

# Newton's Laws of Motion



Here is your chance to prove your understanding of Newton's Laws. You will pick **ONE** of the following situations and apply all three laws. For each law, you will need to draw an illustration AND write a 2 sentence explanation of how the law affects motion in the situation you chose.

**Requirements:** Complete on a piece of construction paper.

1. Give a brief background of Isaac Newton and his contribution to physics. (3-4 sentences)
2. Select **ONE** of the following situations to explain with illustrations and captions.
3. Create a 3-panel illustration of how each law affects the situation you chose.
4. Write a 1-2 sentence caption explaining how each law affects the situation you chose.
5. This will count as a QUIZ grade so do you best work.

**Situations:** You may only select **ONE**.

- |  |  |
|--|--|
| a. A diver diving into the water         | e. A black-belt executes a karate move (keep it clean) |
| b. A hunter shooting an arrow with a bow | f. Someone playing tennis                              |
| c. A quarterback playing football        | g. A skateboarder riding their board and doing tricks  |
| d. Someone riding a rollercoaster        | h. Personal choice _____                               |

**Sample Illustrations:** A baseball player is hitting a ball.

Newton's First Law	Newton's Second Law	Newton's Third Law
<p>The baseball's inertia will keep it moving to the left until the bat (unbalanced force) hits it, changing the ball's speed and direction.</p>	<p>In the first picture, the batter bunts and the ball stays low to the ground because of low acceleration. When the batter uses more force in the second picture, the ball has greater acceleration.</p>	<p>The bat exerts an equal force in the opposite direction on the ball when the two objects come into contact. The ball will then change direction and the bat will slow down as a result of this pair of forces.</p>

**Grading:**

Newton's Laws correctly applied to the situation	30 pts (10 pts each law)
Work is neat, colored, and organized	15 pts
Work is free of grammatical errors	5 pts
Total	50 pts

**Extra Credit Opportunity:** You can earn 10 points extra credit on this assignment if you do one of the following:

- Videotape and narrate you demonstrating Newton's Three Laws
- Take pictures and create a Prezi of you demonstrating Newton's Three Laws

**Planning:**

Use this space to plan out your 3-panels, illustrations, and captions.

Title \_\_\_\_\_

*Background:*

<i>Newton's First Law</i>	<i>Newton's Second Law</i>	<i>Newton's Third Law</i>
<i>Caption</i>	<i>Caption</i>	<i>Caption</i>