

# RESIDENCY PLAN

## ARTIST CONTACT INFORMATION

**Name:** Alexandra Papazian

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## RESIDENCY TITLE

**Title:** Dancing Numbers – Using Dance to Build Math Literacy

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

**For students in grades:** K-2

## 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

Dance is a wonderful way for students to explore complex concepts because of its ability to make ideas tangible and visible. In this residency, students will use their brains and bodies to explore addition, subtraction, and number sentences through physical expression. A teaching artist will make math foundations fun and approachable for students in this creative 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 dance
- The components of a dance
- The definition of addition
- The definition of subtraction
- The structure of a number sentence

### The students will be able to:

- Connect movements that express an idea or emotion to create a short movement sequence
- Understand addition as putting together and adding to
- Understand subtraction as taking apart and taking from
- Represent and solve problems using addition and subtraction

### The students will appreciate:

- The joy of dance
- How dance phrases are created
- The thinking required to reason through math problems
- That math is fun

## 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. ( <i>Nutcracker video</i> )

### CONTENT KNOWLEDGE STUDENTS NEED BEFORE THE RESIDENCY BEGINS

- A basic understanding of what a dancer does
- A basic understanding of numbers and number operations

SESSION	OVERVIEW	TEACHER ROLE During Sessions	TEACHER ROLE Before Next Session
Classroom Session 1	The residency artist will: <ul style="list-style-type: none"> <li>• Introduce the definition of dance: using the body to communicate with movement.</li> <li>• Do the Basic Dance Skills Activity</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 addition and subtraction 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 definitions of addition and subtraction</li> <li>● Do Dance Phrase practice, this time using addition/subtraction operators to modify the phrase</li> <li>● Introduce the structure of a number sentence</li> <li>● Do Dance Phrase and Number Sentence Modeling Activity 1</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 foundations 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 addition and subtraction</li> <li>● Review the structure of a number sentence</li> <li>● Review the components of a dance phrase</li> <li>● Do Dance Phrase and Number Sentence Modeling Activity 2</li> <li>● Group showing of all dance phrases/number models</li> <li>● Facilitate a reflection about the residency.</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>



# **CLASSROOM SESSION #1**

## LESSON TEMPLATE

<b>A. FOUNDATION</b>	
<b>Teaching Artist:</b> Education & Community Engagement Staff Member	
<b>Grade Level:</b> K-2	
<b>Standards</b>	
<u>Art Form:</u> DA.CR.2.(K,1,2)b Connect movements that express an idea or emotion to create a short movement sequence.	<u>Other Curriculum:</u> K.OA.A Understand addition as putting together and adding to. Understand subtraction as taking apart and taking from.  1.OA.A & 2.OA.A Represent and solve problems using addition and subtraction.
<b>Objectives</b>	
<u>Art form:</u>  Students will KNOW: <ul style="list-style-type: none"> <li>• The definition of dance</li> <li>• The components of a dance</li> </ul> Students will BE ABLE TO: <ul style="list-style-type: none"> <li>• Connect movements that express an idea or emotion to create a short movement sequence</li> </ul> Students will APPRECIATE: <ul style="list-style-type: none"> <li>• The joy of dance</li> <li>• How dance phrases are created</li> </ul>	<u>Other Curriculum:</u>  Students will KNOW: <ul style="list-style-type: none"> <li>• The definition of addition</li> <li>• The definition of subtraction</li> <li>• The structure of a number sentence</li> </ul> Students will BE ABLE TO: <ul style="list-style-type: none"> <li>• Understand addition as putting together and adding to</li> <li>• Understand subtraction as taking apart and taking from</li> <li>• Represent and solve problems using addition and subtraction</li> </ul> Students will APPRECIATE: <ul style="list-style-type: none"> <li>• The thinking required to reason through math problems</li> <li>• That math is fun</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>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!

My name is Miss Alex and I am here to do a residency that teaches dance and math. 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 dance
- The components of a dance
- The definition of addition
- The definition of subtraction
- The structure of a number sentence

**BE ABLE TO:**

- Connect movements that express an idea or emotion to create a short movement sequence
- Understand addition as putting together and adding to
- Understand subtraction as taking apart and taking from
- Represent and solve problems using addition and subtraction

**APPRECIATE:**

- The joy of dance
- How dance phrases are created
- The thinking required to reason through math problems
- That math is fun

**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 what a dancer does, right? **\*\*pause and ask students question\*\*** 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.

1. I expect that you will not touch anyone else unless and will keep good personal space.
2. I expect that you will raise your hand and wait for me to call on you if you have a question.
3. I expect that you will keep your eyes and ears open and listen when I am giving instructions.
4. 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 definition of dance.	<b>Min:</b>	1
<b>Step #2:</b> Introduce students to the basic dance skills .	<b>Min:</b>	1
<b>Step #3:</b> Give directions for the BODY activity.	<b>Min:</b>	1
<b>Step #4:</b> Students learn and practice body isolations.	<b>Min:</b>	3
<b>Step #5:</b> Give directions for the SHAPE activity.	<b>Min:</b>	1
<b>Step #6:</b> Students learn and practice shape-making with their bodies.	<b>Min:</b>	3
<b>Step #7:</b> Give directions for the EFFORT activity.	<b>Min:</b>	1
<b>Step #8:</b> Students learn and practice refining their movements to show different effort levels.	<b>Min:</b>	3
<b>Step #9:</b> Give directions for the SPACE activity.	<b>Min:</b>	1
<b>Step #10:</b> Students learn and practice different ways to use space with their bodies.	<b>Min:</b>	3
<b>Step #11:</b> Review <i>The Nutcracker</i> dance that students watched before the residency began.	<b>Min:</b>	2
<b>Step #12:</b> Draw connections between <i>The Nutcracker</i> dance and the basic dance skills the students practiced.	<b>Min:</b>	3
<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>	5
<b>Step #17:</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 learned the definition of dance: using the body to communicate with movement and learned some basic dance skills: body, shape, space, and effort. 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 movement sentences.

**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)

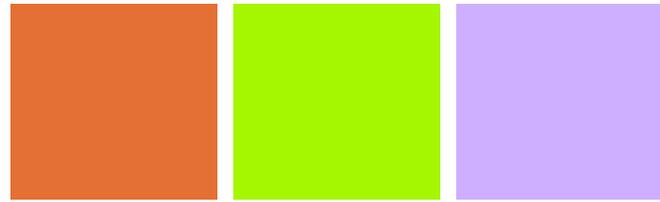
**Recognize Challenges and/or Accomplishments**

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 definitions of addition and subtraction and learn how to create a dance phrase. Before our next class, you and **\*\*teacher name\*\*** will do a little more math practice with addition and subtraction 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> K-2	
<b>Standards</b>	
<u>Art Form:</u> DA.CR.2.(K,1,2)b Connect movements that express an idea or emotion to create a short movement sequence.	<u>Other Curriculum:</u> K.OA.A Understand addition as putting together and adding to. Understand subtraction as taking apart and taking from.  1.OA.A & 2.OA.A Represent and solve problems using addition and subtraction.
<b>Objectives</b>	
<u>Art form:</u>  Students will KNOW: <ul style="list-style-type: none"> <li>The definition of dance</li> <li>The components of a dance</li> </ul> Students will BE ABLE TO: <ul style="list-style-type: none"> <li>Connect movements that express an idea or emotion to create a short movement sequence</li> </ul> Students will APPRECIATE: <ul style="list-style-type: none"> <li>The joy of dance</li> <li>How dance phrases are created</li> </ul>	<u>Other Curriculum:</u>  Students will KNOW: <ul style="list-style-type: none"> <li>The definition of addition</li> <li>The definition of subtraction</li> <li>The structure of a number sentence</li> </ul> Students will BE ABLE TO: <ul style="list-style-type: none"> <li>Understand addition as putting together and adding to</li> <li>Understand subtraction as taking apart and taking from</li> <li>Represent and solve problems using addition and subtraction</li> </ul> Students will APPRECIATE: <ul style="list-style-type: none"> <li>The thinking required to reason through math problems</li> <li>That math is fun</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>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 math.

On day 1 we learned:

- The definition of dance
- Basic dance skills
- Basic dance phrase building

Today we will learn:

- The components of a dance phrase
- The definition of addition
- The definition of subtraction
- The structure of a number sentence

Preview Lesson:

Today we're going to practice these skills by making dances that model addition and subtraction number sentences.

Review Prior Learning:

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

Today, we'll be doing a variety of activities and we'll be moving around a lot. Let's remember our expectations from day 1 that will keep us safe and on track.

1. I expect that you will not touch anyone else and will keep good personal space.
2. I expect that you will raise your hand and wait for me to call on you if you have a question.
3. I expect that you will keep your eyes and ears open and listen when I am giving instructions.
4. 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 begin.

## LESSON TEMPLATE

<b>D. LEARNING ACTIVITY</b>		
<b>TITLE: Classroom Session 2</b>		
<b>Step #1:</b> Give directions for 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 students to the components of a dance phrase.	<b>Min:</b>	4
<b>Step #4:</b> Students do Dance Phrase Activity to embody the concept.	<b>Min:</b>	5
<b>Step #5:</b> Introduce the definition of addition.	<b>Min:</b>	4
<b>Step #6:</b> Introduce the definition of subtraction.	<b>Min:</b>	4
<b>Step #7:</b> Give directions for the Dance Phrase Activity's second round.	<b>Min:</b>	3
<b>Step #8:</b> Students do Dance Phrase Activity using addition and subtraction to modify the phrase.	<b>Min:</b>	7
<b>Step #9:</b> Introduce the structure of a number sentence.	<b>Min:</b>	3
<b>Step #10:</b> Students do Number Sentence Modeling Activity #1.	<b>Min:</b>	7
<b>Step #11:</b> Students do a cool down exercise.	<b>Min:</b>	2
<b>Step #12:</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 learned the components of a dance phrase, the definitions of addition and subtraction, and the structure of a number sentence. That's a lot of information!

**Restate Main Ideas**

The main ideas we want to remember from today are that number sentences and dance phrases are similar and that you can use dance movements to make a model of a number sentence in order to solve the problem.

**Invite Reflection**

What questions came up today addition or subtraction?  
(Format: whole group)

What questions came up today number sentences?  
(Format: whole group)

What questions came up today about dance phrases?  
(Format: whole group)

**Recognize Challenges and/or Accomplishments**

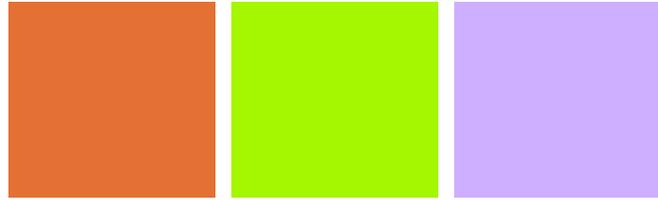
Today we struggled with XXX

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 addition, subtraction, number sentences, and dance phrases, we are ready to create dances that show our understanding of these things. Next time, we'll do some review, work on these dances, and share them with the class! Before our next class, you and **\*\*teacher name\*\*** will do a little more math practice with addition, subtraction, and number sentences so we are ready to use those skills when we meet together next.

# LESSON TEMPLATE



# **CLASSROOM SESSION #3**

## LESSON TEMPLATE

<b>A. FOUNDATION</b>	
<b>Teaching Artist:</b> Education & Community Engagement Staff Member	
<b>Grade Level:</b> K-2	
<b>Standards</b>	
<u>Art Form:</u> DA.CR.2.(K,1,2)b Connect movements that express an idea or emotion to create a short movement sequence.	<u>Other Curriculum:</u> K.OA.A Understand addition as putting together and adding to. Understand subtraction as taking apart and taking from.  1.OA.A & 2.OA.A Represent and solve problems using addition and subtraction.
<b>Objectives</b>	
<u>Art form:</u>  Students will KNOW: <ul style="list-style-type: none"> <li>• The definition of dance</li> <li>• The components of a dance</li> </ul> Students will BE ABLE TO: <ul style="list-style-type: none"> <li>• Connect movements that express an idea or emotion to create a short movement sequence</li> </ul> Students will APPRECIATE: <ul style="list-style-type: none"> <li>• The joy of dance</li> <li>• How dance phrases are created</li> </ul>	<u>Other Curriculum:</u>  Students will KNOW: <ul style="list-style-type: none"> <li>• The definition of addition</li> <li>• The definition of subtraction</li> <li>• The structure of a number sentence</li> </ul> Students will BE ABLE TO: <ul style="list-style-type: none"> <li>• Understand addition as putting together and adding to</li> <li>• Understand subtraction as taking apart and taking from</li> <li>• Represent and solve problems using addition and subtraction</li> </ul> Students will APPRECIATE: <ul style="list-style-type: none"> <li>• The thinking required to reason through math problems</li> <li>• That math is fun</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!

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 math.

On day 1 we learned:

- The definition of dance
- Basic dance skills
- Basic dance phrase building

On day 2 we learned:

- The components of a dance phrase
- The definition of addition
- The definition of subtraction
- The structure of a number sentence

Today we will:

1. Create dances that show our understanding of number sentences, addition, and subtraction.
2. Share our dances with the class

Preview Lesson:

To start with, we will review some of the things we've learned over the last few days. We will then choose our number sentences and matching emotions and create our dances. Then, we will share them with the class and talk about what we've learned.

Review Prior Learning:

We already know that dance is using the body to communicate with movement. We also already know that dance phrases can help us think about math and number sentences in a different way.

Today, we'll be doing a variety of activities and we'll be moving around a lot. Let's remember our expectations from day 1 that will keep us safe and on track.

1. I expect that you will not touch anyone else and will keep good personal space.
2. I expect that you will raise your hand and wait for me to call on you if you have a question.
3. I expect that you will keep your eyes and ears open and listen when I am giving instructions.
4. 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 begin.

## LESSON TEMPLATE

<b>D. LEARNING ACTIVITY</b>		
<b>TITLE: Classroom Session 3</b>		
<b>Step #1:</b> Give directions for 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> Review the definition of addition.	<b>Min:</b>	5
<b>Step #4:</b> Review the definition of subtraction.	<b>Min:</b>	5
<b>Step #5:</b> Review the structure of a number sentence.	<b>Min:</b>	5
<b>Step #6:</b> Review the components of a dance phrase.	<b>Min:</b>	5
<b>Step #7:</b> Give directions for Dance Phrase and Number Sentence Modeling Activity #2.	<b>Min:</b>	3
<b>Step #8:</b> Students do Dance Phrase Activity #2.	<b>Min:</b>	10
<b>Step #9:</b> Give directions for a sharing session.	<b>Min:</b>	2
<b>Step #10:</b> Students share their dances with the class.	<b>Min:</b>	5
<b>Step #11:</b> Lead a reflection about the residency as a whole.	<b>Min:</b>	4

## LESSON TEMPLATE

### E. CLOSURE

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

Today we demonstrated our understanding of addition, subtraction, and number sentences through the dances we made in our groups.

#### **Restate Main Ideas**

We were able to use our knowledge of dance and dance phrases to model number sentences, addition, and subtraction in a small dance sequence. We were also able to have fun while learning about math!

#### **Invite Reflection**

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

(Format: whole group)

What were some things that were difficult for you?

(Format: whole group)

What did you enjoy about learning this way?

(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**

Today was our last class together! I am very proud of the way you all worked together to create your dances. Over the course of this residency, we learned that math can be fun, even though it takes a lot of thinking to do. We also learned that dance is an art form that uses a lot of math when you create a dance from scratch. Always remember that you can be creative in the ways that you think and reason through math problems. Thank you so much for letting me share this time with you!