

Workshop on Mathematics and Dance

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Introductory description and overall goals

The presenters will offer a workshop for *Constructionism 2010* participants on how to integrate mathematics and dance in the classroom as well as on stage. They will incorporate several mathematical topics, including symmetry, counting principles, and the mathematics of rhythm. Participants will create, practice, and perform short dance phrases, and simultaneously explore mathematical principles and critique the work from the point of view of both the mathematics and the artistry involved.

Method

The purpose of this workshop is to give participants a palpable experience to help them understand connections between mathematical and choreographic concepts. Prior experience in either mathematics or dance is not required. The workshop alternates between creative problem solving and reflection/discussion. Workshop participants will (1) solve problems physically in groups of two to four, (2) discuss problems in smaller groups and as a class, (3) will first explore creatively the subject matter and then examine formalization of the concepts, (4) Discuss the use of these activities in K-12 and college classes.

Expected outcomes

Workshop participants will (1) solve problems physically in groups of two to four, (2) discuss problems in smaller groups and as a class, (3) will first explore creatively the subject matter and then examine formalization of the concepts, (4) Discuss the use of these activities in K-12 and college classes.

Keywords

Choreography. Open-ended Problem Solving. Symmetry.