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| **Question / Prompt** | **Student Response / Explanation** |
| Find the following website:  https://www.grc.nasa.gov/www/k-12/airplane/newton.html  Read about each of Newton's Laws of Motion.  Explain each of Newton’s three laws in your own words. | |  |  | | --- | --- | | 1st Law |  | | 2nd Law |  | | 3rd Law |  | |
| Investigate and apply Newton’s laws to vehicle restraints (seatbelts):  Choose one of the videos and observe Newton’s Laws in relation to collisions.  Then   * write two or three sentences that describe how each law can be exemplified in the collision video/s you chose to watch. (use the space to the right to record your descriptions). * Compare & Contrast the results of a collision when the passengers are NOT wearing seatbelts to when passengers ARE wearing seatbelts.   https://www.youtube.com/watch?v=wV2UTkkQ0Fg | |  |  | | --- | --- | | 1st Law |  | | 2nd Law |  | | 3rd Law |  |      |  |  | | --- | --- | | Results of Collisions With Seatbelts | Results of Collisions  Without Seatbelts | |  |  | |
| Find the following interactive simulation:  <http://glencoe.com/sites/common_assets/science/virtual_labs/E25/E25.html>   * Using the information in the left margin, answer the questions in the table to the right. | |  |  | | --- | --- | | What is a Force? |  | | What is Net Force? |  | | What does Newton's Second Law State? |  | | What is Acceleration? |  | | What is the formula for calculating the Force acting on an object? |  | | What is the difference between Mass and Weight? |  | | What is a Newton? |  | | Scroll Down to "objectives".  read the objectives. |  | | Proceed to the simulation. |  | |
| Find the following simulation:  [**http://www.sciencenetlinks.com/interactives/gravity.html**](http://www.sciencenetlinks.com/interactives/gravity.html)   * You will have five different missions to dock the rocket at the orbiting space station.  For each trial, change the amount of thrust and the angle of the launch.  Press the launch button to test your variables.  Record the variables for successful launches in the table to the right. | |  |  |  | | --- | --- | --- | | **Round** | **Thrust** | **Angle** | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |  |  |  | |