

UNIT: PLACE VALUE
DANCING NUMBERS (Lesson 1 of 5)
Grade Band: 3
Content Focus: Dance & Math



LEARNING DESCRIPTION

Students will be able to read and write multi-digit whole numbers up to 10,000 using choreography to model base-ten numerals and expanded form. Students will demonstrate their understanding by creating leveled choreography to represent the different place values in a number. Each level will represent a different place value.

LEARNING TARGETS

Essential Questions	"I Can" Statements
What is place value?	I can explain what place value is.
How can I create a movement to represent a number?	I can tell the value of digits in different place value positions.
	I can write numbers in standard form.



How can levels in dance be used to represent place value?	I can represent place value in multiple ways (concrete and abstract).
	I can use levels to express place value.
	I can create a movement or shape with my body to represent a number.

GEORGIA STANDARDS

Curriculum Standards	Arts Standards
3.NR.1.1 Read and write multi-digit whole numbers up to 10,000 to the thousands using base-ten numerals and expanded form.	ESD3.CR.1 Demonstrate an understanding of the choreographic process. a. Collaborate with others to create and perform movement phrases.
3.NR.1.2 Use place value reasoning to compare multi-digit numbers up to 10,000, using >, =, and < symbols to record the results of comparisons.	b. Create a sequence of three or more movements utilizing body, space, time, and energy.
	ESD3.CR.2 Demonstrate an understanding of dance as a form of communication.
	ESD3.PR.1 Identify and demonstrate movement elements, skills, and terminology in dance.
	ESD3.RE.1 Demonstrate critical and creative thinking in dance.

SOUTH CAROLINA STANDARDS

Curriculum Standards	Arts Standards			
3.NSBT.5 Compare and order numbers through 999,999 and represent the comparison using the symbols >, =, or <.	Anchor Standard 1: I can use movement exploration to discover and create artistic ideas and works.			
	Anchor Standard 2: I can choreograph a dance.			
	Anchor Standard 3: I can perform movements using the dance elements.			

KEY VOCABULARY

Content Vocabulary	Arts Vocabulary
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- <u>Place value</u> The value of each digit in a number based on its position
- <u>Ten-thousands</u> The fifth position represents the number of ten-thousands
- <u>Thousands</u> The fourth position represents the number of thousands
- <u>Hundreds</u> The third position represents the number of hundreds
- <u>Tens</u> The second position represents the number of tens
- Ones The rightmost position (first place) represents the number of ones
- Expanded form A way of writing numbers to show the value of each digit according to its place value; it breaks down a number by expressing it as the sum of each digit multiplied by its place value
- <u>Standard form</u> The way of writing numbers using digits, without breaking them down by place value or expanding them
- <u>Numerical</u> Using digits to represent quantities, values, or amounts
- <u>Digits</u> Symbols used to represent numbers in a numeral system

- <u>Choreography</u> The art of composing dances and planning and arranging the movements, steps, and patterns of dancers
- Body The physical instrument through which movements and expressions are conveyed; it encompasses how dancers use their whole body or specific body parts to perform movements and communicate ideas, emotions, or stories
- <u>Space</u> An element of movement involving direction, level, size, focus, and pathway
- <u>Level</u> One of the aspects of the movement element space; in dance, there are three basic levels: high, middle, and low
- Shape This refers to an interesting and interrelated arrangement of body parts of one dance; the visual makeup or molding of the body parts of a single dancer; the overall visible appearance of a group of dancers
- <u>Dance sequence</u> A specific order of movements or steps performed in a particular pattern or progression

MATERIALS

- Music
- Sound source and speakers
- Cards with four digit numbers written on them (one per group of four students)
- Name tags with four digit numbers written on them (one per student)

INSTRUCTIONAL DESIGN

Opening/Activating Strategy



- The teacher will lead students in the Freeze Game.
 - Give students name tags with different numbers 1-999.
 - Turn the music on and have students walk through space.
 - When the music stops, students must find someone near them to partner with and freeze in a pose to show who has the higher number.
 - Continue so students have multiple opportunities to compare numbers and pose on a high and low level depending on which number is greater than or less than.
 - Pause periodically to make observations and discuss how students are demonstrating the value of a number using their bodies.
- Have students return to their seats. Facilitate a discussion around how students compared the values of two numbers using their bodies.
- Tell students that when we pose at different levels, we are using a concept called "levels" in dance.
 - Have students stand at their desks.
 - Model different levels of dance-high, middle, and low. Have students mirror your movements.

Work Session

- Introduce place value in math.
- Once students are familiar with the concept, provide directions for creating Place Value Choreography.
- Model the activity to show what is expected of the students during the work session time.
- Students will be put into groups of five.
- Each group will be assigned a five digit number written on a card.
- Students will first determine the place value of each digit.
- Next, students will use the number cards to choreograph a dance sequence that shows each digit in its place value. Each student will represent one digit and its place value (ten thousands, thousands, hundreds, tens, ones).
 - Students should use levels to demonstrate the place value and should create a shape or movement with their body to represent the digit.
 - The higher the movement or shape, the greater the value of the corresponding digit.

Closing/Reflection

- Students will perform their dance sequences. Discuss appropriate audience participation and etiquette prior to performances.
- While groups perform, the audience members will use their peer reflection form to record the performing group's number.
- After two performances, the audience will compare the groups' numbers.
- They will reflect on their choreographic choices in their STEAM journals.

ASSESSMENTS

Formative

• Teachers will assess students' understanding of place value by observing how students use their bodies and levels in dance to represent place value.



•	Provide students with a copy of the self-checklist to use as they choreograph their
	sequences.

Self-Checklist for Dance

Number:					
Ten- thousands	Thousands		Hundreds	Tens	Ones
Movement & level:	Movement & level:		Movement & level:	Movement & level:	Movemen: & level:
Explain:					l

Summative

- Students can accurately use levels to represent place value.
- Students can create movements and shapes with their bodies to represent digits.
- Students can compare two numbers and determine which is larger using place value.



thousands				One
ı	Number in th	eir place va	lue:	
Group 2- Nu	umber:			
 Compare: Which nur	mber is greater?		<u> </u>	

Provide students with a copy of the peer-checklist to evaluate their peers during the

DIFFERENTIATION

Accelerated:

• Students will create choreography using larger numbers.



• Two groups will create a new choreographic sequence that compares their numbers to each other, digit by digit.

Remedial: Students will create choreography using smaller numbers representing fewer place values.

ADDITIONAL RESOURCES			

CREDITS

U.S. Department of Education- STEM + the Art of Integrated Learning Ideas contributed by: SAIL Grant Teacher Leaders, Melissa Joy

*This integrated lesson provides differentiated ideas and activities for educators that are aligned to a sampling of standards. Standards referenced at the time of publishing may differ based on each state's adoption of new standards.

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