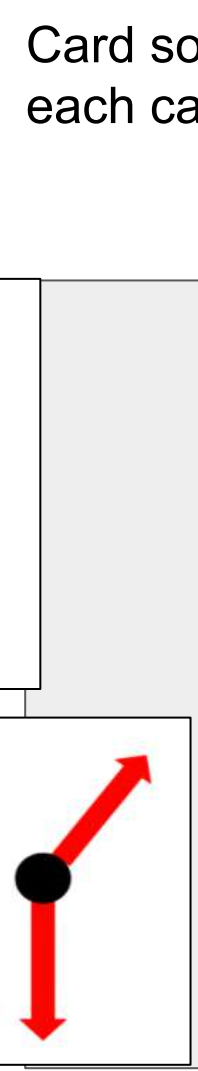
Card sort! Sort these cards into 2 categories, and then give each category a title that represents those cards

October



Big Idea - There are 2 broad ways to categorize Net Force

$$\Sigma F = 0 \text{ N} \qquad \Sigma F \neq 0 \text{ N}$$

Do these 2 situations tell us something about how the object/system is moving?

~~Object was not moving~~
~~At rest~~

~~Object was moving~~

Guiding questions

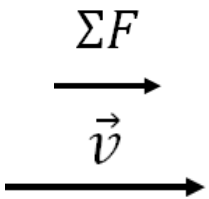
1. How does a system behave (specifically move) when the net force is 0 N?

$$\Sigma F = 0 \text{ N}$$

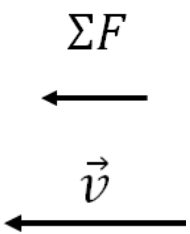
1. How does a system behave (specifically move) when there is a net force?

$$\Sigma F \neq 0 \text{ N} \qquad \Sigma F = 17 \text{ N}$$

1. Is there a relationship between the direction of the net force and the direction of motion (velocity)? If not, does another relationship exist?



Always true??



Today's Objectives….

Today I will…

- Explore how forces affect the motion of an object in an Online Simulation

So that I can…

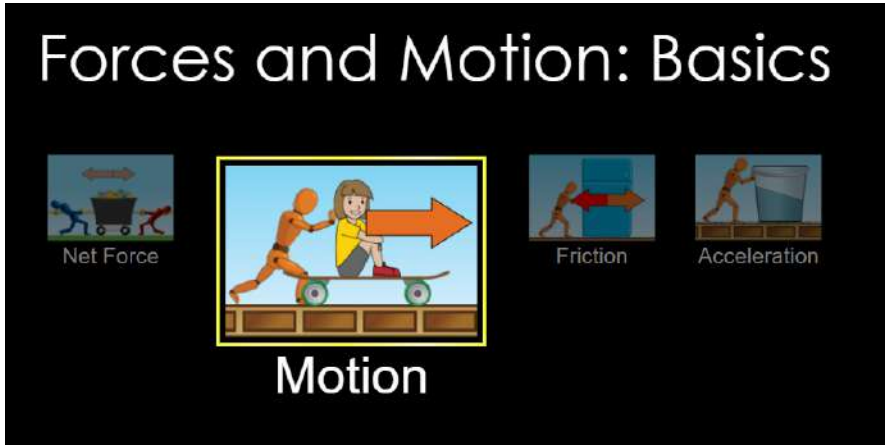
- Collect evidence on how a Net Force acting on a system affects the behavior of a system.

I'll know I've got it when…

- I can explain, supported by evidence, how affect the motion of an object

$\Sigma F = 0\ \mathrm{N}$ $\Sigma F \neq 0\ \mathrm{N}$

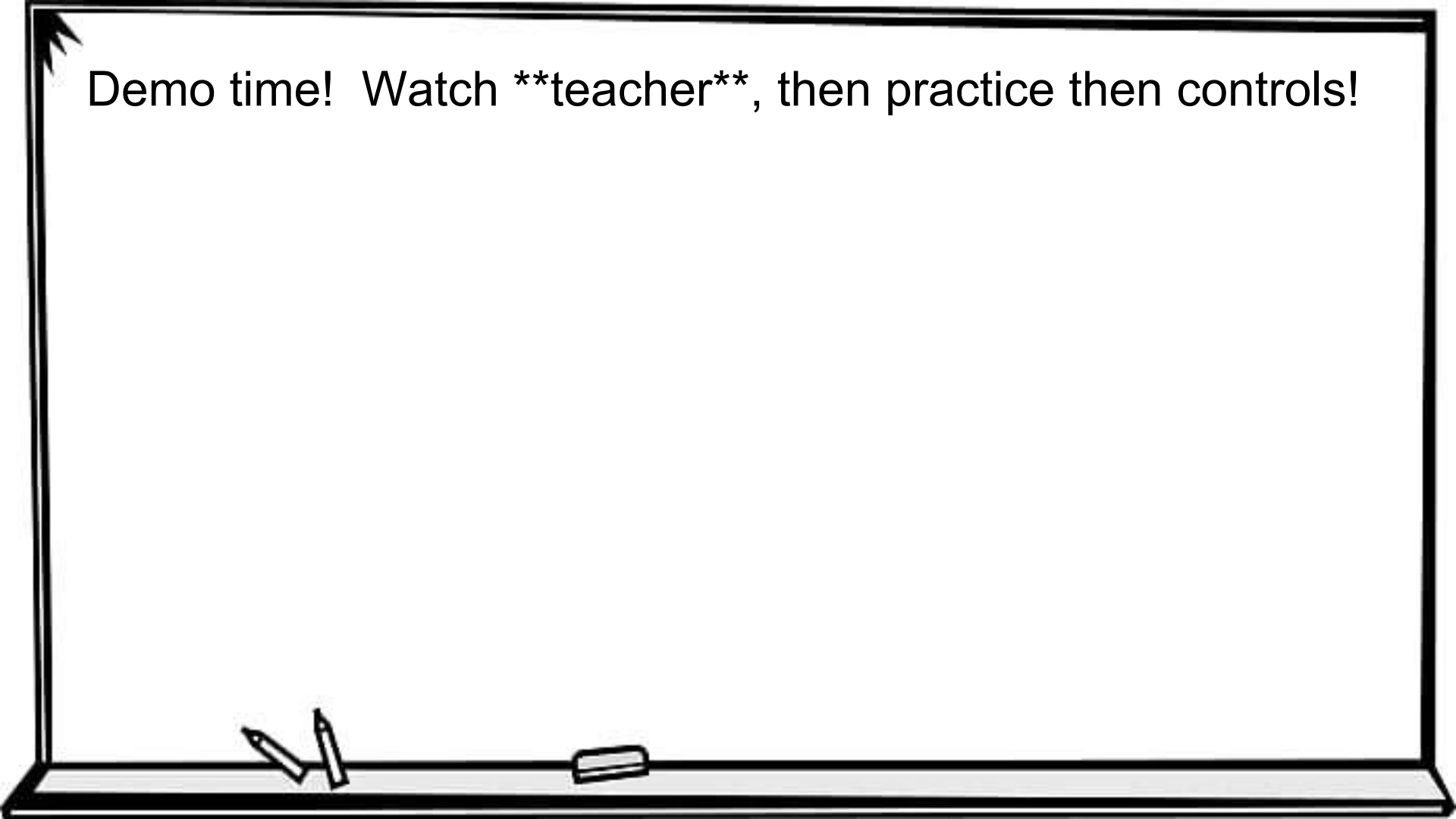
Click on this link to access the interactive:



Choose the “Motion” Option

Click these boxes!

Demo time! Watch **teacher**, then practice then controls!



Screen Break! Take 3 minutes and leave your computer!

Breakout groups - Expectations

- Everyone should have the materials open for themselves. Everyone should be contributing to the assigned task on the slidedeck.
- Work on the slide that your group has been assigned. Use the color bar at the bottom to ask for help!
- Turn on your microphone and talk! If it is not working, type in the chat.
    - Turn on your camera if you are comfortable - be aware of how you present yourself and what is in the background


Your Task:

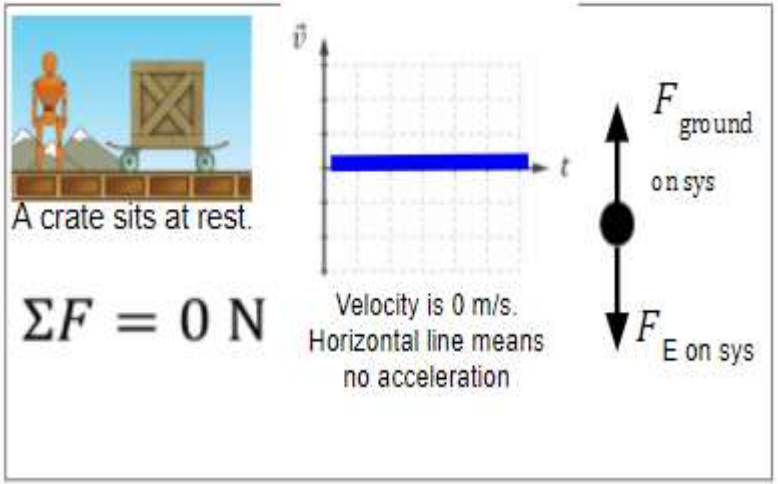
- Work in small breakout groups to explore different situations.
- Set up at least 4 **unique** situations in the simulation that allow you to answer our guiding questions.
- Develop models that will help you determine how these 2 conditions affect the motion of the system.

$$\Sigma F = 0 \text{ N}$$

$$\Sigma F \neq 0 \text{ N}$$

Deliverable: A slide filled with MODELS (not sentences) that will allow you to support answers to our Guiding Questions. You can add words, just no full sentences!

For homework, you will answer the questions in a FlipGrid video, using your slide as support!



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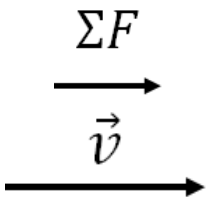

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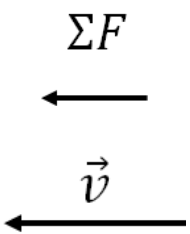
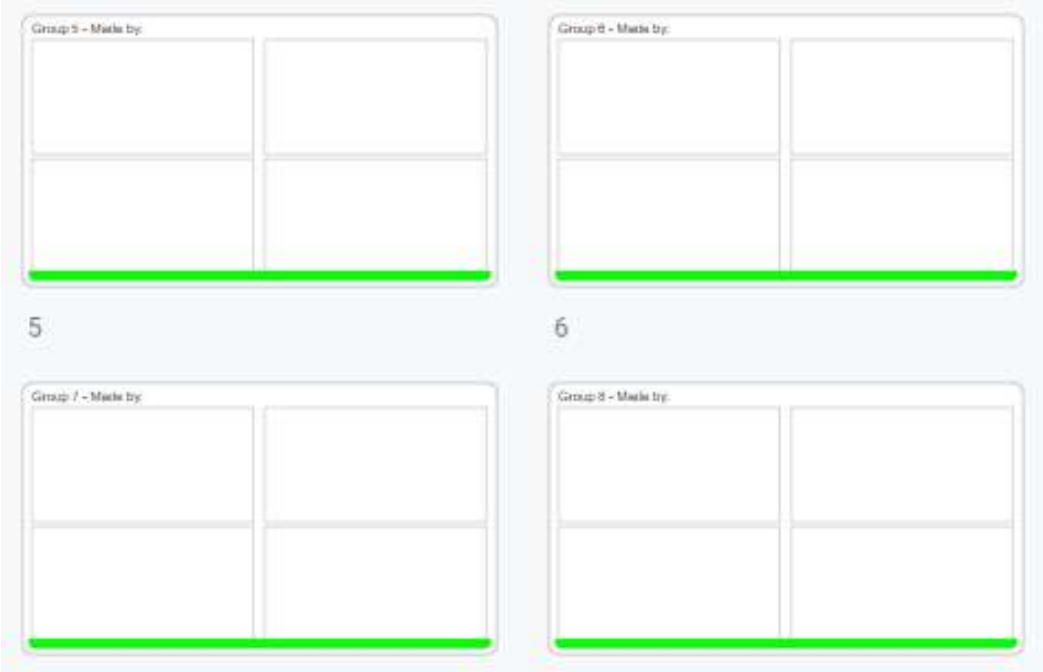


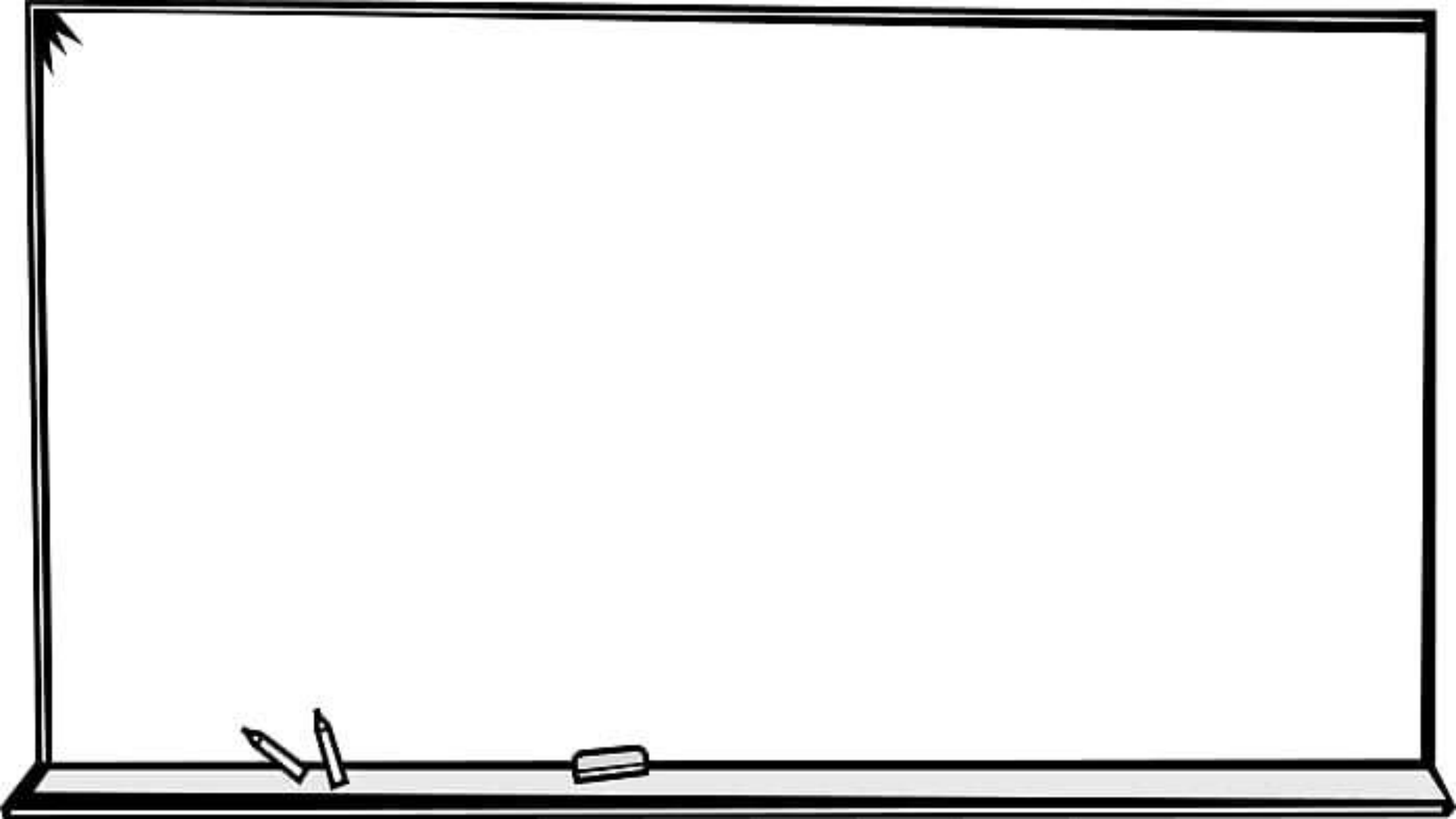
Remember - I'll be watching your progress! Use the bar at the bottom to indicate you need help!

You have until 2:45 pm to complete the task!

Groups 1-4 work in this document

Groups 5-8 work in this document





Flipgrid

Oct 15, 2020

October 15th, Forces and Motion

9 responses • 4 views • 0 comments • 0 hours of engagement

Answer the following questions in a FlipGrid video. Be sure to share your screen and show your slide from class today to support your answers.

How does a system behave when there is a net force acting on the system?

How does a system behave when the net force acting on the system is 0 N? Is there a relationship between the direction of the net force and the direction of motion (velocity)? - If not, does another relationship exist?