**Free Particle Model**

# Activity: Bowling Ball Motion

As part of our study of motion and forces, in this activity you will push a bowling ball across the gym floor using a broom.

| **Predictions**<br>*How can you make the bowling ball move as described using only the broom bristles? Explain using words and pictures.* | **Observations**<br>*After successfully producing the given motion, describe how you did it.* |
|---|---|
| Accelerate the bowling ball from rest. | |
| Stop a moving bowling ball. | |
| Keep a moving bowling ball moving at constant velocity. | |
| Move the ball from the end court line to the free throw line and back as quickly as possible, without overshooting either line. | |

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|---|---|
| With a moving bowling ball, make a sharp left turn. | |
| Travel at constant speed along the 3-point line. | |
| Move the ball around a jump circle as quickly as possible. | |