FRICTION

5.2e A machine can be made more efficient by reducing friction. Some common ways of reducing friction include lubricating or waxing surfaces.
5.2d Friction is a force that opposes motion

Topic: Energy- Friction

Goal: I will be able to understand the forces acting upon my rollercoaster

HW: MOSA MACK Packet & Take home quiz

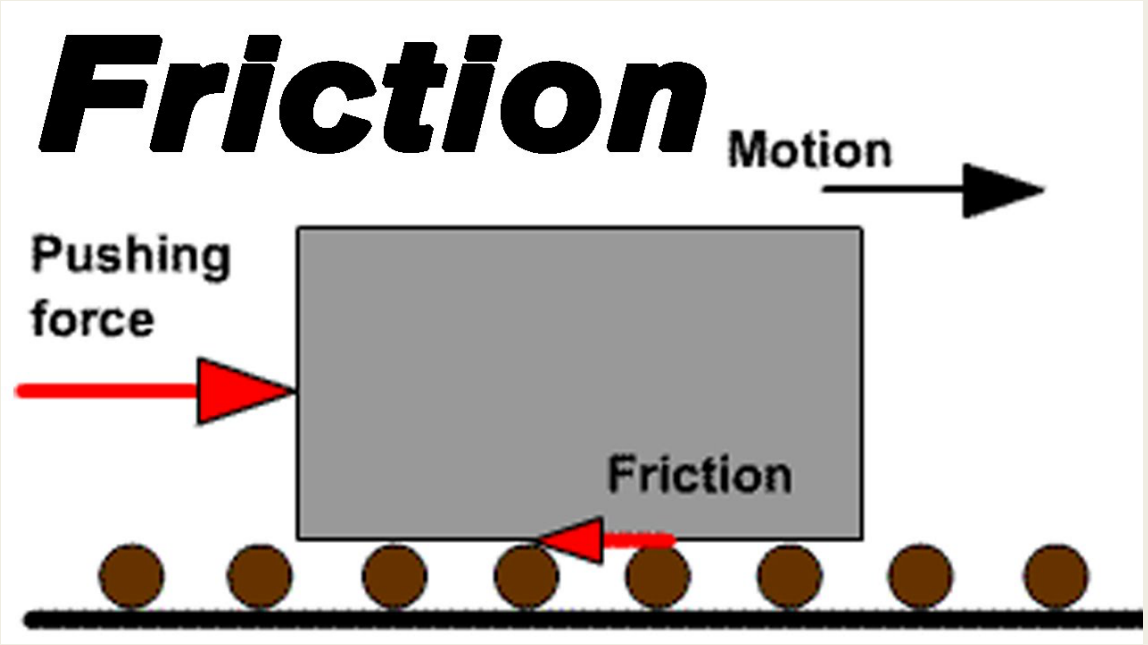
Do now: Pick one item that uses or gives off energy and explain how it shows conservation of energy

Video Questions

1) What happens when you apply a force to a heavier object?
2) What slows forces down?
3) What is friction?
4) Why does the soccer ball slow down?
5) What if you kick a ball on ice?
6) Why do water and ice have less friction?

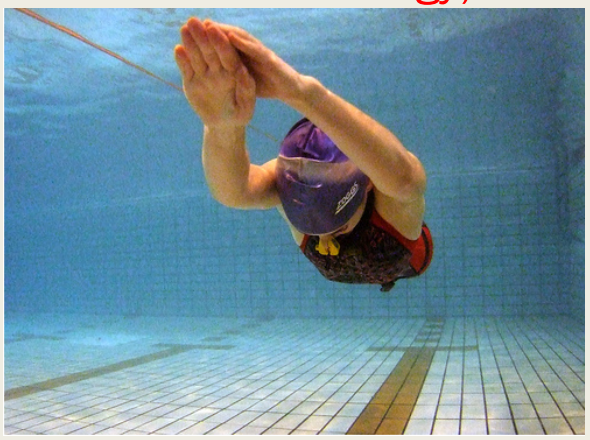
What is friction?

- Friction: A force that opposes motion (resists motion)
- Example) Soccer ball on the ground, ball flying through the air



How can we reduce friction?

- What happens when you drive a car on an icy street?
- Friction can be reduced by
  - *Smoother surfaces*
  - *Adding lubrication (oil) or wax to a surface*
    - This makes the surface smoother
    - Makes machines more efficient (work better & use less energy)



1. What is NOT a way to reduce the amount of friction when sliding a box up a ramp? (5.2e)

(a) Cover the ramp with a smoother surface (b) Cover the ramp with a rougher surface

(c) Lubricate the ramp

2. The wheels and gears of a machine are greased in order to decrease ___. (PS5.2e)

(a) potential energy (b) output

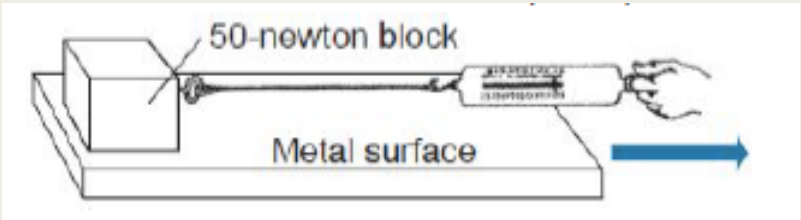
(c) efficiency (d) friction

3. Friction acts on a bicycle to help make turns. Where does the friction occur that causes this? (PS5.2d)

(a) in the seat (b) in the brakes

(c) in the chain (d) between the tires and the road

4. How can the force of friction be decreased so that less effort is needed to move the block? (PS5.2d)



(a)place sandpaper between the block & the metal (b) place oil between the block & the metal

(c) change the metal surface to rubber (d) change the metal surface to wood