

Trend Task:

Swinging Marbles

Approach: Station Year: 8

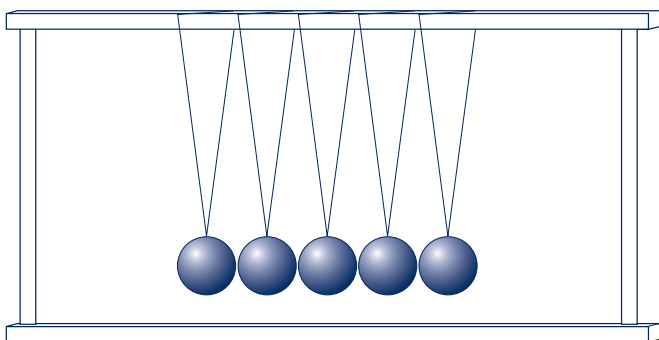
Focus: Motion

Resources: Swinging ball set

Questions / instructions:

Check that your marble set looks like the picture.

Gently pull back one of the end marbles and let it go.



1. What happened to the marbles at the ends?

marbles at ends swing out alternately
they go backwards and forwards

2. Try to explain why that happened.

clear explanation
vague idea

Explanation: *When one end ball hits, it transfers its energy to the next ball, which passes it on to the next ball, etc. The ball at the other end has none to pass it on to, so it swings out (until all the energy has been converted to potential energy). When it swings back in, the flow goes the other way through the balls.*

3. What happened to the marbles in the middle?

stayed the same – didn't move
(passed energy on)

Total score: 5
4
3
2
0-1

% responses
2003 ('99)

year 8

42 (34)

41 (49)

46 (41)

40 (45)

77 (75)

21 (12)

28 (36)

25 (25)

17 (16)

9 (11)

Commentary:

There was no meaningful change in performance between 1999 and 2003.