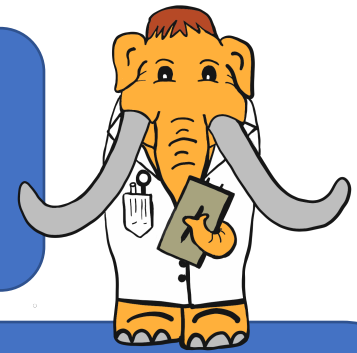


Science Saturday @ Home

Road Friction Test



Gathering Supplies:

Toy Cars

Flat moveable surface like a large piece of card board or cooking sheet

Cardboard Tubes

Scissors

Tape

Different textured material for tracks
Pencil and Paper or Printout Time Table

How To Steps:

1: Make sure you are using a surface that you can lift up on one end to create different angles for your ramp. Divide the surface into 3 tracks. You can cut the cardboard tubes in half and tape them down to make divided tracks.

2: Pick 2 to 3 different textured materials, like an old towel, fabric, some sheets of sand paper, or aluminum foil. Cut pieces to line 2 or 3 of your tracks. You can leave one track the same material as the ramp, uncovered.

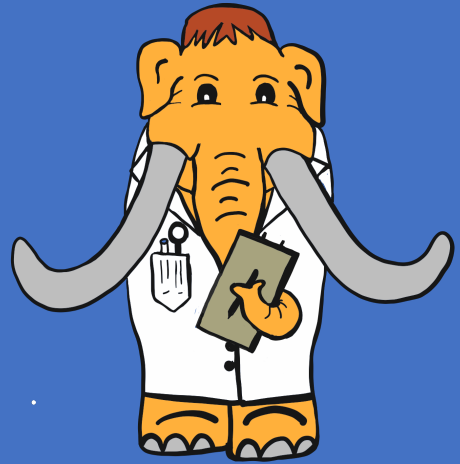
3. Put some books or boxes under one end of the ramp. You can try different angles to see what works the best.

4. Pick out 3 toy cars. Try each of the cars out on the track that is the smoothest just to make sure the cars work about the same.

5. Put one car into each track and let go at the same time. Which car gets to the bottom first? What material types create more friction, slowing the car down?

6. Run your Road Friction Test a few times to see what your results are. Record which car came in 1st, 2nd and 3rd on the table. Which surface makes for a faster road with less friction? Which makes for the slowest? Why do you think the friction is great on one road and car than another road?

Max's Road Friction Test!



Road Friction Test Table

Material Type	Car 1			Car 2			Car 3		
	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3	Run 1	Run 2	Run 3

List what type of material you used in the first column.
Then for each run mark which car came in 1st, 2nd and 3rd.

Did You Know?

Friction is a type of force. Force is anything that affects the way an object moves or the speed it travels. There are many different types of force that can change the speed an object is moving at. Friction is an opposing force that is created by two objects rubbing against each other. Opposing means that the force of the friction is pushing back on the object, slowing it down. Think about the breaks on your family's car. The breaks slow or stop your car by using friction. In this case it is the brake pads pressing on the wheels and slowing them down.

With your Road Friction Test you are looking to see how different textures and materials create different levels of friction between the car's tires and the road. Some materials increase friction and slow the car down, but others will decrease friction and help the car speed up.