Scientist\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_

**DRY ICE DEMO**

**Scenario 1: Dry ice sitting on table**

1. Draw the free body diagram of the dry ice.
2. What is the net force on the dry ice? \_\_\_\_\_\_\_\_\_\_\_\_
3. Is the velocity of the dry ice constant or changing? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. Graph the position vs. time for the motion
5. Conclusion: If the net force on an object is \_\_\_\_\_\_\_\_\_\_\_\_\_\_, then the object’s velocity is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Scenario 2: Dry ice pulled with a string**

1. Predict: What will happen to the speed of the ice?
2. Draw the free body diagram of the dry ice.
3. What is the net force on the dry ice? \_\_\_\_\_\_\_\_\_\_\_\_
4. Is the velocity of the dry ice constant or changing? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. Graph the position vs. time for the motion
6. Conclusion: If the total force on an object is not \_\_\_\_\_\_\_\_\_\_\_, then the object’s velocity is \_\_\_\_\_\_\_\_\_\_\_\_\_.

**Scenario 3: Dry ice briefly pushed and then released**

1. Predict: What will happen to the speed of the ice?
2. Draw the free body diagram of the dry ice.
3. Is the velocity of the dry ice constant or changing? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. What is the net force on the dry ice? \_\_\_\_\_\_\_\_\_\_\_\_
5. Graph the position vs. time for the motion
6. Conclusion: If the object’s velocity is \_\_\_\_\_\_\_\_\_\_\_, then the net force on an object is \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

What is Newton’s First Law? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_