

Program Name: Simple Machines

Artist: City in Motion Dance Theatre, Inc.

Special Requirements:

Minimum 24' x 30' stage or gym space, wood floor preferred; area and floor surface clean and clear of students 30 minutes before performance.

Special Points of Interest:

The third and most profound simple machine is the wheel. The first two are the lever and the wedge.

Performance Description

A trio of professional dance artists from City in Motion Dance Theater introduce students to the concept of dance as a means of communicating specific ideas about simple machines in this lively and energetic performance. Designed as a companion piece to KCYA's workshop, *Simple Machines: Bodies in Motion*, this performance will guide students through an exploration of the shapes and movements of wheels, gears, pulleys, levers, inclined planes, wedges, and screws and how they combine to form simple machines.

The performance begins with a visually stimulating original dance piece featuring a choreography of lifts, partnering, shapes, and motifs inspired by wheels, gears, pulleys,

and other simple machines. This dance is then broken into components as each simple machine shape motif is explained and demonstrated by the dancers .

Next, Andrea invites students to volunteer for an exercise that has them mirror the dancers' movements. This leads to the participants exploring simple machine shapes and linking them together to create a new simple machine.

Lastly, a dancer recites the poem, "Cogs and Gears and Wheels and Springs", by Jacqueline Sweeney, as two other dancers perform an original piece inspired by the simple machines in the poem.

Educational Objectives & Standards

Students will:

- Be introduced to dance as an art form
- Learn about the practical application of simple machines
- Experience non-verbal communication through mirroring exercises

Science:

- Knows that things move in many different ways (e.g. straight line, zigzag, vibration, circular motion)

Dance

- Understands dance as a way to create and communicate meaning



List of Resources:

Books:

Simple Machines (Rookie Read-About Science) by Allan Fowler
Children's Press (CT);
(November 2001) ISBN:
0516273108

How Do You Lift a Lion?

by Robert E. Wells
Albert Whitman &
Company;
(October 1, 1996) ISBN:
0807534218

Simple Machines (Starting With Science)

by Adrienne Mason,
Deborah Hodge,
The Ontario Science
Centre
Kids Can Press; (March 1,
2000)
ISBN: 1550743996

Contact KCYA for more
information about this and
other programs

816.531.4022
KC YA.org

Teaching Artist Andrea Skowronek received a Bachelor of Fine Arts from Stephens College in 1981. Since then, Andrea has been a professional dancer and educator, holding senior positions with dance troupes and theaters in the region. In addition, she has taught at University of Missouri-Kansas City and St. Mary's College.

Andrea is the Artistic Co-Director of City in Motion Dance

Theater, Inc. She is also Children's Dance Theater Director and held the title of School Director for four years.

City in Motion, a school of dance in Kansas City, believes that everyone is a dancer. Founded in 1985, City in Motion boasts a professional faculty, offering a wide assortment of dance, movement exercise techniques, and other classes.

Vocabulary

Choreographer: A person who makes up dances.

Inclined plane: A surface angled so something can slide up or down it.

Lever: A bar free to move about a fixed point, called a fulcrum, and used to pry or lift.

Pulley: A wheel and axle with a rope or wire over it, used to lift objects.

Screw: A wedge with spiral grooves like an inclined plane wrapped around a shaft, used to hold things together.

Simple machine: A simple tool used to make work easier.

Wedge: Two inclined planes tapering to a thin edge, used to force things or hold things open.

Wheel: A circular frame that turns on an axle.



Post-Performance Activities

1. Review students' understanding of simple machines by asking them to create the shape of each using only their arms, or just their hands and fingers.
2. Bring in, or invite students to bring in, examples of simple machines from home.
3. Have a scavenger hunt around school, looking for ways simple machines make people's work easier.