Whistlestop Dance Company Sample Lesson Plan

Directions: Complete this lesson plan for a sample residency. Fill out all the areas that apply to your lesson.

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| **Course Title:** | Fractions in Action |
| **Course Type:***(please check all that apply)* | ✔Integrated arts residency□ Cultural arts residency  |
| **Partnering Course:** | Math |
| **Teaching Artist Name:** | Debbie Gilbert, Whistlestop Dance Company |
| **What grade(s) is the residency for?** | 4th grade |
| **Schedule Information** | 6 Number of sessions1 hour Length of each individual session6 Total hours |

Course Description:

In this math and dance lesson, students learn the South African line dance Pata Pata. They break the dance into five parts and determine the fraction that corresponds to each part of the dance. In small groups, they write five fractions that total 16/16 or 1. They choreograph a line dance in which each movement corresponds to one of the fractions to create a sixteen-count dance. They perform for each other and describe the fractions and the movements. They teach each other their dances and reflect on the connection between dance and math.

Materials & Space:

*Math Dances* CD by Debbie Gilbert; “Pata Pata” by Miriam Makeba: CD player; white board, document camera, or chart paper & markers; worksheets & pencils; assessment checklist, empty space for movement

**Big Idea:**

A movement sequence or equation can be represented by fractions. Those fractions can be decomposed into a sum of fractions with the same denominator.

**Student Learning Assessment**:

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| Learning Objectives*What I want my students to know and be able to do.*  | Assessment Criteria *What I will observe in my students – traits that can be seen and/or heard.* |
| **1.** Performs a dance from South Africa. | **1.** Dances the five parts of the dance Pata Pata in a line formation. |
| **2.** Creates a sequence of fractions that when combined total one. | **2.** Writes five fractions with a denominator of 16. Adds the fractions to total 16/16. |
| **3.** Choreographs a sixteen-count line dance with a small group (creative thinking and collaboration). | **3.** Works together with other students compromising and making choices to create a movement sequence with five parts designed in a line formation. Constructs each part to correspond to a fraction of the dance. When added, all fractions of the dance total 16/16 or 1. |
| **4.** Performs the sixteen-count line dance (persistence).  | **4.** Rehearses and then dances each part of the dance choreography for an audience of peers. |

**Vocabulary (optional):**

Counts, sequence, fractions, choreographer, movement, shape

**State** [**Standards**](http://www.k12.wa.us/arts/standards/) **(Complete for Integrated Arts Residency):**

**Arts Standards:**

1.1.1 Elements: Space, Shape

1.2.1 Skills and Techniques: Movements with Full Body Extension

1.4.1 Audience Skills

2.1.1 Creative Process

2.2.1 Performance Process

2.3.1 Responding Process

4.2.1 Connection between Dance and Math

**Common Core State Standards (CCSS) in Math**

4.NF.3.a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

4.NF.3.b. Decompose a fraction into a sum of fractions with the same denominator.

**Instructions:**

**Day One**

**1. Introduce using fractions to analyze a dance from South Africa and to choreograph dances.**

* *We’ll be doing dance and math together in this lesson. Dancing Mathematicians, today we’ll learn a dance from South Africa called Pata Pata. Then we’ll break the dance into fractions, figuring out which fraction of the whole dance each section is. During the following dance lessons, you’ll use fractions to create your own movements.*
* *I’ll demonstrate the process with a hand dance that I choreographed. I’ll shake my hands for four counts, scrunch them up for two counts, and open them up for two counts. What fraction of the eight-count dance is the four-count handshake?* (4/8) *What fraction of the eight-count dance is the hand scrunch for two counts?* (2/8) *What fraction of the eight-count dance is the hand opening for two counts?* (2/8). *So the whole dance is 4/8 + 2/8 + 2/8 = 8/8 or 1.*
* *Do your own hand dance. Do the first movement: 1, 2, 3, 4. Do the second movement: 5, 6. Do the last movement: 7, 8.*
* *We’ll do the same process with Pata Pata, but first let’s ready to get warmed up.*

**2. Prepare students for dancing by creating agreements for appropriate dance behavior. Chart response.**

* *How can you be creative and safe at the same time?*

**3. Lead students in *Math* *BrainDance* warm-up.** (BrainDance originally developed by Anne Green Gilbert, [www.creativedance.org](http://www.creativedance.org), reference: *Brain-Compatible Dance Education,* video: *BrainDance, Variations for Infants through Seniors.*)

Music: “Math BrainDance (Fourth Grade)” #5, *Math Dances* by Debbie Gilbert

* *The BrainDance is designed to warm up your body and make your brain work better at the same time. Notice when we use fractions in the BrainDance.*

**4.** **Teach Pata Pata, a dance from South Africa.**

Music: “Fraction Line Dance” #12, *Math Dances* by Debbie Gilbert or “Pata Pata” by Miriam Makeba

* *Pata Pata comes from a song by Miriam Makeba from South Africa that she wrote in 1957. We are going to learn the line dance that goes with the song.*
* *Part one (counts 1, 2, 3, 4):*

*Touch right foot to the side, then bring feet together.*

*Touch left foot to the side, then bring feet together.*

* *Part two (counts 5, 6, 7, 8):*

*Toes out (hands up), heels out (elbows up).*

*Heels in (hands up), toes in (elbows up).*

* *Part three (counts 9, 10, 11, 12):*

*Knee up forward right, then touch right foot to the side.*

*Knee up forward right, then right foot down.*

* *Part four (counts 13, 14):*

*Kick left, then left foot down.*

* *Part five (count 15, 16):*

*Jump while doing 1/4 turn to the right. Clap.*

* *Let’s put it all together and practice! We’ll repeat the 16-count sequence four times. You may have noticed that each time you repeat the sequence you are facing a different wall.*

Assessment: criteria-based teacher checklist – Dances the five parts of the dance Pata Pata in a line formation.

**5. Analyze Pata Pata. Break the dance into fractions. Notate fractions on board.**

* *If Pata Pata is 16 counts long, and our first part is four counts long. How many sixteenths of the whole dance is part one?* (4/16)
* *Part two is four counts long. How many sixteenths of the whole dance is part two?* (4/16)
* *Part three is four counts long. How many sixteenths of the whole dance is part three?* (4/16)
* *Part four is two counts long. How many sixteenths?* (2/16)
* *Part five is two counts long. How many sixteenths?* (2/16)
* *Let’s check our work: 4/16 + 4/16 + 4/16 + 2/16 + 2/16. What does that equal?*

**6.** **Lead reflection.**

* *Dancing Mathematicians, what did you discover about how choreographers use math?*
* *When we dance next time, you’ll work in a small group to create a fractional pattern of your own and use the fractions to choreograph your own line dance.*

Assessment: criteria-based group reflection about the connection between math and dance.

**Sample Sessions:**

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| **Day** | **Daily Goal** | **Supporting Activities** |
| 2 | Students create fractional plan for the dance and begin small group choreography. | Introduce the lesson and connect to previous lesson’s learning, lead Math BrainDance warm-up, introduce the math/dance task, divide students into small groups, assist them as they create fractional plan, support them as they begin to choreograph their dances, guide reflection. |
| 3 | Students refine and rehearse their dances. | Introduce the lesson and connect to previous lesson’s learning, lead Math BrainDance warm-up, give students guidelines for refining and rehearsing their dances, support students during rehearsal, guide reflection. |
| 4 | Students refine and rehearse their dances and perform first drafts. | Introduce the lesson and connect to previous lesson’s learning, lead Math BrainDance warm-up, support students during rehearsal, outline performer and audience expectations, direct performance, guide response and reflection. |
| 5 | Students rehearse and perform their dances.  | Introduce the lesson and connect to previous lesson’s learning, lead Math BrainDance warm-up, support students during rehearsal, review performer and audience expectations, direct performance, guide response and reflection. |
| 6 | Students teach their dances and reflect on the math and dance experience. | Introduce the lesson and connect to previous lesson’s learning, lead Math BrainDance warm-up, support students as each group teaches its dance to the other students, guide reflection. |