## Conservation Laws

## Newton's Cradle

Observe one ball swinging. Next, observe and describe what happens when two balls, three balls, and finally four balls are swinging, and record your observations.

Table 1

|  |  |
| :--- | :--- |
| one ball |  |
| two balls |  |
| three balls |  |
| four balls |  |

In the preceding experiment, all the balls were of uniform size and mass.
What would happen if the balls were not the same mass?
If the first ball swinging has a mass of $4-\mathrm{kg}$ and the rest of the balls are $2-\mathrm{kg}$, what would the collisions look like?

Table 2

|  |  |
| :--- | :--- |
| Initial collision | Answer |
| Second <br> collision <br> (return swing) |  |

