Lesson Plan
Chemical Equation Hip Hop Dance

Grade Level
7th Grade

Subject Area
Science

MSCCRS
P.7.5E.3 Compare and contrast balanced and unbalanced chemical equations to demonstrate the number of atoms does not change in the reaction.

Art Form
Dance

MSCCR Creative Arts Standards
DA: Pr.5.1.7c Collaborate with peers to practice and refine dances. Develop a group performance expectations through observation and analyses.

Enduring Understanding:
Dancers use the mind-body connection and develop the body as an instrument for artistry and artistic expression.

Essential Question:
What must a dancer do to prepare the mind and body for artistic expression?

Duration
1 hour

Materials
Projector
Computer
Body

Objectives
TLs will solve chemical equations utilizing hip hop dance in creative decision-making.

Vocabulary
Chemical equations
Reactant
Coefficients
Products
Dance

Hip Hop

Lesson Description

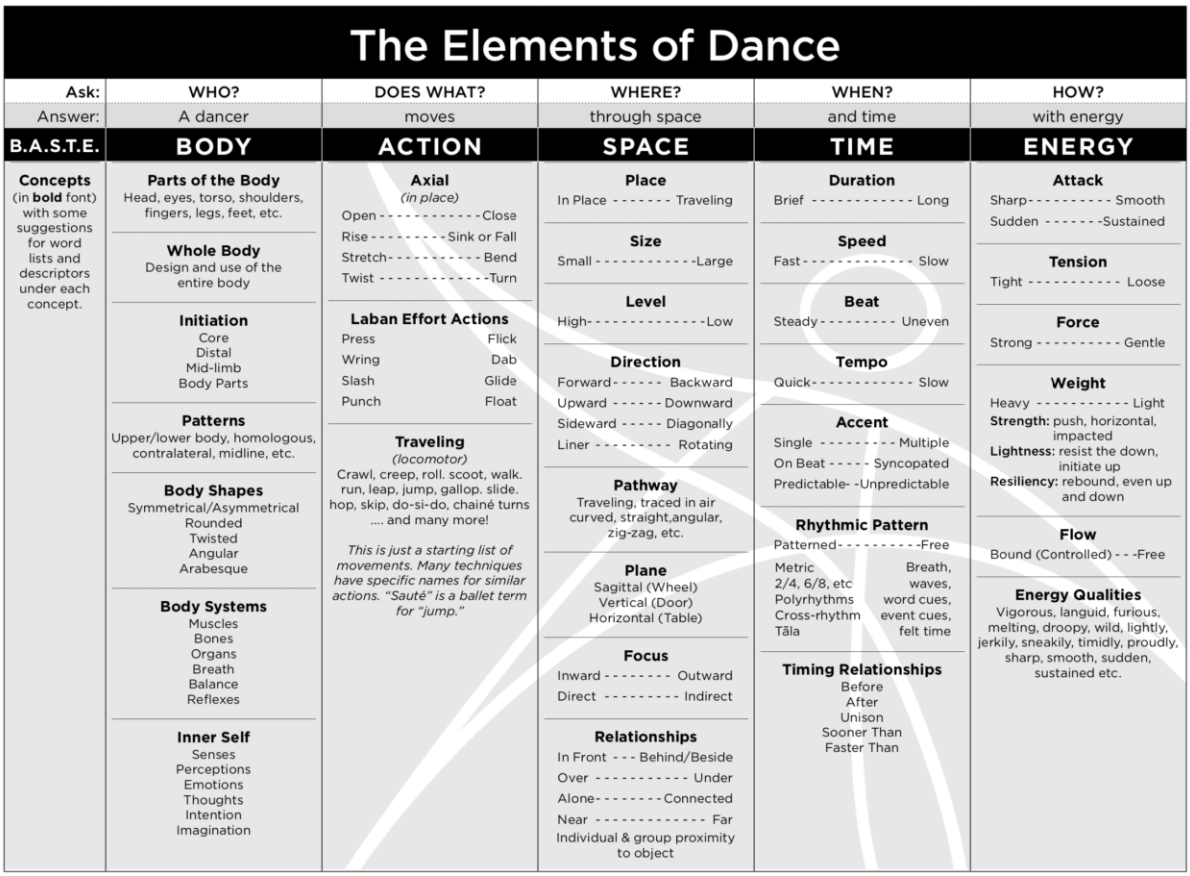
1. This lesson is an end of the unit lesson, so students know fully how to balance chemical equations. Balancing chemical equations is a difficult skill, so students will not be able to achieve success at the beginning of your unit.

2. TTW give the students the opportunity to watch dancers perform a hip hop dance: https://youtu.be/OghLUl9YKzk *The kids in this are phenomenal.

3. TTW then give the students the opportunity to participate in a dance tutorial: https://youtu.be/bmety40FIis?t=120 (about 10 minutes) *start video at two minutes.

4. Allow students time to practice.

5. TTW show the students the BASTE diagram:



The Elements of Dance

Ask:	WHO?	DOES WHAT?	WHERE?	WHEN?	HOW?
Answer:	A dancer	moves	through space	and time	with energy
B.A.S.T.E.	**BODY**	**ACTION**	**SPACE**	**TIME**	**ENERGY**
Concepts (in **bold** font) with some suggestions for word lists and descriptors under each concept.	**Parts of the Body** Head, eyes, torso, shoulders, fingers, legs, feet, etc. **Whole Body** Design and use of the entire body **Initiation** Core, Distal, Mid-limb, Body Parts **Patterns** Upper/lower body, homologous, contralateral, midline, etc. **Body Shapes** Symmetrical/Asymmetrical, Rounded, Twisted, Angular, Arabesque **Body Systems** Muscles, Bones, Organs, Breath, Balance, Reflexes **Inner Self** Senses, Perceptions, Emotions, Thoughts, Intention, Imagination	**Axial** *(in place)* Open - - - - - - - - - - - - Close Rise - - - - - - - - - - Sink or Fall Stretch - - - - - - - - - - - Bend Twist - - - - - - - - - - - - - Turn **Laban Effort Actions** Press / Flick Wring / Dab Slash / Glide Punch / Float **Traveling** *(locomotor)* Crawl, creep, roll, scoot, walk, run, leap, jump, gallop, slide, hop, skip, do-si-do, chainé turns .... and many more! *This is just a starting list of movements. Many techniques have specific names for similar actions. "Sauté" is a ballet term for "jump."*	**Place** In Place - - - - - - - Traveling **Size** Small - - - - - - - - - - - - Large **Level** High- - - - - - - - - - - - - - Low **Direction** Forward - - - - - - Backward Upward - - - - - - Downward Sideward - - - - - Diagonally Liner - - - - - - - - - Rotating **Pathway** Traveling, traced in air curved, straight,angular, zig-zag, etc. **Plane** Sagittal (Wheel) Vertical (Door) Horizontal (Table) **Focus** Inward - - - - - - - - Outward Direct - - - - - - - - - Indirect **Relationships** In Front - - - Behind/Beside Over - - - - - - - - - - - Under Alone- - - - - - - - Connected Near - - - - - - - - - - - - - Far Individual & group proximity to object	**Duration** Brief - - - - - - - - - - - - Long **Speed** Fast - - - - - - - - - - - - - Slow **Beat** Steady - - - - - - - - - Uneven **Tempo** Quick - - - - - - - - - - - - Slow **Accent** Single - - - - - - - - - Multiple On Beat - - - - - Syncopated Predictable- -Unpredictable **Rhythmic Pattern** Patterned - - - - - - - - - - Free Metric, 2/4, 6/8, etc Polyrhythms Cross-rhythm Tāla Breath, waves, word cues, event cues, felt time **Timing Relationships** Before After Unison Sooner Than Faster Than	**Attack** Sharp - - - - - - - - - - Smooth Sudden - - - - - - - Sustained **Tension** Tight - - - - - - - - - - - Loose **Force** Strong - - - - - - - - - - Gentle **Weight** Heavy - - - - - - - - - - - Light **Strength:** push, horizontal, impacted **Lightness:** resist the down, initiate up **Resiliency:** rebound, even up and down **Flow** Bound (Controlled) - - - Free **Energy Qualities** Vigorous, languid, furious, melting, droopy, wild, lightly, jerkily, sneakily, timidly, proudly, sharp, smooth, sudden, sustained etc.

6. ...and ask the following questions about the video and tutorial:

    a. TTW ask, "What do the dancers do with their WHOLE bodies?" TSW respond.

b. TTW ask, “How were different PARTS of the body used?” TSW respond.

c. TTW ask, “What shapes did the body make? Please draw or describe.” TSW respond.

d. TTW ask, “What else did you notice about how the body was used in this dance?” TSW respond.

7. TT may want to discuss “Energy,” too. If so, explore it on a continuum.
    a. TTW ask, “How does the dancer begin a movement?” TSW respond.
        i. “Is it sharp or is it smooth?” TSW respond.
        ii. “Is it sudden or is it sustained?” TSW respond.
    b. TTW ask, “what’s the muscle tone like? How much are the muscles engaged and working? TSW respond.
        i. “Are the muscles tight?” TSW respond.
        ii. “Are the muscles ever smooth?” TSW respond.
    c. TTW ask, “How much force is used? Force often looks like effort.” TSW respond.
        i. “Are the movements strong?” TSW respond.
        ii. “Are the movements gentle?” TSW respond.
    d. TTW ask, “How does the dancer work with gravity? Is the dancer grounded and connected to the earth or floating and lifting away?” TSW respond.
        i. “Are the movements heavy? TSW respond.
        ii. “Are the movements ever light?” TSW respond.
    e. TTW ask, “How do the movements flow? Does the dancer connect the movements? Are they tight and contained? Are they freely moving?” TSW respond.
        i. “Are the movements bound?” TSW respond.
        ii. “Are the movements free?” TSW respond.

8. TTW turn student’s attention to a review on how to balance chemical equations using a youtube video.

9. TTW explain that the class will be divided into groups of 3. Each group will be given a chemical equation that is unbalanced.

10. They must first balance their equation. Then once their equation is balanced and checked by the teacher, the groups must create a dance to represent their balanced equation.
    a. For example, if an equation is $C_2H_6 + O_2 \rightarrow CO_2 + H_2O$.
    b. Students will need to be creative. For instance, if they wanted to represent the letter C, then they could curve their body into a C. Each time a C is

used, they would curve their body like that. Students can step twice, or six times to represent subscripts or quantities.

c. The student must be able to justify the chosen movements.

11. TTW explain that their dance must flow and show each part of the chemical equation.

12. TLs will get their chemical equation and then solve it. TLs will then create their dance to represent their balanced chemical equation.

13. TLs perform their balanced chemical equation dances.

Essential Question:
What must a dancer do to prepare the mind and body for artistic expression?

Recommended Resources
Balancing chemical equations- How to Balance a Chemical Equation EASY

Music: https://youtu.be/tOnTPW1MTZ4

Hip Hop Tutorial: https://youtu.be/bmety40FIis?t=120

Extended Learning Activities
N/A

Sources
N/A

Tips
Make sure the students have plenty of room to move. Make sure they have a means of listening to their music https://youtu.be/tOnTPW1MTZ4 to rehearse.

Suggested Assessment Strategies in Dance

***3-2-1 Strategy**	Students will identify *3* things they discovered, 2 interesting things, and *1* question they still have.
***Self-Reflection**	"*I became more aware of…*" or "*I was surprised about…*" If students have a similar response to another student, they should also add, "I agree with (student name), sentence starter, response.
***Observation**	TTW walk around the classroom and observe the students as

	they are working in order to check for evidence of student learning. The teacher should record anecdotal accounts from each class, topics of private conferences, checklists, and/or any rubrics utilized.
*__Creative Process__	TSW self-critique one's performance.
*__Journal__	TSW write a personal response to this dance experience and include any photos or drawings about the dance.

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