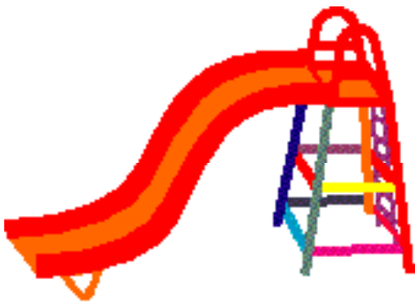
Playground - Energy Transfer

In school, the children have investigated how a rolling sphere behaves when it moves down a ramp. This activity enables the children to investigate some of the ways in which energy is transferred at a playground.

What you need:

- small ball
- medium- sized ball
- large ball
- masking tape
- centimeter tape measure
- playground slide



What to do

1. Explain to your child that this investigation explores how far a small ball will travel after it rolls down a playground slide.

2. Release the small ball from the top, middle and bottom of the slide. Measure the distance from the end of the slide to where the ball stops rolling each time and record the results on the worksheet.

3. Compare your results to see how the variable of height affects the distance the ball travels.

4. Repeat this procedure for the medium-sized ball and the large balls.

5. Review your results. Discuss with your child how the size and weight of the ball affect the results.

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Worksheet

	Small Ball	**Medium-sized Ball**	**Large Ball**
Top of Slide	___ cms	___ cms	___ cms
Middle of Slide	___ cms	___ cms	___ cms
Bottom of Slide	___ cms	___ cms	___ cms

SUMMARY: The size and weight of the ball and the height from which it is released are the variables affecting how far a ball will travel.

EXTENSIONS:

Further Investigation:

Design a small ramp. Place the ramp on a variety of surfaces, such as: a rug, a smooth floor, a blanket, etc. Release a small sphere from the same height on the ramp onto the varying surfaces. What do you observe? What can you conclude?

Literary Connections:

• Taylor, Barbara. *Force and Movement*. New York: Franklin Watts, 1990.
• Ardley, Neil. *The Science Book of Energy.* Harcourt Brace Jovanovich, 1992.
• Snedden, Robert. *Energy Transfer* Heinemann Library, 48 pp, 2001

Related Web Sites:

http://ofcn.org/cyber.serv/academy/ace/sci/cecsci/cecsci136.html

http://ofcn.org/cyber.serv/academy/ace/sci/cecsci/cecsci174.html