

FRICITION:

A FORCE THAT OPPOSES MOTION

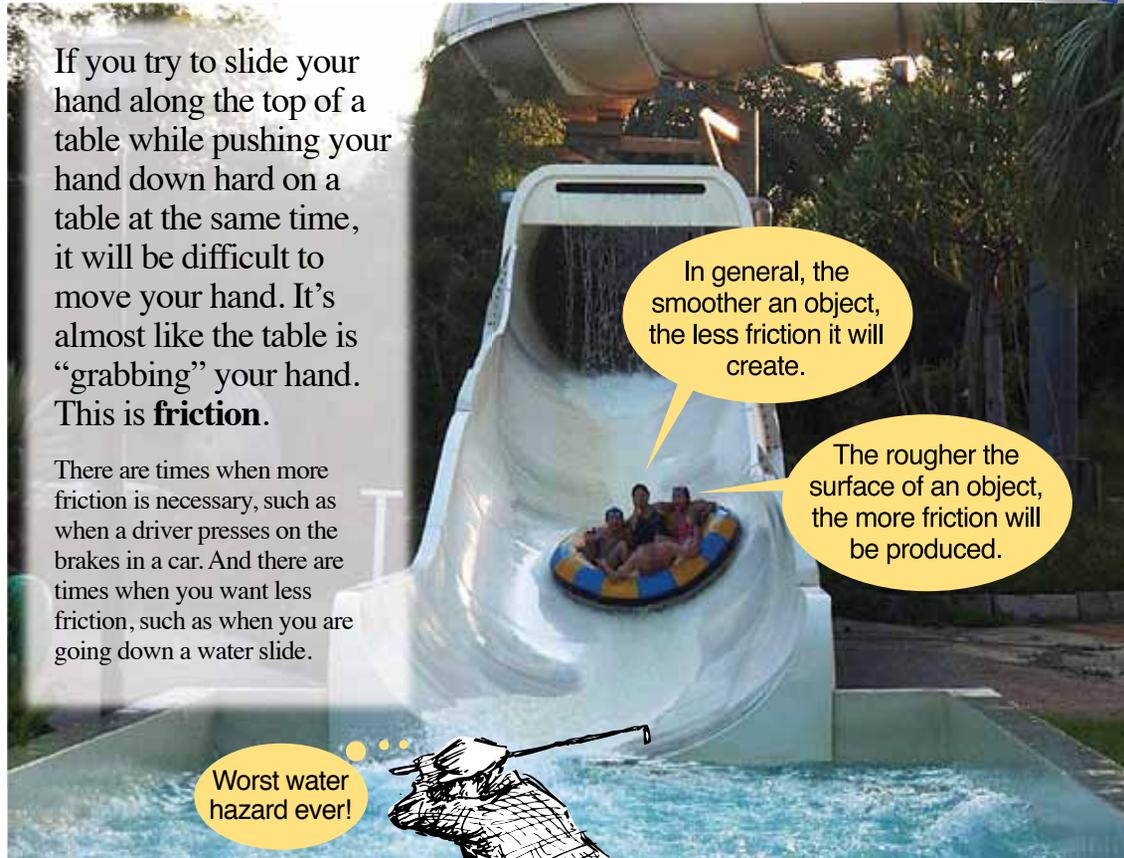


“A gem cannot be polished without friction nor a man perfected without trials.”

– Lucius Annaeus Seneca

If you try to slide your hand along the top of a table while pushing your hand down hard on a table at the same time, it will be difficult to move your hand. It’s almost like the table is “grabbing” your hand. This is **friction**.

There are times when more friction is necessary, such as when a driver presses on the brakes in a car. And there are times when you want less friction, such as when you are going down a water slide.



In general, the smoother an object, the less friction it will create.

The rougher the surface of an object, the more friction will be produced.

Worst water hazard ever!

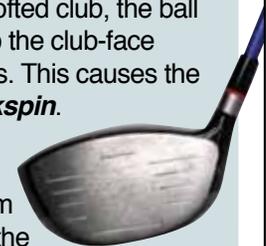
STOP RIGHT THERE!

Friction slows or stops moving things. A rolling ball eventually stops because friction between the ball and the ground brings it to a stop.

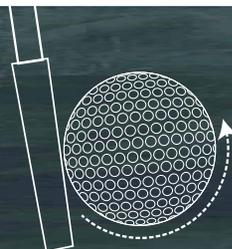


When a golf ball is struck accurately by a slanted, or lofted club, the ball will tend to roll up the club-face before it launches. This causes the ball to have **backspin**.

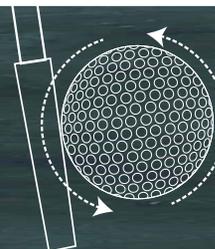
But if the ball is hit with the bottom of the club-face, the ball will get **topspin** causing the ball to go downward toward the ground.



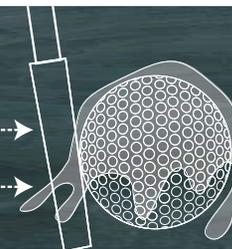
WHEN THE HEAD OF A GOLF CLUB HITS THE BALL, THE FORCE OF FRICTION GRABS THE BALL AND SPINS IT BACKWARDS.



THE ROUGHNESS ON THE FACE OF THE CLUB INCREASES FRICTION, CAUSING THE BALL TO SPIN MORE.



IF THE GOLF BALL WAS COVERED IN SLIPPERY SLIME, IT WOULDN'T SPIN VERY MUCH AT ALL.



John Spitzer
Managing Director
of Equipment Standards

SNEAK PEEK AT THE NEW EQUIPMENT

When scientists at the USGA Test Center test golf clubs and balls, it is important to make sure that tests don't contain mistakes. That is John Spitzer's job – to be sure the tests are

done correctly and the data collected is accurate.

“We have to be positive that none of the balls or clubs people use when they play golf give

them an unfair advantage,” says Spitzer.

“I love my job because I get to see all of the new golf balls and clubs before anyone else!”