<b>TIME: 5 mins</b>
<b>LEARNING ACTIVITY</b>	<b>TIME: 50 mins</b>
<b>CLOSURE</b>	<b>TIME: 5 mins</b>
	<b>TOTAL: 60 mins</b>

## LESSON TEMPLATE

## C. INTRODUCTION

Min: 5

Good [morning/afternoon] students!

My name is Miss Alex and I am here to do a residency that teaches dance and fractions. I'm going to be here for 3 days [Monday, Wednesday, & Friday] to work with you all, so we're going to get to know each other pretty well this week. By the end of our 3 days together you will:

**KNOW:**

- The definition of choreography
- The elements of dance
- The components of a dance phrase
- The definition of fraction
- The steps for adding and subtracting fractions of the same denominator
- The elements of fractions

**BE ABLE TO:**

- Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.
- Understand a fraction as being 1 or x parts out of a whole
- Understand a fraction as having a numerator and a denominator
- Use modeling to be able to solve addition and subtraction problems of fractions of the same denominator

**APPRECIATE:**

- How dancers use math to choreograph dances
- The thinking required to choreograph a dance
- That math is fun
- Their own ability to think and reason through math problems using modeling

**Preview Lesson:**

Today, we're going to spend some time learning about dance and how we can use our bodies to communicate.

**Review Prior Learning:**

You already know that a dancer uses their body to create movements that communicate feelings, ideas, or events. Today, we're going to learn how dancers do exactly that!

**Communicate Expectations:**

Since we will be up and moving around, I have a few expectations that will help us be successful.

- I expect that you will not touch anyone else unless and will keep good personal space.
- I expect that you will raise your hand and wait for me to call on you if you have a question.
- I expect that you will keep your eyes and ears open and listen when I am giving instructions.
- I expect everyone to participate. I know that dance might be new or seem uncomfortable to some of you, but we're all going to do it together.

Okay! Let's stand up and find our own space in the room.

## LESSON TEMPLATE

<b>D. LEARNING ACTIVITY</b>		
<b>TITLE: Classroom Session 1</b>		
<b>Step #1:</b> Introduce students to the elements of dance.	<b>Min:</b>	3
<b>Step #2:</b> Give directions for the BODY activity.	<b>Min:</b>	1
<b>Step #3:</b> Students learn and practice body isolations.	<b>Min:</b>	3
<b>Step #4:</b> Give directions for the TIME activity.	<b>Min:</b>	1
<b>Step #5:</b> Students learn and practice shape-making with their bodies.	<b>Min:</b>	3
<b>Step #6:</b> Give directions for the ENERGY activity.	<b>Min:</b>	1
<b>Step #7:</b> Students learn and practice refining their movements to show different effort levels.	<b>Min:</b>	3
<b>Step #8:</b> Give directions for the SPACE activity.	<b>Min:</b>	1
<b>Step #9:</b> Students learn and practice different ways to use space with their bodies.	<b>Min:</b>	3
<b>Step #10:</b> Give directions for the LEVELS activity.	<b>Min:</b>	1
<b>Step #11:</b> Students learn and practice different ways to add levels to their movements.	<b>Min:</b>	3
<b>Step #12:</b> Introduce the definition of choreography.	<b>Min:</b>	1
<b>Step #13:</b> Give directions for the Name Dance Game.	<b>Min:</b>	2
<b>Step #14:</b> Students play the Name Dance Game to boost movement confidence, have fun, and build foundations for phrase building.	<b>Min:</b>	15
<b>Step #16:</b> Students do cool down exercise.	<b>Min:</b>	4
<b>Step #17:</b> Lead a reflection.	<b>Min:</b>	5

## LESSON TEMPLATE

**E. CLOSURE**

Min: 5

**Review Purpose**

Today we learned the definition of choreography and learned the elements of dance: body, time, energy, space, levels. We also practiced some basic dance phrase building skills when we played the Name Dance Game.

**Restate Main Ideas**

The main idea we want to remember from our work today is that we can we can put different movements together in different ways to create different size combinations.

**Invite Reflection**

What questions do you have about dance?  
(Format: whole group)

What are you excited to learn/do when we are together again?  
(Format: whole group)

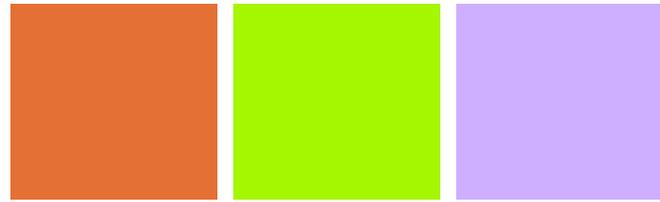
**Recognize Challenges and/or Accomplishments**

Today we struggled with XXX

Today we accomplished XXX

**Connect to Future Learning/Set Challenges for Next Lesson**

We have two more lessons together! Now that we have learned some basic dance skills and practiced using them, we are going to learn a little more about math. Next time, we'll talk about the definition and elements of fractions and learn how dancers use fractions in their choreography. Before our next class, you and **\*\*teacher name\*\*** will do a little more math practice with fractions so we are ready to use those skills when we meet together next. Be thinking about what connections you might see between math and dance!



# **CLASSROOM SESSION #2**

## LESSON TEMPLATE

<b>A. FOUNDATION</b>	
<b>Teaching Artist:</b> Education & Community Engagement Staff Member	
<b>Grade Level:</b> 3-5	
<b>Standards</b>	
<p><u>Art Form:</u> DA.CR.1(3,4,5)b – Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.</p>	<p><u>Other Curriculum:</u> 3.NF.A1 – Understand a fraction (<math>1/b</math>) as the quantity formed by one part when a whole is partitioned into <math>b</math> equal parts; understand a fraction (<math>a/b</math>) as the quantity formed by a parts of size <math>1/b</math>.</p> <p>4.NF.B.3 – Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of unit fractions (<math>1/b</math>)</p> <p>5.NF.A.2 – Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using a variety of representations, equations, and visual models to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</p>
<b>Objectives</b>	
<p><u>Art form:</u></p> <p>Students will KNOW:</p> <ul style="list-style-type: none"> <li>• The definition of choreography</li> <li>• The elements of dance</li> <li>• The components of a dance phrase</li> </ul> <p>Students will BE ABLE TO:</p> <ul style="list-style-type: none"> <li>• Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.</li> </ul>	<p><u>Other Curriculum:</u></p> <p>Students will KNOW:</p> <ul style="list-style-type: none"> <li>• The definition of fraction</li> <li>• The steps for adding and subtracting fractions of the same denominator</li> <li>• The elements of fractions</li> </ul> <p>Students will BE ABLE TO:</p> <ul style="list-style-type: none"> <li>• Understand a fraction as being 1 or <math>x</math> parts out of a whole</li> <li>• Understand a fraction as having a numerator and a denominator</li> <li>• Use modeling to be able to solve addition and subtraction problems of fractions of the same denominator</li> </ul>

# 3

## LESSON TEMPLATE

<p>Students will APPRECIATE:</p> <ul style="list-style-type: none"><li>• How dancers use math to choreograph dances</li><li>• The thinking required to choreograph a dance</li></ul>	<p>Students will APPRECIATE:</p> <ul style="list-style-type: none"><li>• That math is fun</li><li>• Their own ability to think and reason through math problems using modeling</li></ul>
<p><b>Materials Required</b> An open space for movement, a place to display written information (i.e. whiteboard), an online video connection platform if Ballet Arizona's Zoom account is not allowable</p>	
<p><b>Room Set-up Required</b> Open floor with room to move around safely</p>	

## LESSON TEMPLATE

<b>B. LESSON TIMING</b>	
<b>INTRODUCTION</b>	<b>TIME: 5 mins</b>
<b>LEARNING ACTIVITY</b>	<b>TIME: 50 mins</b>
<b>CLOSURE</b>	<b>TIME: 5 mins</b>
	<b>TOTAL: 60 mins</b>

## LESSON TEMPLATE

**C. INTRODUCTION****Min: 5**

Good [morning/afternoon] students!

For anyone who was not here last time, my name is Miss Alex and I'm going to be here for 2 more days [Wednesday, & Friday] to work with you to understand more about dance and fractions.

On day 1 we learned:

- The definition of choreography
- The elements of dance
- Basic dance phrase building

Today we will learn:

- The components of a dance phrase
- The definition of fraction
- The steps for adding and subtracting fractions of the same denominator
- The elements of fractions

Preview Lesson:

Today we're going to practice these skills by making dances that model fractions.

Review Prior Learning:

We already know that dancers use the body to communicate with movement. We also already know some basic dance skills: shape, space, effort, and body.

Communicate Expectations:

Since we will be up and moving around, I have a few expectations that will help us be successful.

- I expect that you will not touch anyone else unless and will keep good personal space.
- I expect that you will raise your hand and wait for me to call on you if you have a question.
- I expect that you will keep your eyes and ears open and listen when I am giving instructions.
- I expect everyone to participate. I know that dance might be new or seem uncomfortable to some of you, but we're all going to do it together.

Okay! Let's stand up and find our own space in the room.

## LESSON TEMPLATE

<b>D. LEARNING ACTIVITY</b>		
<b>TITLE: Classroom Session 2</b>		
<b>Step #1:</b> Give directions for the Basic Dance Skills warmup.	<b>Min:</b>	1
<b>Step #2:</b> Students do Basic Dance Skills warmup.	<b>Min:</b>	5
<b>Step #3:</b> Introduce components of a dance phrase.	<b>Min:</b>	3
<b>Step #4:</b> Give directions for Dance Phrase practice.	<b>Min:</b>	1
<b>Step #5:</b> Students do Dance Phrase practice using movements and counts.	<b>Min:</b>	5
<b>Step #6:</b> Introduce the definition of fraction.	<b>Min:</b>	2
<b>Step #7:</b> Introduce the elements of a fraction.	<b>Min:</b>	3
<b>Step #8:</b> Give directions for Dance Phrase practice using fractions.	<b>Min:</b>	2
<b>Step #9:</b> Students do Dance Phrase practice this time creating a phrase and separating it into equal parts and having the students identify and setup corresponding single fractions for those parts.	<b>Min:</b>	10
<b>Step #10:</b> Introduce the steps to adding/subtracting fractions of same denominator.	<b>Min:</b>	3
<b>Step #11:</b> Give directions for Dance Phrase practice using addition/subtraction of fractions	<b>Min:</b>	1
<b>Step #12:</b> Students do Dance Phrase practice, this time creating a phrase and separating it into equal parts and having the students practice adding and subtracting fractions of the phrase.	<b>Min:</b>	10
<b>Step #13:</b> Lead a reflection.	<b>Min:</b>	4

## LESSON TEMPLATE

**E. CLOSURE**

Min: 5

**Review Purpose**

Today we learned the components of a dance phrase, the definition and elements of a fraction, and the steps to adding or subtracting fractions of like denominator.

**Restate Main Ideas**

The main ideas we want to remember from today are that fractions are parts of a whole and dancers use fractions to split their choreography into smaller parts.

**Invite Reflection**

What questions do you have about fractions?  
(Format: whole group)

What questions do you have about choreography?  
(Format: whole group)

What questions do you have about dance phrases?  
(Format: whole group)

**Recognize Challenges and/or Accomplishments**

Today we struggled with XXX

Today we accomplished XXX

**Connect to Future Learning/Set Challenges for Next Lesson**

We have one more lesson together! Now that we have learned about fractions, choreography, and dance phrases, we are ready to create our own dances that demonstrate our understanding of these concepts. Next time, we'll split into groups and create our own 8 count dance phrases and practice adding and subtracting them to show different fractions of our whole class dance. Before our next class, you and **\*\*teacher name\*\*** will do a little fraction review to make sure that you are understanding everything we are learning. Be thinking about what kinds of movements you might want to put into your choreography!



# **CLASSROOM SESSION #3**

## LESSON TEMPLATE

<b>A. FOUNDATION</b>	
<b>Teaching Artist:</b> Education & Community Engagement Staff Member	
<b>Grade Level:</b> 3-5	
<b>Standards</b>	
<p><u>Art Form:</u> DA.CR.1(3,4,5)b – Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.</p>	<p><u>Other Curriculum:</u> 3.NF.A1 – Understand a fraction (<math>1/b</math>) as the quantity formed by one part when a whole is partitioned into <math>b</math> equal parts; understand a fraction (<math>a/b</math>) as the quantity formed by a parts of size <math>1/b</math>.</p> <p>4.NF.B.3 – Understand a fraction <math>a/b</math> with <math>a &gt; 1</math> as a sum of unit fractions (<math>1/b</math>)</p> <p>5.NF.A.2 – Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators by using a variety of representations, equations, and visual models to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.</p>
<b>Objectives</b>	
<p><u>Art form:</u></p> <p>Students will KNOW:</p> <ul style="list-style-type: none"> <li>• The definition of choreography</li> <li>• The elements of dance</li> <li>• The components of a dance phrase</li> </ul> <p>Students will BE ABLE TO:</p> <ul style="list-style-type: none"> <li>• Explore a given movement problem by combining a variety of movements and manipulating the elements of dance.</li> </ul>	<p><u>Other Curriculum:</u></p> <p>Students will KNOW:</p> <ul style="list-style-type: none"> <li>• The definition of fraction</li> <li>• The steps for adding and subtracting fractions of the same denominator</li> <li>• The elements of fractions</li> </ul> <p>Students will BE ABLE TO:</p> <ul style="list-style-type: none"> <li>• Understand a fraction as being 1 or <math>x</math> parts out of a whole</li> <li>• Understand a fraction as having a numerator and a denominator</li> <li>• Use modeling to be able to solve addition and subtraction problems of fractions of the same denominator</li> </ul>

**LESSON TEMPLATE**

<p>Students will APPRECIATE:</p> <ul style="list-style-type: none"><li>• How dancers use math to choreograph dances</li><li>• The thinking required to choreograph a dance</li></ul>	<p>Students will APPRECIATE:</p> <ul style="list-style-type: none"><li>• That math is fun</li><li>• Their own ability to think and reason through math problems using modeling</li></ul>
<p><b>Materials Required</b> An open space for movement, a place to display written information (i.e. whiteboard), an online video connection platform if Ballet Arizona's Zoom account is not allowable</p>	
<p><b>Room Set-up Required</b> Open floor with room to move around safely</p>	

## LESSON TEMPLATE

**B. LESSON TIMING**

<b>INTRODUCTION</b>	<b>TIME: 5 mins</b>
<b>LEARNING ACTIVITY</b>	<b>TIME: 50 mins</b>
<b>CLOSURE</b>	<b>TIME: 5 mins</b>
	<b>TOTAL: 60 mins</b>

## LESSON TEMPLATE

**C. INTRODUCTION****Min: 5**

Good [morning/afternoon] students!

For anyone who was not here last time, my name is Miss Alex and this is our last day to work together to explore dance and fractions.

On day 1 we learned:

- The definition of choreography
- The elements of dance
- Basic dance phrase building

On day 2 we learned:

- The components of a dance phrase
- The definition of fraction
- The steps for adding and subtracting fractions of the same denominator
- The elements of fractions

Today we will:

- Create our own 8 count dance phrases
- Demonstrate our understanding of fractions by manipulating those phrases

Preview Lesson:

To start with, we will review some of the concepts we've learned over the past few days. We will then work on choreographing our own dances to show our fractions. Then, we will add music to our dances and practice one last time before we share and discuss as a class.

Review Prior Learning:

We already know that dancers use math to choreograph dances and that choreography takes a lot of thought. We also know that we can think and reason through math problems using modeling with our dances.

Communicate Expectations:

Since we will be up and moving around, I have a few expectations that will help us be successful.

- I expect that you will not touch anyone else unless and will keep good personal space.
- I expect that you will raise your hand and wait for me to call on you if you have a question.
- I expect that you will keep your eyes and ears open and listen when I am giving instructions.
- I expect everyone to participate. I know that dance might be new or seem uncomfortable to some of you, but we're all going to do it together.

Okay! Let's have some fun with dance and math!

## LESSON TEMPLATE

<b>D. LEARNING ACTIVITY</b>		
<b>TITLE: Classroom Session 2</b>		
<b>Step #1:</b> Give directions for the Basic Dance Skills warmup.	<b>Min:</b>	1
<b>Step #2:</b> Students do Basic Dance Skills warmup.	<b>Min:</b>	4
<b>Step #3:</b> Review definitions of choreography and fraction.	<b>Min:</b>	3
<b>Step #4:</b> Review the elements of a fraction and the steps for adding/subtracting fractions of same denominator.	<b>Min:</b>	3
<b>Step #5:</b> Review the components of a dance phrase.	<b>Min:</b>	2
<b>Step #6:</b> Split students into small groups.	<b>Min:</b>	2
<b>Step #7:</b> Give directions for choreography preparation.	<b>Min:</b>	3
<b>Step #8:</b> Students choreograph 8 counts in their small groups.	<b>Min:</b>	7
<b>Step #9:</b> Give directions for rehearsing with music.	<b>Min:</b>	1
<b>Step #10:</b> Students rehearse their dance phrases with music.	<b>Min:</b>	2
<b>Step #11:</b> Give directions for sharing and discussion session.	<b>Min:</b>	2
<b>Step #12:</b> Students share their dances with the class one at a time and each group is asked to manipulate their dance with fractions to demonstrate their understanding. Audience members participate and help the sharing students as well.	<b>Min:</b>	15
<b>Step #13:</b> Lead a reflection.	<b>Min:</b>	5

## LESSON TEMPLATE

### E. CLOSURE

	<b>Min:</b>	<b>5</b>
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#### **Review Purpose**

Today we demonstrated our understanding of fractions through our dance phrases and choreography.

#### **Restate Main Ideas**

The main ideas we want to remember from our work are that dancers use a lot of math to choreograph dances and that it takes a lot of thought to choreograph a dance. We also want to remember that math can be fun and that you can reason through problems using modeling like we did with our dance phrases.

#### **Invite Reflection**

What things did you learn from participating in this residency that you haven't learned before?

(Format: whole group)

What were some challenges you had to overcome during this process? (Format: small group/whole group)

What did you enjoy about learning in this way? (Format: small group/whole group)

#### **Recognize Challenges and/or Accomplishments**

Today we struggled with XXX

Today we accomplished XXX

#### **Connect to Future Learning/Set Challenges for Next Lesson**

This was our last class together! I am very proud of the way you all worked together to create your dances and learn about fractions. Over the course of this residency we learned that modeling is a really helpful way to learn and understand math. We practiced thinking about fractions as parts of a whole by dividing up our dance phrases into smaller parts. I challenge each and every one of you to take what you have learned here and apply it to the new things you'll learn in this class and in others. Thank you so much for letting me share this time with you.