Fiction Facts (Teacher)

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1. Match each of the following terms on the left to the most appropriate definition on the right.

__D__friction	A. amount of matter in an object
__A__ mass	B. gravitational force on an object
__C__ μ	C. ratio of the frictional force to the normal force
__E__ normal force	D. force that acts opposite to motion or attempted motion of an object
_B___ weight	E. perpendicular force exerted by a surface

2. Explain the difference between static friction and kinetic friction. Give a numerical example.

Static friction is the resistive force between two surfaces, which are not moving relative to one another. Static friction increases as the force attempting to move the surfaces increases -- up to a maximum "limiting static friction" after which the surface will start sliding. Kinetic friction is the force of friction acting between two surfaces moving relative to one another.

3. A box is being pushed westward across a surface. What is the direction of the frictional force?

A. West B. East C. up D. down

4. A magnet is sliding down a fridge door. What is the direction of the frictional force acting on the magnet?

A. up B. down C. into the fridge door D. out of the fridge door

5. Place the following in order from lowest to highest coefficient of kinetic friction.

Steel on steel, dry	4.
Rubber on ice	2.
Aluminum on steel	5.
Teflon on Teflon	3.
Rubber on concrete, wet	6.
Cartilage on synovial fluid	1.

6. Why do tires have treads?

If a film of water develops between car tires and the road, friction is reduced the car may not start, stop, or change direction. Tires have large and small grooves to disperse the water, maintaining friction between the tire and the road.