

Suzy's World

Friction - What would you use to make a really fast slide?

Fact

- Slides usually have a smooth surface and are made out of metal.
- The steeper the slope the faster you go.
- The less friction you have the faster you go.
- Friction is a stopping force.
- Friction acts to slow things down and even stop them from moving.
- Lubricants reduce friction by making surfaces slippery so they can move over each other faster.
- I used water and detergent as lubricants on a plastic sheet to make a fast slide on a grassy slope.



Do you know?

- Friction is very helpful. If we didn't have friction we would slip over every time we tried to walk.
- Rough surfaces cause greater friction than smooth surfaces.
- When the Egyptians were building the pyramids they would have to drag huge blocks of stone long distances. Then they discovered that if they put rollers under the stone blocks they could move them far more easily. The rollers reduced the friction.

Experiments you can do

Speed test toy cars.

What you need:

Two identical toy cars

Strong cardboard like an empty box

Something to raise one end of the cardboard (like some books)

Strip of carpet, some rough material like sacking or scrunched newspaper

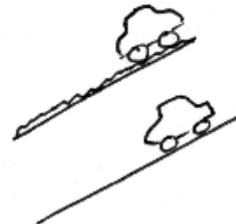
What you do:

Take the tape off the cardboard box and fold it down so it lies flat. Raise one end of the box, by supporting it with some books, to make a race slope.

Race both cars down the cardboard starting them both at the same time. They should both finish at the same time.

Then lay a strip of carpet, rough material, or newspaper (that has been tightly scrunched and then flattened) on the box. Race one car on the box and one on the rough surface. Which surface slows the car down?

Race your cars down the different surfaces to see which one is fastest. What other surfaces can you test?



Other Investigations

Try the soapy hand experiment. Use a screw top container (preferably one that has a smooth lid) Screw the lid open with a dry hand. It's pretty easy right? Now soap up your hand with warm soapy water, make sure it's really soapy and try the experiment again. Is it still easy to open?

Jokes

What doesn't see, or saw or swing but it can take you for a really fast ride? A slide.