

# Notes Combining Forces

Day 1

10/24/14

# Hot Sync

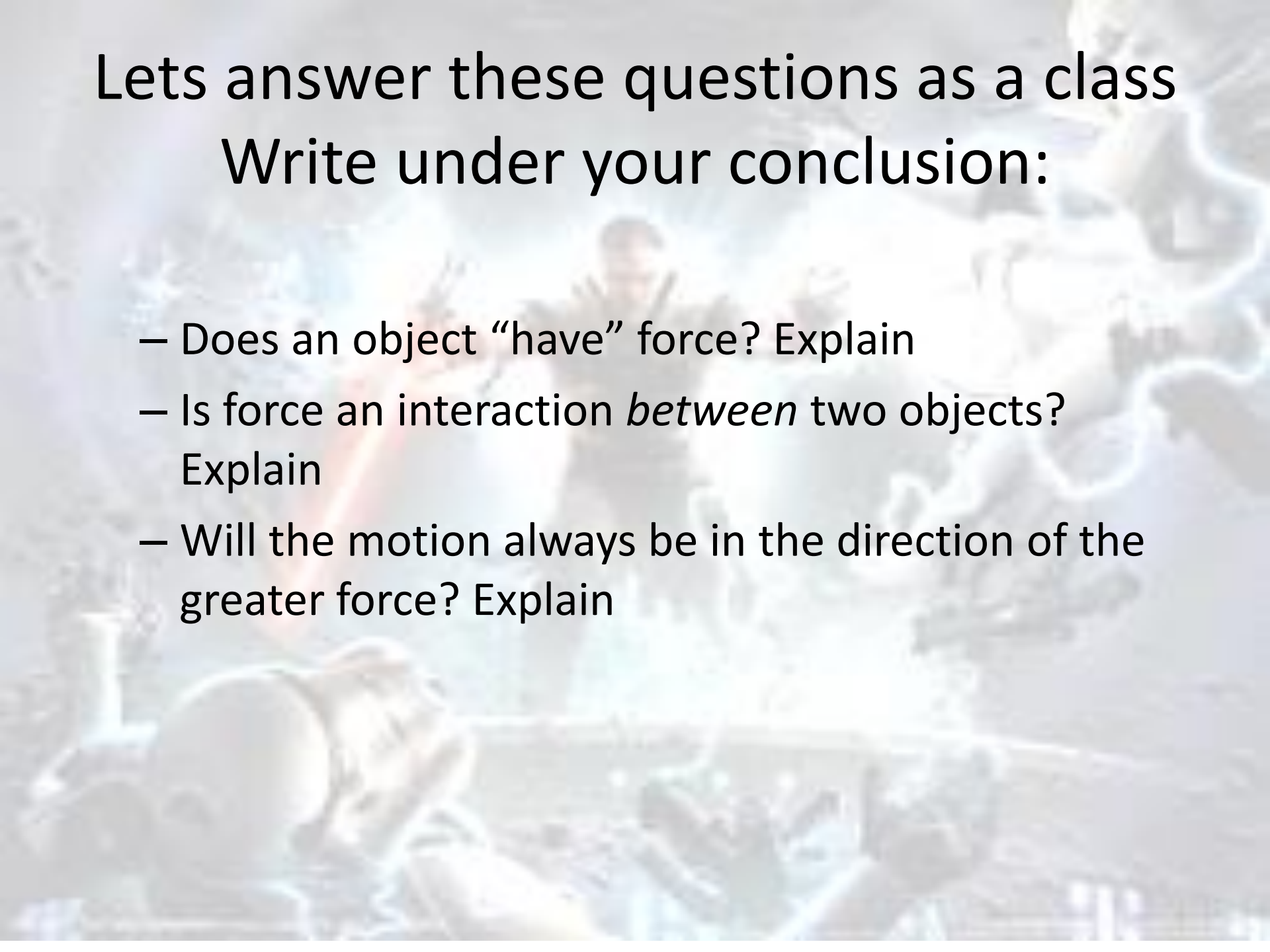
- Think about the video of all the accidents.
  - Why did the two kids on the ice fall? What force was acting on them? Would they have fallen the same on regular land? What is the difference?
  - Why did little kid on the slide fall when the second kid hit her? Who exerted the greater force? The kid who fell or the kid who hit the other?
  - Recall when the men were pushing the BIG branch back and let go sending the guy flying...why did this happen?

# Write on the back of your worksheet:

## Conclusion:

- In conducting this experiment, we found that when two opposing forces on an object are equal, the object will \_\_\_\_\_ when two opposing forces on an object are unequal, the object will \_\_\_\_\_.

HINT: The blanks should be filled with your description of the motion of the object; if it moves, which direction does it move?

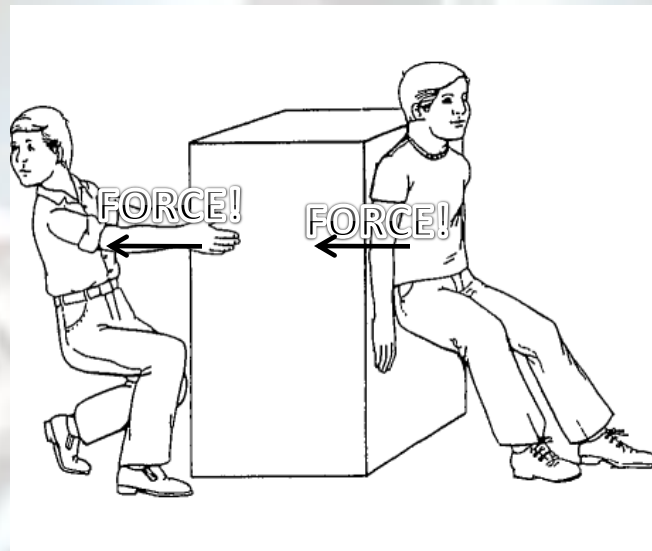


Lets answer these questions as a class  
Write under your conclusion:

- Does an object “have” force? Explain
- Is force an interaction *between* two objects? Explain
- Will the motion always be in the direction of the greater force? Explain

# FORCE

- When more than one force acts on an object, the combined effect is caused by the sum of all applied forces.
- A push or a pull on an object is a **force**.



# Contact and Noncontact Forces

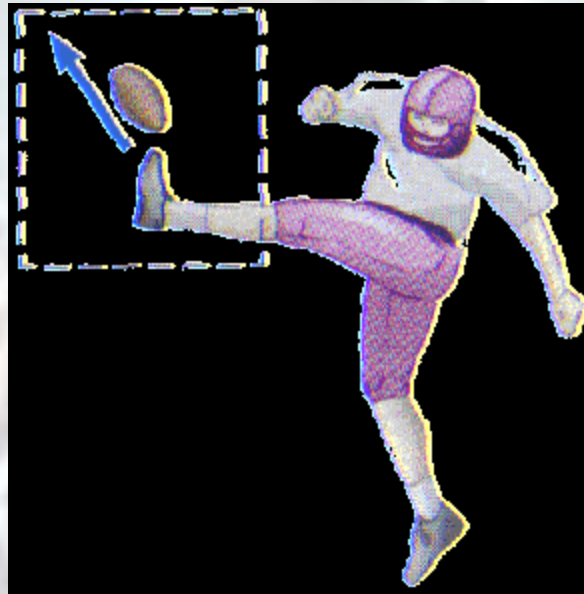
- A **contact force** is exerted only when two objects are touching.



- A **noncontact force** is exerted when two objects are not touching.
- Magnets exert a noncontact force on each other.

# Force is a Vector

- Vectors have magnitude and direction.
- Force has a direction and a magnitude.
- Force is measured in Newtons.



# Combining Forces

- When more than one force acts on an object, the forces combine.
- The combination of all the forces acting on an object is called the **net force**.

