



Science Fair Projects

6th Grade to 8th Grade

Title: Physical Science

"Slip and Slide"

Stating the Problem - The Big Question

There are many factors that can affect the amount of friction between two surfaces. In your experiment, you will be measuring friction and finding out how weight, type of surface, and other factors affect friction. Write a question that asks what you want to learn about friction from your scientific investigation.

Forming a Hypothesis - A Smart Guess

Do you think friction is affected by an object's weight? By the object's size? The type of surface? In one sentence write a hypothesis, or a prediction of what you will find out. It should answer your Big Question.

Planning the Procedure

What is friction? How is friction measured? How is friction helpful to man? When is friction harmful? These and many other questions can be answered by doing some research in your library. Before a scientist plans the procedure for a scientific investigation, he or she finds out what others have learned about the topic. Read some books and articles about friction.

The experiment can be constructed easily with materials found around the house or bought at a local hardware store. Washers are being used to measure the force of friction. How many washers does it take to move the block? What would happen if you taped different kinds of materials on the bottom of the block, such as waxed paper or sandpaper? What would happen if you used a lubricant, such as oil or petroleum jelly, between the block and the sliding surface?

Write a step-by-step description of your experiment. Make a detailed list of materials that will be needed.

This project is from Daryl Vriesenga's book, *Science Fair Projects, Grades 4-6*, Michigan, Schaffer Publications, 1990. The Guide is available on line at: SchooDoodle.com

Enter Coupon Code **SCIENCE** for 20% OFF your entire purchase on





Science Fair Projects

6th Grade to 8th Grade

Title: Physical Science

"Slip and Slide" (continued)

Make a chart or table to record the results of your experiment. Here is a sample of what you might use.

Chart

Variable	Number of Washers Needed to Move Block			
	Test #1	Test #2	Test #3	Average
Waxes Paper				
Sandpaper				

Recording Results

Push, Pull! Slip! Slide! It's time to begin measuring the force of friction on various kinds of objects. Remember to keep careful and accurate records of your experiment. Carefully record the results on charts that you have prepared. To compare the results, you can use bar or line graphs.

Drawing a Conclusion

What have you learned about friction from your experiment? How accurate was your prediction? Write a report that describes what you learned from your investigation of friction. Your report should include the steps of the scientific method: (1) your Big Question, (2) your hypothesis, (3) a description of the experiment, including a list of materials, (4) the tables and charts with the written results of the experiment, and (5) the conclusion.

Display

Make a display board with a title, Big Question, procedure, hypothesis, results and your conclusion. Display the equipment that you used for your experiment.

This project is from Daryl Vriesenga's book, *Science Fair Projects, Grades 4-6*, Michigan, Schaffer Publications, 1990. The Guide is available on line at: SchooDoodle.com

Enter Coupon Code **SCIENCE** for 20% OFF your entire purchase on

