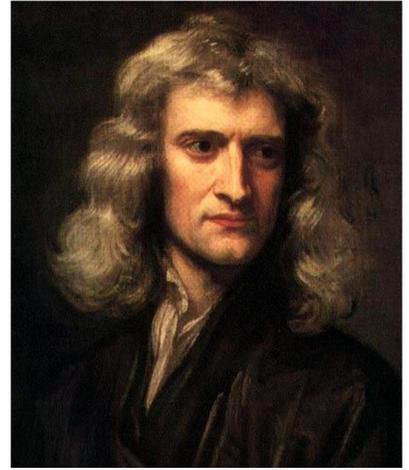


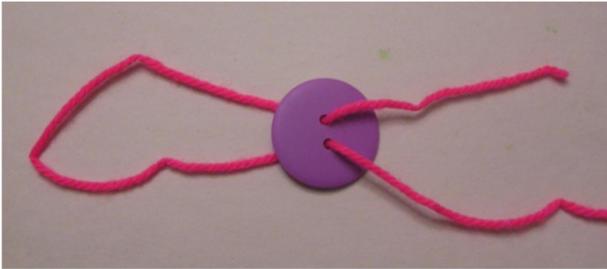
Isaac Newton was a scientist who lived a long time ago. He studied how and why things move, and wrote three laws of motion based on what he learned. Many other scientists had studied motion before Isaac Newton did, but his ideas were better than anyone else's. His ideas are so important that they are still being studied and used over 300 years later!!!



Newton's three laws of motion are:

1. The way a thing is staying still (or moving steadily) will not change unless the thing gets pushed or pulled.
2. The harder a thing is pushed or pulled compared to how heavy it is, the more it will speed up.
3. If a thing is pushed or pulled, it will push or pull right back.

To make a spinning toy that shows how those laws work, thread a string through one button hole and back through the other hole. Then even up the ends of the string, and form them into a loop. Then bring the ends through the loop and pull the knot tight.



To make the toy spin, move the button to the middle of the loop and hold the ends of the string. Swing the button around so that the string gets twisted, and then pull on the loop ends. The string will untwist and the button will start spinning. When the loop ends are as far out as they can go, let them come together as the spinning button twists the string. When the button runs out of spin, pull on the ends of the string again. Repeat the pulling-out and coming-together movements to get the button to spin as fast as you can.

So where is the science in playing with a spinning button? Newton's first law can be seen before you swing the button around – it's not moving! Newton's second law can be tested by pulling harder or not so hard, and also by adding weight to the button. Newton's third law can be felt by your fingers because as you are pulling, you are also being pulled.

Scientists keep getting further ahead in science by learning about what others have already done. Isaac Newton said "If I have seen further than others, it is by standing upon the shoulders of giants." Maybe you and I will grow up to make important discoveries in science too!!!



Lelia Schilke

Scientist of the Week
February 7-11, 2011

Mrs. DeWeese's Kindergarten Class
Oak Grove Elementary School