



Do science from home: FRICTION!

Materials needed to do science

- DIY Ramp (block of wood, thick piece of cardboard, sheet pan, board game box, etc.)
- Assorted textures/materials to put on the ramp: sweater; towel; paper towel; wrapping paper; aluminum foil; pillowcase – whatever you find around the house!
- Toy car

1 Begin doing science by introducing our new concept

Friction is something that happens when two objects rub together. When some objects rub together, they tend to stick together a little bit. Have your child rub their hands together slowly and gently. What happens? It gets a little warm, but not very hot. Now have your child rub their hands together really fast and really hard. What happens? It gets hot! You can also hear a sound. This is because of friction. Different materials provide different levels of friction. Materials that are bumpy or rough make more friction, and materials that are smooth make less friction.



2 Let's do science by OBSERVING!

Put the first texture on the ramp. Have your child do science and observe the first texture on the ramp using his/her hands and eyes. Is the texture bumpy, rough or flat and smooth?

3 Let's do science by PREDICTING!

Each texture creates a different amount of friction, which can slow down toy cars or let them roll fast. Have your child do science and guess how far and fast the car will go rolling down the ramp on the first texture. Will it go far or not very far off of the ramp? Will it go fast or slow?

4 Let's do science by CHECKING our guesses

Have your child do science and test their predictions by letting the car roll down the ramp on the first texture. Did the car go fast or slow? Did it go far or not very far off the ramp? Why does your child think that happened?

5 OBSERVE, PREDICT, and CHECK with more objects

Let your child continue do science by switching out the textures on the ramp. As you introduce each new material, continue going through the steps of **observing**, **predicting** and **checking**!

