#### **Lesson Plan Title**

Our Place in this Space: Revelations, Rotations and Revolutions

#### **Grade Level**

5th Grade

#### **Subject Area**

Science

#### **MSCCRS**

E.5.8B.1 - Analyze and interpret data from observations and research (e.g., from NASA, NOAA, or the USGS) to explain patterns in the location, movement, and appearance of the moon throughout a month and over the course of a year.

E.5.8B.2 - Develop and use a model of the Earth-Sun-Moon system to analyze the cyclic patterns of lunar phases, solar and lunar eclipses, and seasons.

E.5.8B.3 - Develop and use models to explain the factors (e.g., tilt, revolution, and angle of sunlight) that result in Earth's seasonal changes

#### **Art Form**

Dance

#### **MSCCR Creative Arts Standards**

DA: Cr1.1.5 - Generate and conceptualize artistic ideas and work.

- a. Build content for choreography using several stimuli (for example, music/sound, text, objects, images, notation, observed dance, experiences, literary forms, natural phenomena, current news, social events).
- b. Construct and solve multiple movement problems to develop choreographic content.

**Enduring Understanding:** Choreographers use a variety of sources as inspiration and transform concepts and ideas into movement for artistic expression.

Essential Question(s): Where do choreographers get ideas for dances?

DA: Cr2.1.5 - Organize and develop artistic ideas and work. PLAN a. Manipulate or modify a variety of choreographic devices to expand choreographic possibilities and develop a main idea. Explain reasons for movement choices. b. Develop a dance study by selecting a specific movement vocabulary to communicate a main idea. Discuss how the dance communicates non-verbally.

**Enduring Understanding:** The elements of dance, dance structures, and choreographic devices serve as both a foundation and a departure point for choreographers.

Essential Question(s): What influences choice-making in creating choreography?

#### **Duration**

90 minutes

#### **Materials**

Teacher created presentation on Sun, Earth, Moon, Rotation, Revolution "Dance the Elements of the Solar System" instruction cards

"Elements of Dance" Rotation and Revolution task cards

#### **Objectives**

Students will develop and utilize a model to explain how the position of the earth, sun, and moon cause lunar phases.

The student will demonstrate understanding of 'rotation' by choreographing a dance.

The student will demonstrate understanding of 'revolution' by choreographing a dance.

The student will dance the famous "Revelations" choreography and apply in group choreography and a class performance.

Essential Question: How do the movements of the Earth, Sun, and Moon impact life on Earth?

#### Core Ideas:

The orbits of Earth around the sun and of the moon around Earth, together with the rotation of Earth about an axis between its North and South poles, cause observable patterns. These include day and night; daily changes in the length and direction of shadows; and different positions of the sun, moon, and stars at different times of the day, month, and year.

This model of the solar system can also explain eclipses of the sun and moon. This also explains that seasons are a result of the Earth's tilt, leading to different intensities of sunlight on different areas of Earth throughout the year.

#### **Content Vocabulary**

Solar System\*

Satellite\*

Asteroid

Comet

Meteor

Meteorite

Meteoroid

Elliptical

Mass

Gravity

Revolve

Rotate

Possible Additional Vocabulary (but not in this presentation):

**Eclipse** 

Solar

Lunar

Axis

Rotation

Revolution

Gibbous

Crescent

Quarter

New moon

Full moon

Eclipse Lunar phase

# **Art Form Vocabulary**

Locomotor Non-locomotor

Locomotor Non-locomotor

# **ACCESS SLIDE PRESENTATION HERE:**

https://www.canva.com/design/DAD9UrATJs4/Z3u1Gy9H6AKzRpUUvmCdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmCdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmCdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmCdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmcdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmcdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmcdwg/view?utm\_content=DAD9UrATJs4/Z3u1Gy9H6AKzrpUuvmcdwg/view.

# **Lesson Description**

[SLIDE 1: Title Slide- Our Place in This Space: Revelations, Rotations, and Revolutions]



TTW present slide one and read the title.

TSW: follow along.

[SLIDE 2: Introduction]



TTW present SLIDE 2 and ask, "What does the word 'revelation' mean?"

TSW answer.

TTW give clarity with a Merriam Webster definition, "an act of revealing or communicating divine truth" or something that is revealed by God to humans." It can also be the act of revealing to view or making known or something that is revealed. It can also be a pleasant, enlightening surprise."

TTW will say, "The 1960s were a tumultuous time in the United States. In 1961, our president, John F. Kennedy, said he wanted to land humans on the moon. The president and NASA were confident that they could do it. On July 16, 1969, astronauts Neil Armstrong, Edwin "Buzz" Aldrin and Michael Collins blasted off on Apollo 11. Four days later, Armstrong and Aldrin landed on the moon. The astronauts left a sign on the moon which read, "Here men from the planet Earth first set foot upon the moon July 1969, A.D. We came in peace for all mankind."

TTW continue, "It was on July 20, 1969, that Neil Armstrong became the first human to walk on the moon. He and Aldrin walked around for three hours. During that time, they did experiments. They picked up bits of moon dirt and rocks. They put a U.S. flag on the moon, and President Kennedy's goal was accomplished...humans had finally walked on the moon! The world watched in astonishment, and space exploration continued to grow.

TSW:

[SLIDE 3: Ailey and Kennedy]



TTW present SLIDE 3 and continue, "President Kennedy, however, was not satisfied with all that America had accomplished. He was also serious about equality and civil rights. He defined the United States civil rights crisis as moral, constitutional and legal. He announced that major civil rights legislation would be submitted to the Congress to guarantee equal access to public facilities, to end segregation in education, and to provide federal protection of the right to vote."

TTW say, "Alvin Ailey was an American choreographer and activist who founded the Alvin Ailey American Dance Theater in New York in 1958. It was a hugely popular, multi-racial modern dance ensemble that popularized modern dance around the world thanks to extensive world tours. His most famous dance is *Revelations*, a celebratory study of religious spirit."

TTW continue, "Despite his untimely death in 1989, Ailey continues to be an important figure in the arts. Dancer Mikhail Baryshnikov told *The New York Times* that Ailey's work was an 'important contribution to American culture.' The dancers with the Alvin Ailey American Dance Theater have performed for more than 20 million people around the world, and countless others have seen their work through numerous television broadcasts."

TSW:

[SLIDE 4: Objectives]

# OBJECTIVES STUDENTS WILL DEVELOP AND UTILIZE A THE STUDENT WILL PARTICIPATE IN THE MODEL TO EXPLAIN HOW THE POSITION OF THE FAMOUS "REVELATIONS" CHOREOGRAPHY AND EARTH, SUN, AND MOON CAUSE LUNAR PHASES. APPLY IT TO HIS/HER OWN GROUP CHOREOGRAPHIC PIECE. THE STUDENT WILL DEMONSTRATE 2 UNDERSTANDING OF ROTATION BY HAVE FUN! CHOREOGRAPHING A DANCE. THE STUDENT WILL DEMONSTRATE UNDERSTANDING OF REVOLUTION BY CHOREOGRAPHING A DANCE.

TTW present slide 4 and ask student volunteers to read objectives.

TSW will read each objective.

[SLIDE 5: Agenda]



TTW present SLIDE 5 and ask student volunteers to read the items on the agenda.

TSW read each item on the Agenda.

[SLIDE 6: Essential Question 1]

ESSENTIAL QUESTION I

HOW DO THE MOVEMENTS OF THE EARTH, SUN, AND MOON IMPACT LIFE ON EARTH?

TTW present SLIDE 6 and ask students to consider, "how movements by the earth, sun, and moon impact life on earth." Remind students that they will be given another opportunity to answer this question later in the class period.

TSW respond.

[SLIDE 7: Essential Question 2]

ESSENTIAL QUESTION 2

WHERE DO CHOREOGRAPHERS
GET IDEAS FOR DANCES?

TTW present SLIDE 7 and ask students to consider, "how choreographers get ideas for dances." Remind students that they will be given another opportunity to answer this question later in the class period. TSW respond.

[SLIDE 8: Essential Question 3]

ESSENTIAL QUESTION 3

WHAT INFLUENCES CHOICE-MAKING IN CREATING CHOREOGRAPHY?

TTW present SLIDE 8 and ask students to consider, "what influences choice-making in creating choreography." Remind students that they will be given another opportunity to answer this question later in the class period.

# TSW respond.



TTW present SLIDE 9 and says, "it is time to get warmed up! We are going to do a movement exercise as well as a thinking exercise."

TSW respond.

[SLIDE 10: Revelations Workshop with Hope Boykin]



CLICK ON LINK BELOW IF YOU ARE VIEWING THIS IN THE LESSON PLAN.

YOU CAN ALSO UTILIZE THIS PRESENTATION MODE THROUGH "PRESENT" MODE IN CANVA.COM.



[If you would like to access this YouTube video through this lesson plan, click here: <a href="https://youtu.be/QefuHRw5948">https://youtu.be/QefuHRw5948</a>; keep in mind you can also access the video through the presentation on Canva.]

TTW present SLIDE 10 and continue, "We are going to learn about the solar system through dance today. As a warm-up, though, we are going to celebrate the anniversary of Alvin Ailey American Dance Theater with Hope, a dancer and choreographer from Alvin Ailey. Follow along as she shares some iconic choreography with you and invites you to share your own interpretations with the company (by tagging @alvinailey along with #MyRevelations in your videos). Take the artistry you learn here and let it inspire your choreography later in this lesson. Keep in mind that this signature work was created during the time when President Kennedy and NASA were still trying to figure out how to land a man on the moon."

TSW spread out and participate in the workshop. [13 minutes and 26 seconds]

[SLIDE 11: Mir Space Station Art Exhibit]

IN 1995, THE FIRST FORMAL ART EXHIBITION IN SPACE WAS LAUNCHED. THE ARS AD

ASTRA PROJECT SELECTED 20 WORKS OF ART VIA AN INTERANTIONAL COMMITTEE AND

THOSE PIECES OF ART WERE ON EXHIBITION ON THE MIR SPACE STATION. THE NAME OF

THE EXHIBT WAS "ART, SPACE, AND HUMANITY."

X





TTW present SLIDE 11 to the students and read it aloud.

TSW share any observations or thoughts about why this was important.

# [SLIDE 12: Visual Art Questions]

# VISUAL ART QUESTIONS

IF THIS ARTWORK WERE AT THE BEGINNING

OF A STORY, WHAT MIGHT HAPPEN NEXT?

IF IT IS IN THE MIDDLE OF A STORY,

WHAT MIGHT HAVE HAPPENED BEFORE?

WHAT MIGHT BE ABOUT TO HAPPEN?

IF THIS ARTWORK IS FOUND AT THE END OF A STORY, WHAT MIGHT THE STORY BE ABOUT?



Werner Beyeler - Switzerland "Life Probes"

TTW present SLIDE 12 and ask the students to "Think creatively. If this artwork were at the beginning of a story, what might happen next?"

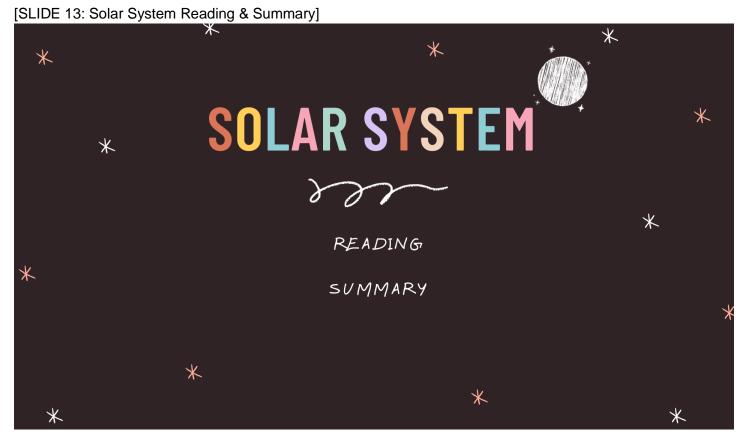
Allow students to respond.

Next, TTW say, "If it is in the middle of the story, what might have happened before? What might be about to happen?"

Allow students to respond.

Finally, TTW ask, "If this artwork is found at the end of a story, what might the story be about?"

Allow students to respond.



TTW present SLIDE 13 and introduce the solar system.

[SLIDE 14: The Solar System]

#### THE SOLAR SYSTEM

THE WORDS "SOLAR SYSTEM" REFER TO THE SUN AND ALL OF THE OBJECTS THAT TRAVEL AROUND IT.

THESE OBJECTS ARE PLANETS, NATURAL SATELLITES SUCH AS THE MOON, THE ASTEROID BELT,

COMETS, AND METEOROIDS. OUR SOLARS SYSTEM HAS AN ELLIPTICAL SHAPE. THE SUN IS THE CENTER

OF THE SOLAR SYSTEM. IT CONTAINS 99.8% OFF ALL THE MASS IN OUR SOLAR SYSTEM.

CONSEQUENTLY, IT EXERTS A TREMENDOUS GRAVITATIONAL PULL ON PLANETS, SATELLITES, ASTEROIDS,

COMETS, AND METEOROIDS. THE PLANETS AND THEIR SATELLITES ORBIT THE SUN AT DIFFERENT

PERIODS OF REVOLUTION. A PERIOD OFF REVOLUTION IS DIRECTLY RELATED TO A PLANETS DISTANCE

FROM THE SUN. AS DISTANCE DECREASES, THE PERIOD OF REVOLUTION DECREASES. THEREFORE A

YEAR LENGTH IS DIFFERENT FOR EACH PLANET. IN ADDITION, PLANETS ALSO ROTATE ON THEIR AXIS AT X

DIFFERENT SPEEDS.

TTW present SLIDE 15 and say, "I need a volunteer to assist with today's readings on the solar system."

TSW participate voluntarily in a reading about the solar system.

# [SLIDE 15: The Solar System, continued]

# THE SOLAR SYSTEM

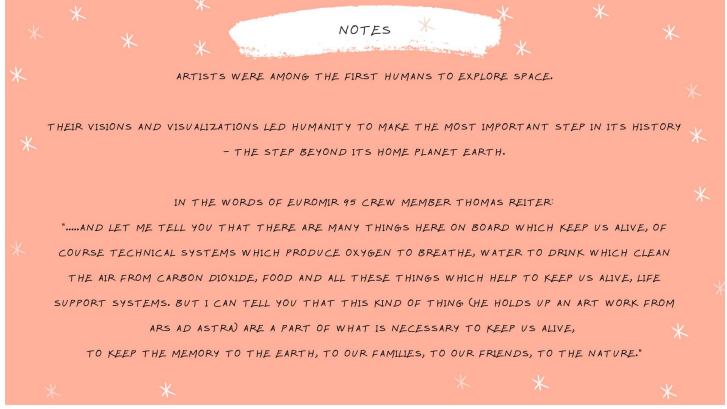
A PLANETS LENGTH OF DAY AND NIGHT IS RELATED TO ITS SPEED OF ROTATION. THE SLOWER A PLANET
ROTATES, THE LONGER ITS LENGTH OF DAY. ASTRONOMERS BELIEVE THE SOLAR SYSTEM FORMED 4.5
BILLION YEARS AGO. HOWEVER, THEIR BELIEFS DIFFER AS TO HOW THE SYSTEM FORMED.

SOME BELIEVE THE WHOLE SOLAR SYSTEM FORMED FROM A SINGLE FLAT CLOUD OF GAS, WHILE OTHERS
BELIEVE IT FORMED WHEN A HUGE OBJECT PASSED NEAR THE SUN, PULLING A STREAM OF GAS OFF AT
THE SUN. ASTRONOMER THEORIZE THAT THE PLANETS THEN FORMED FROM THIS GAS STREAM.

ASTRONOMERS ARE NOW FINDING NEW OBJECTS FAR, FAR AWAY FROM THE SUN WHICH THEY CALL "DWARF PLANETS." PLUTO, WHICH WAS ONCE CALLED A PLANET, IS NOW REFERRED TO AS A DWARF PLANET.

TSW continue to participate in a reading about the solar system.

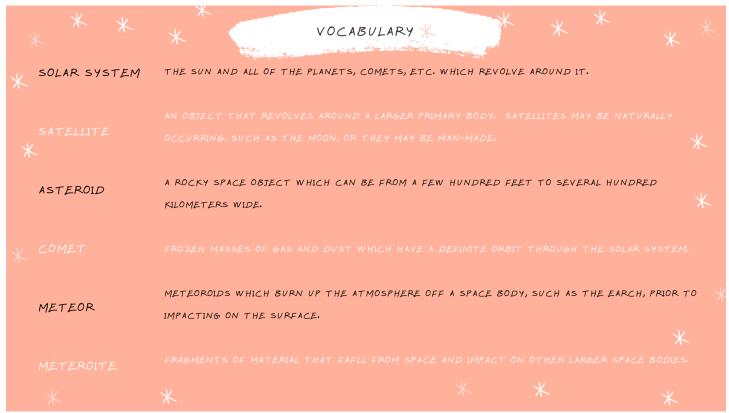
[SLIDE 16: asdff]



TTW present SLIDE 16.

TSW participate in the reading about the EUROMIR 95 Crew.

[SLIDE 17: Vocabulary]



TTW present SLIDE 17.
TSW popcorn read definitions.

[SLIDE 18: Vocabulary, continued.]



TTW present SLIDE 18.

TSW popcorn read definitions.

[SLIDE 19: Elements of Dance]



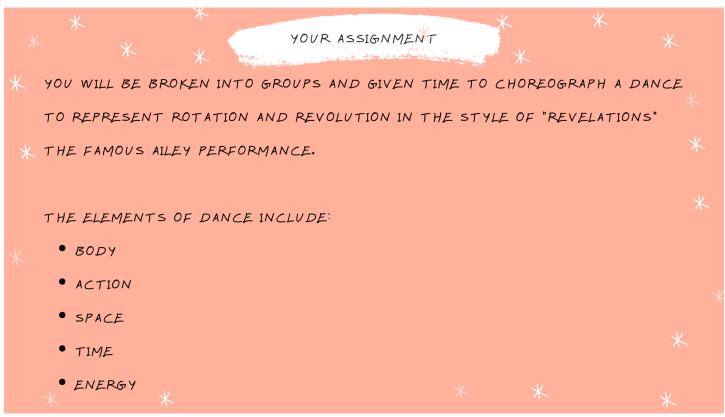
TTW ask, "who remembers what locomotor and non-locomotor movements are? Raise your hand."

Allow students to respond with brief definitions as they are called on. Locomotor = traveling movements; non-locomotor = non traveling movements.

TTW ask, "who remembers a locomotor movement from the Ailey dance? What about a non-locomotor movement from the Ailey dance? Raise your hand if you are willing to demonstrate."

Allow students to respond with movements.

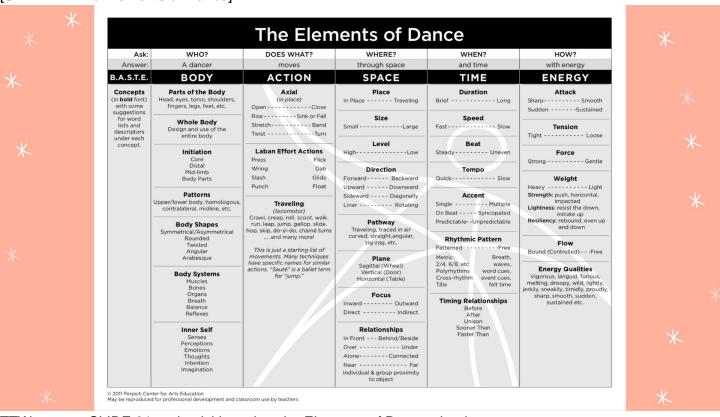
[SLIDE 20: Your Assignment]



TTW say, "you will be broken into groups momentarily and given time to choreograph a dance which represents rotation and revolution...in the style of "Revelations," the famous Ailey performance.

TSW will read the elements of dance.

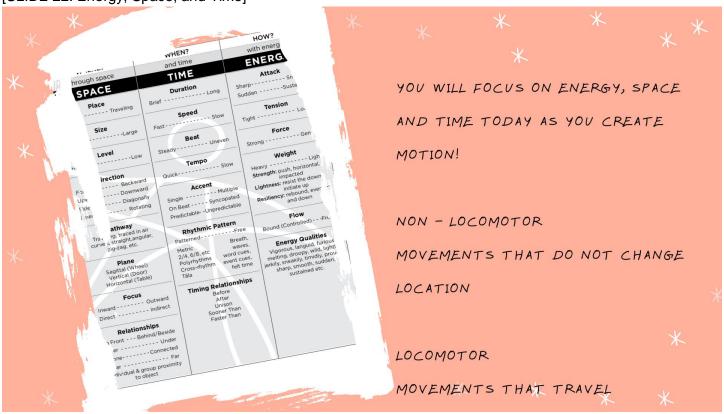
[SLIDE 21: The Elements of Dance]



TTW present SLIDE 21 and quickly review the Elements of Dance aloud.

TSW listen.

[SLIDE 22: Energy, Space, and Time]



TTW present SLIDE 22 and say, "you will focus today's activity on energy, space, and time today."

TSW listen.

[SLIDE 23: Dance & Movement]

# LOCOMOTOR Revolution

MOTIONS CREATED MOVING

ACROSS SPACE. DANCERS USING

LOCOMOTOR MOVEMENTS MAY

WALK, RUN, SKIP, HOP, JUMP,

SLIDE, LEAP, OR GALLOP.

# NON-LOCOMOTOR Rotation

MOTIONS CREATED WHILE
STAYING IN ONCE SPACE.

DANCERS USING NON
LOCOMOTOR MOVEMENTS MAY

BEND, STRETCH, TWIST, OR

SWING THEIR BODIES.

TTW present SLIDE 23 and encourage student engagement.

TSW read locomotor/revolution v. non-locomotor/rotation characteristics.

[SLIDE 24:Dance & Movement]



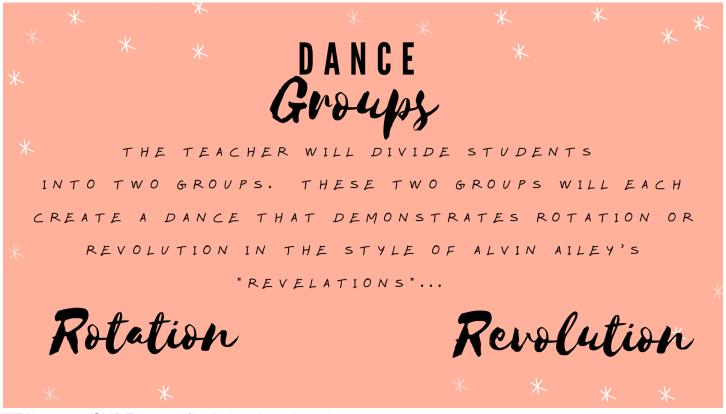
WHEN DOES MOVEMENT BECOME DANCE?

MOVEMENT BECOMES DANCE WHEN THE
ELEMENTS OFF DANCE: BODY, ENERGY,
SPACE, AND TIME ARE INTENTIONALLY
INCORPORATED.

TTW ask, "when does movement become dance? For instance, the Ailey dancers do not just move..they dance. What is the difference?"

TSW respond with their own ideas and "movement becomes dance when the elements of dance: body, energy, space, and time are intentionally incorporated."

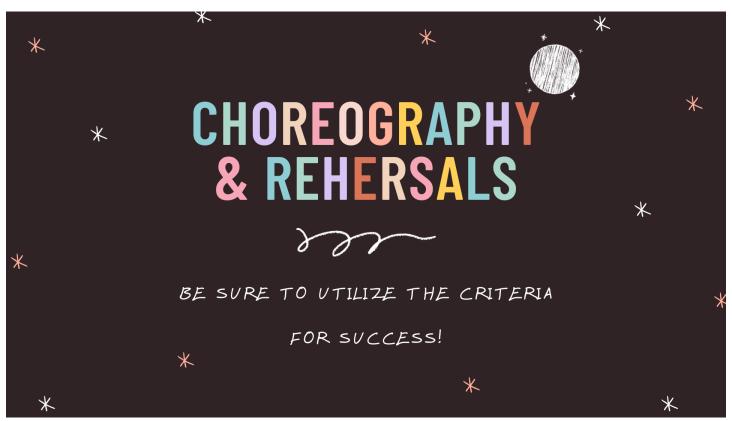
[SLIDE 25: Dance Groups]



TTW present SLIDE 25 and finally break students into groups.

TSW: Move to groups and wait for further instructions.

[SLIDE 26: Choreography & Rehearsals]



TTW present SLIDE 26 and say, "The musical selection is from Alvin Ailey's "Revelations" and is the processional. In approximately \_\_\_\_\_\_(Teacher determines amount of time?) minutes, you will present your dance to the class."

TSW listen for direction.

# LOCOMOTOR Revolution

MOTIONS CREATED MOVING

ACROSS SPACE. DANCERS USING

LOCOMOTOR MOVEMENTS MAY

WALK, RUN, SKIP, HOP, JUMP,

SLIDE, LEAP, OR GALLOP.

YOUR CHOREOGRAPHY SHOULD BE
REPRESENTATIVE OF THESE
CHARACTERISTICS:

- AROUND A BODY
- A YEAR OF ORBIT
- CHARACTERISTICS OF PLANETS
- SUN IS THE CENTER
- GRAVITY
- ELLIPTICAL IN SHAPE

USE THESE ELEMENTS IN YOUR
CHOREOGRAPHY TO DEMONSTRATE
THE CONCEPT OFF REVOLUTION, AND
TO REPRESENT YOUR SPECIFIC SOLAR
SYSTEM ATTRIBUTES.

- MOTION: LOCOMOTOR (TRAVELS)

  SLIDE, CHASSE, WALK, CRAWL, RUN
- ENERGY: SHARP, AND FREE FLOW
- SPACE: AROUND, FORWARD,
   CURVED, BIG/LITTLE, HIGH, LOW
- TIME: EVEN BEAT/PATTERN, SLOW,
   AND QUICK.

TTW present SLIDE 27 as well as the dance task cards for students. The teacher may print this "task card" for each student group.

TSW study the dance task cards and discuss them in their groups quietly.

[SLIDE 28: Non-Locomotor/Rotation]

NON-LOCOMOTOR Rotation

MOTIONS CREATED WHILE STAYING IN

ONCE SPACE. DANCERS USING NONLOCOMOTOR MOVEMENTS MAY BEND,

STRETCH, TWIST, OR SWING THEIR

BODIES.

YOUR CHOREOGRAPHY SHOULD BE
REPRESENTATIVE OF THESE
CHARACTERISTICS:

ROTATION/SPINNING

· CHARACTERISTICS OF PLANETS

SUN IS THE CENTER

• DAY AND NIGHT

• GRAVITY

ELLIPTICAL SHAPE

USE THESE ELEMENTS IN YOUR
CHOREOGRAPHY TO DEMONSTRATE
THE CONCEPT OF ROTATION, AND TO
REPRESENT YOUR SPECIFIC SOLAR
SYSTEM ATTRIBUTES.

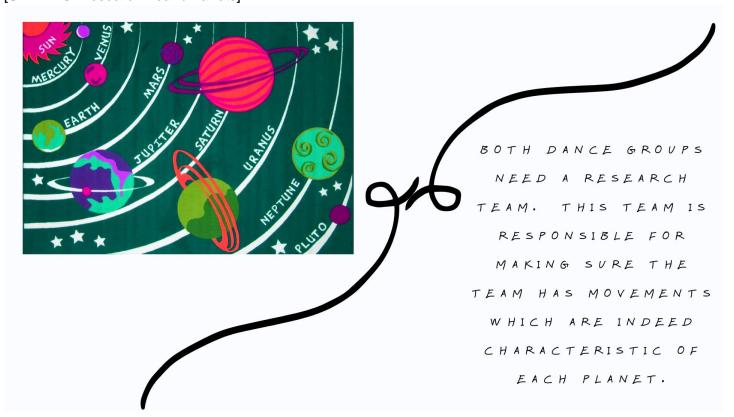
- MOTION: NON-LOCOMOTOR SINKING,
   BENDING, PUSHING, PULLING,
   STRETCHING
- ENERGY: SMOOTH, LIGHT, STRONG, HEAVY
- SPACE: HIGH, TIME, LITTLE, BIG,

  CURVED, TWISTED, UP, DOWN
- TIME: SLOW, QUICK, FOLLOW THE
   EVEN BEAT PATTERN.

TTW present SLIDE 28 as well as the dance task cards for students. The teacher may print this "task card" for each student group.

TSW study the dance task cards and discuss them in their groups guietly.

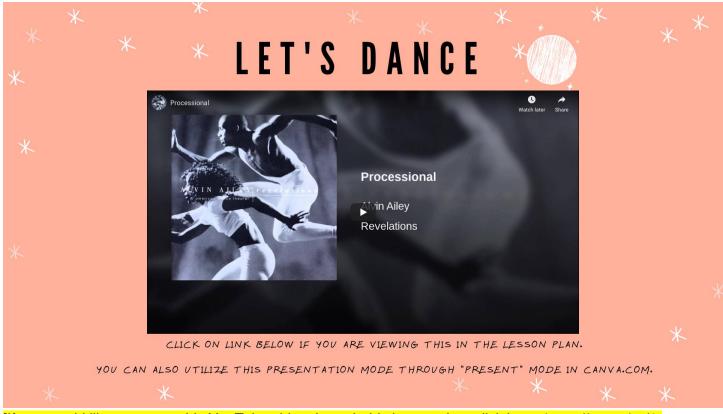
[SLIDE 29: Research Team/Planets]



TTW present SLIDE 29 and remind students that they need a research team for every group, but it essential that everyone performs the dance.

TSW study the dance task card and discuss them in their groups quietly.

# [SLIDE 30: Let's Dance]



[If you would like to access this YouTube video through this lesson plan, click here: <a href="https://youtu.be/1-Pu2obzD5Y">https://youtu.be/1-Pu2obzD5Y</a>; keep in mind you can also access the video through the presentation on Canva.]

TTW present SLIDE 30 and encourage students to begin working. Allow the music to loop as frequently as possible.

TSW begin choreographing, discussing possibilities, researching, and dancing.

TTW move through the groups listening intently for learning and helping to redirect any students who are off-task.

TTW ask students to share their dances. Students who are not performing will act as the audience.

TSW perform their 90-second long choreography. The audience will respond appropriately.

TTW ask each group to have a representative show their favorite movement from the group's choreography.

Allow students to respond.

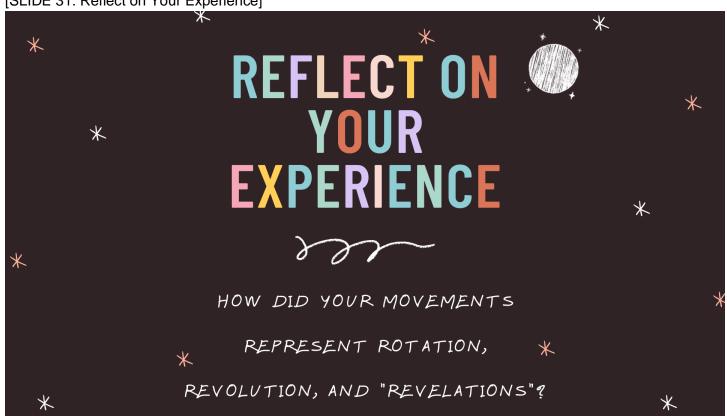
TTW ask each group to have a representative demonstrate the movements chosen in the group's choreography which emulate rotation and revolution.

Allow students to respond.

TTW ask each group to have a representative to demonstrate and discuss how the group's choreography was inspired by Alvin Ailey.

Allow students to respond.

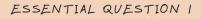
[SLIDE 31: Reflect on Your Experience]



TTW present slide 31 and pose the question, "how did your movements represent rotation, revolution, and the "Revelations" choreography you learned earlier in the lesson? Give students the opportunity to reflect on the experience as a whole.

TSW respond as called upon.

[SLIDE 32: Essential Question 1]



HOW DO THE MOVEMENTS OF THE EARTH, SUN, AND MOON IMPACT LIFE ON EARTH?

TTW present SLIDE 32 and pose the question.

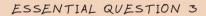
TSW respond as they are called upon.

[SLIDE 33: Essential Question 2]

ESSENTIAL QUESTION 2

WHERE DO CHOREOGRAPHERS
GET IDEAS FOR DANCES?

[SLIDE 34: Essential Question 3]



WHAT INFLUENCES CHOICE-MAKING IN CREATING CHOREOGRAPHY?

TTW present SLIDE 34 and ask, "what influences choice-making in creating choreography?

Allow students to respond.

[SLIDE 35: Credits]

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- EDUTOPIA- EDUTOPIA.ORG/STW-ARTS-INTEGRATION-DOWNLOADS

[SLIDE 36: EXIT TICKET]	
NAME:  DATE:  PERIOD:  Circle One: Revolution	EXIT TICKET:  ROTATION & REVOLUTION DANCE  ***  **  **  **  **  **  **  **  **
CHOOSE A MOVEMENT THAT YOU DESCRIBE THE	
HOW DID THIS MOVEMENT F ROTATION/REVOLUTION O	

TTW: Approximately ten minutes prior to the end of class, distribute Exit Tickets, and ask students to complete them as a group.

TSW complete Exit Ticket on rotation and revolution...and turn them in as they leave class.

[SLIDE 37: Assessment]

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__ DATE: _
I. WHAT MOTION OF EARTH CAUSES DAY AND NIGHT?
   A. ROTATION
   B. REVOLUTION
   C.NONE OF THE ABOVE
   D. BOTH A & B
2 WHICH STATEMENT BEST DESCRIBES THE ORBIT OF EARTH AROUND THE SUN?
   A. EARTH'S ORBIT CHANGES EVERY YEAR.
   B.EARTH'S ORBIT TAKES 365 DAYS OR ONE YEAR.
   C.EARTH'S ORBIT TAKES ABOUT 30 DAYS TO COMPLETE.
   D.EARTH'S ORBIT TAKES ABOUT 24 HOURS.
3. SATURN HAS AN ORBIT THAT GOES AROUND __
   A. THE EARTH
   B. THE SUN
   C. THE MOON
   D. MERCURY
4. AS A PLANET'S DISTANCE FROM THE SUN DECREASES, THE PERIOD OF REVOLUTION
   A.INCREASES
   B. DECREASES
   C.STAYS THE SAME
   D.FLUCUATES
5. WHAT FORCE IS KEEPING THE PLANETS IN A REVOLVING MOTION?
   B. GRAVITY
   C.ELECRICITY
   D. MAGNETISM
6. WHICH STATEMENT BEST DESCRIBES THE MOTION OF THE PLANETS IN OUR SOLAR SYSTEM?
   A. THE SUN REVOLVES AROUND THE PLANETS.
   B. THE PLANETS ROTATE AROUND THE SUN.
   CITHE SUN ROTATES AROUND THE PLANETS.
   D. THE PLANETS REVOLVE AROUND THE SUN.
                                                 ____. GIVE A SYNONYM FOR REVOLUTION: ____
7. GIVE A SYNONYM FOR ROTATION: _____
```

The teacher may use this assessment during the following class period.

# **Assessment Strategies:**

Written Work - Allow each student to write a letter to The OURS Foundation, CH-8424 Embrach, Switzerland detailing three things they discovered about Ars ad Astra, 2 things they noticed, and 1 question they still have.

Written Assessment - Provided.

Peer Assessment - Encourage dialogue between student groups. "I noticed..." "I like the way...because..." "Have you thought of...?"

#### **Recommended Resources**

Hope Boykin Bio (https://www.alvinailey.org/alvin-ailey-american-dance-theater/hope-boykin)

Hope is a three-time recipient of the American Dance Festival's Young Tuition Scholarship. She attended Howard University and, while in Washington, D.C., she performed with Lloyd Whitmore's New World Dance Company. Ms. Boykin was a student and intern at The Ailey School. She was assistant to the late Talley Beatty and an original member of Complexions. Ms. Boykin was a member of Philadanco and received a New York Dance and Performance (Bessie) Award.

She has choreographed three works for Alvin Ailey American Dance Theater: *Acceptance In Surrender* (2005), in collaboration with fellow Ailey company members Abdur-Rahim Jackson and Matthew Rushing; *Go in Grace* (2008, for the Company's 50th anniversary season) with music by the award-winning singing group Sweet Honey in the Rock; and *r-Evolution*, *Dream*. (2016), inspired by the speeches and sermons of Dr. Martin Luther King, Jr., with original music by Ali Jackson.

Find Ms. Boykin on Twitter and Instagram at hbdance and Facebook at HopeBoykinDance. Ms. Boykin joined the Company in 2000.

#### **Extended Learning Activities**

Expand on this lesson when introducing the effects of the tilt of the Earth, as well as the interaction with the other planets in the solar system

#### Sources

### www.edutopia.org

# http://www.arsadastra.com/euromir.html

https://www.edutopia.org/sites/default/files/pdfs/stw/edutopia-stw-bates-artsintegration-lessonplanrotationrev-presenta.pdf

https://www.edutopia.org/sites/default/files/pdfs/stw/edutopia-stw-bates-artsintegration-lessonplanrotationrev-solarsys.pdf

https://www.edutopia.org/sites/default/files/pdfs/stw/edutopia-stw-bates-artsintegration-lessonplanrotationrev-danceelements.pdf

https://www.edutopia.org/sites/default/files/pdfs/stw/edutopia-stw-bates-artsintegration-lessonplanrotationrev-taskcards.pdf

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# **Tips**

Plan ahead by moving tables and chairs before class begins.

Instruct and model student expectations regarding giving others personal space, as well as appropriate behavior.

# Adapted By:

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