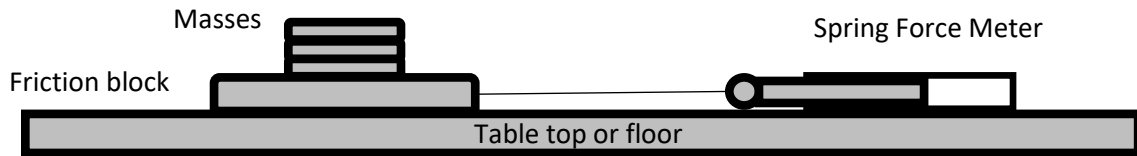


Friction

Activity Guide - basic



- Take care the masses are not pulled too near to the edge of the table, or simply work on the floor.

Gather data to complete the table.

Results

Material	Load (grams)	Sliding Friction Force (Newtons)			
		Test 1	Test 2	Test 3	Average

Are there any clear patterns in how the friction force changes?

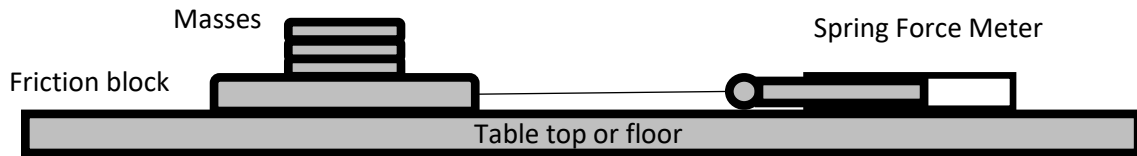
By comparing with other groups, which surfaces have the highest friction?

Which surfaces have the lowest friction?

Can you suggest what increases or decreases the friction force?

Friction

Activity Guide – in-depth



- Take care the masses are not pulled too near to the edge of the table, or simply work on the floor.

Gather data to complete the table. Test each material with at least 6 masses. Continue results table over the page if necessary.

Results

Materials	Load (grams)	Sliding Friction Force (Newtons)			
		Test 1	Test 2	Test 3	Average

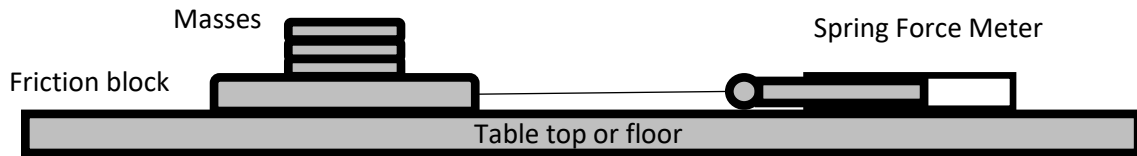
Plot graphs of Friction force (y-axis) against contact force (x axis)

Describe the relationship between the two variables.

By comparing your results with others, can you suggest which factors change the friction force?

Friction

Activity Guide - Advanced



- Take care the masses are not pulled too near to the edge of the table, or simply work on the floor.
- If lubrication materials are spilled, clear up immediately

Gather data to complete the table. Test each material with at least 6 masses. Continue results table over the page if necessary.

Results

Materials	Load (Newtons)	Sliding Friction Force (Newtons)			
		Test 1	Test 2	Test 3	Average

Plot graphs of Friction force (y-axis) against contact force (x axis)

Determine the gradient and the confidence limits for the gradient. The gradient is the coefficient of friction.

How does the addition of a lubricant between the surfaces change the results?

By comparing your results with others, can you suggest which factors change the friction force?