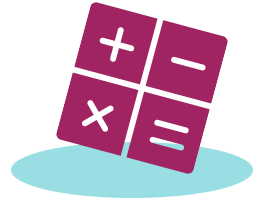




SO YOU THINK YOU CAN MATH



Using Dance to Teach Math in Elementary Classrooms

Why Dance and Math?

<p>Multiple Connections Across Strands of Math</p> <p>(Hawes et al., 2013; Moore & Linder, 2012; Redman, 2016; Newcombe, 2010)</p>	<p>Encourages Physical Activity</p> <p>(Lindt & Miller, 2017; OME, 2005)</p>	<p>Deepens Understanding of Both Subjects</p> <p>(Moore & Linder, 2012)</p>	<p>Accessible & Inclusive For All Students</p> <p>(Hawes et al., 2013; Rosenfeld, 2013)</p>	<p>Supports Cognitive Skill Development</p> <p>(Becker, 2013; Leandro et al., 2018)</p>	<p>Fun & Engaging</p> <p>(Hawes et al., 2013; Lindt & Miller, 2017)</p>
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What Are Some Math & Arts Curriculum Connections?

Gr. 3 Arts: Dance



OE A1: "Apply the creative process to the composition of dance phrases, using the elements of dance (i.e. space, body, relationship) to communicate feelings and ideas" (p. 86)

Gr. 3 Geometry & Spatial Sense



SE: "Complete and describe designs and pictures of images that have a vertical, horizontal, or diagonal line of symmetry" (p. 60)

Gr. 3 Number Sense & Numeration



SE: "Divide whole objects and sets of objects into equal parts, and identify the parts using fractional names, without using numbers in standard fractional notation" (p. 55)

What Does The RESEARCH SAY STUDENTS Think?

"Not only did these things help; **it was fun**, which made it **more interesting to learn about**. Like our geometry dances. They helped me and they were fun." - Gr. 3

"I learned that you may not notice it, but **shapes are all around you**. For dance I learned that doing a geometry dance not only requires you working hard and learning shapes, it teaches you **how to cooperate with others**." - Gr. 3

(Moore & Linder, 2012)

What Are Some Other Cross-Curricular Connections?

Gr. 3 Arts: Music



SE C2.2: "Describe ways in which the elements of music are used in the music they perform, listen to and create" (p. 91)

Gr. 3 Phys-Ed



OE A1: "participate actively and regularly in a wide variety of physical activities and demonstrate an understanding of the value of regular activity in their daily lives" (p. 102)

What Did The STUDENTS WE TAUGHT Think?

"It's fun and exciting because it's different and you're **learning without knowing** that you're learning!" - Gr. 3

"It's fun because you don't just write stuff down. You get to be active. It's also **easier to picture the fraction sizes** when you do them with your body." - Gr. 5



Easy Lesson Idea

Teaching Your Students About **SYMMETRY THROUGH DANCE**

➤ **Materials/Preparation**

- Music
- Space for students to dance
- Printed pages of symmetrical images

➤ **Primary Learning Outcomes**

- Learn about symmetry
- Demonstrate cohesive group work
- Demonstrate understanding of elements of dance: body, space, time & relationship

➤ **Lesson Summary**

- **PART 1:** In whole group, discuss symmetry and the line of symmetry. Demonstrate the creation of symmetry using body.
- **PART 2:** Work in pairs to create symmetrical images with their bodies to specified beats in the music.
- **PART 3:** Work in groups of 4 to recreate symmetrical pictures using their bodies. Give students 16 counts to travel through space before returning to the location of their card to recreate their symmetrical shape.



Suggested Grade

Grades 1-5

Assessment

Can students demonstrate symmetry using the elements of dance (body and space)?

(<https://learning.nbs-enb.ca>)

Online Resources

- <https://learning.nbs-enb.ca>
- <https://dancepdnetwork.ca/research>
- <https://www.teachingchannel.org/video/teaching-symmetry-with-dance>
- http://www.enumclaw.wednet.edu/teachlearn/curriculum/arts/k_2/2dance.pdf
- <https://www.youtube.com/watch?v=Ws2y-cGoW>
- <https://danceequations.com/>
- <http://www.edu.gov.on.ca/eng/literacynumeracy/LNSPayingAttention.pdf>
- <http://www.mathinyourfeet.com/publications.html>

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