

Name: \_\_\_\_\_

Date: \_\_\_\_\_

# Friction

You have already learned that the force of friction acts on objects that rub together. How much friction there is depends on the surfaces of those objects. When the surfaces are rough there will be more friction. There will be less friction when the objects have smooth surfaces. A slide has a smooth surface, which means that you can slide quickly down. You would not slide as fast if it was made of wood.

It is a good thing there is friction. Friction allows us to walk without slipping. Your bicycle stops because of friction. Friction is necessary to stop moving cars and bicycles. Tires are designed with bumps and grooves on them. This increases the friction between the tires and roads or sidewalks.

There are many times when it is necessary to increase or decrease the amount of friction.

## Increasing Friction

Nature can make surfaces slippery. When this happens we want to increase friction. By increasing the friction we can make driving safer. Tires are not the only things that are designed or used to make us safer in bad weather.



## Decreasing Friction

There are times when less friction is better. Too much friction can cause rubbing parts to wear out. Things can rotate more easily with less friction. If there is less friction, then less energy is needed to make things happen



Fill in the chart below with information you have read on this page. Add more examples that you think of on your own.

| Things done to increase friction. | Things done to decrease friction. |
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