**General Physical Science – Laws of Motion Lab**

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period\_\_\_\_\_\_\_\_\_\_

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| I can… |
| *Define the laws of motion.* |

* ***Go to http://shhsphysicalscience.weebly.com***
* ***Mouseover General Physical Science*** 🡪 ***Click Week 6*** 🡪 ***Click “Laws of Motion Lab”***

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| ***Laws of Motion lab*** | |
| 1. Listen to Sir Isaac Newton! List his **4 jobs**. |  |
| 1. Click on the 1st LAW, “Law of Inertia”.  Write down the text that summarizes the first law. |  |
| 1. Click the hand and apply a force. Describe IN COMPLETE SENTENCES what happens. (Sir Newton helps you out.) |  |
| 1. Click to stop the apple. Describe what happened in COMPLETE SENTENCES. |  |
| 1. Why did the worm keep going? (Sir Newton will help you.) |  |
| 1. Click the poor worm to stop him. What was the external force that stopped him? (Sir Newton will help you.) |  |
| 1. Click the hand to go to the next law. Write down the definition of the 2nd law. |  |
| 1. Click the hand to go on. What is the formula you are given? |  |
| 1. Sketch the scenario with the worm and the apple, and label the *force*, the *mass*, and the *acceleration.* |  |
| 1. Click the hand to go on. Then, click the worm. What happened to your worm? |  |
| 1. What does the stronger worm do? (Sir Newton will help you.) |  |
| 1. Click the worm again to shrink him. Now click the apple. What happens? |  |
| 1. What does the giant apple do to the acceleration? |  |
| 1. Click the hand to go to the next law, and write the sentence that describes the law. |  |
| 1. Click the worm to send him on his journey. What is the “action”that occurs? (Sir Newton will help you.) |  |
| 1. Click the rocket. What is the reaction? |  |
| **The Quiz!** | |
| Click the hand to take the quiz, and click “Start the quiz” when you are ready. The questions are recorded here for you, it’s your job to record the CORRECT answers!   1. The worm below is pulling an apple. If we want the apple’s acceleration to increase, what variable could we change? 2. This apple is at rest. Which law states that the apple is going to remain that way until a force is applied? 3. Which law is often represented by the equation below? 4. In what field of science was Isaac Newton not involved? 5. The rocket below has a mass of 2 kilograms (it’s all that metal weighing it down). How many Newtons (units of force) would it take to make the apple accelerate to 10m/s/s? (*Hint: use the formula F=ma)* 6. The worm is tired of pulling the apple and now wants to push it. If he pushes it, what is he exerting on the apple? 7. Newton’s inspiration for his three laws of motion came when he was hit on the head by an apple. True or false? 8. The apple below is floating in a pond. The hitchhiking worm jumps from the apple as shown. According to Newton’s third law, what is likely to happen to the apple? 9. What is the Newton a unit of? 10. What color was the worm’s scarf in the example for Newton’s first law?   ***What score did you get?*** | |