Name Period Date

Newton’s First Law – A Body at Rest

**STARTER: Look up Newton’s First Law in the textbook and write it down. Then try to explain the law in your own words.**

**Text definition:**

**My explanation:**

In this experiment you will learn about inertia. In it, you will try to remove a large piece of paper from under an object without moving the object on top. Magicians do this all the time. Remember seeing a magician pull a tablecloth out from under a pile of dishes? Was it magic or science?   
  
Before you begin, write down what you think will happen. Try to explain the scientific reasons for the outcome you predict.

**What I think will happen:**

*Materials*You will need the following items for this experiment:  
• one large piece of smooth paper  
• one book with a hard, glossy cover  
• one book with a rough or non-glossy cover  
• objects to place on the large piece of paper  
*Procedure*1. Place the large piece of paper on a flat, smooth surface.   
2. Put the book with the glossy cover on top of the paper.   
3. Quickly (and in one smooth motion) yank the paper out from under the book.   
4. **Write down what happens:**

5. Do the experiment again, this time putting other objects on top of the paper. Observe what happens and answer the questions on the back of this paper.

**Does mass (weight) have any effect on the experiment?**

**Does the type of object you add have any effect?** **If so, in what way and why?**

**Try the experiment again using a book with a rough or non-glossy cover. What do you notice? Explain how this experiment relates to Newton’s First Law of Motion.**