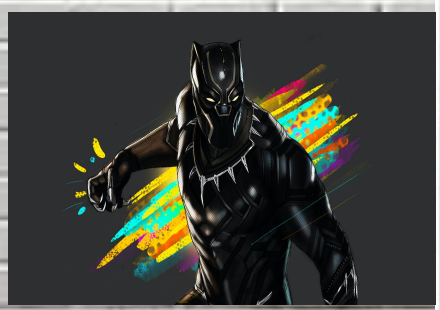
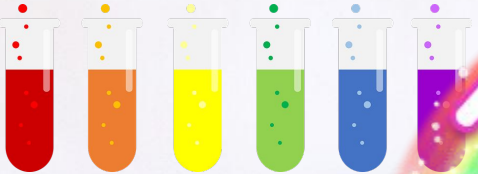


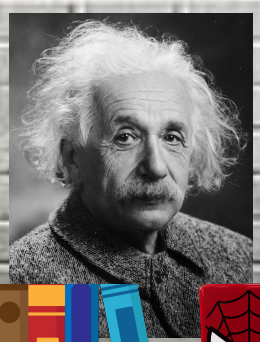
Sept. 17, 2020

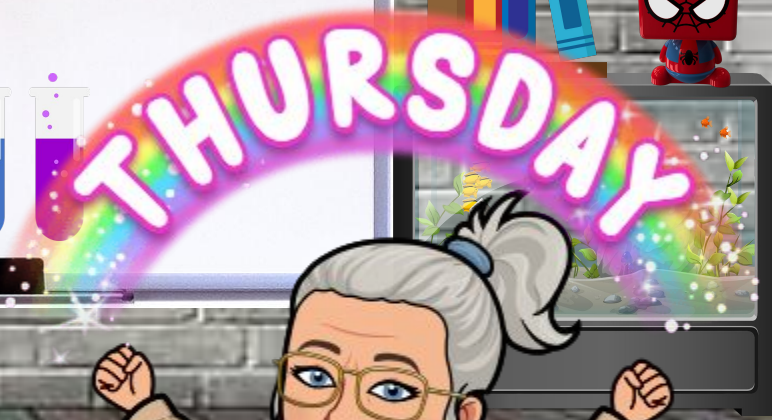
Yá’át’ééh!

sha'ałchíní

Welcome to science class!







ZOOM MEETING EXPECTATIONS

MICROPHONE

When you enter the virtual meeting, mute yourself (if you aren't already). You can unmute yourself when it is your turn to speak.

ETIQUETTE

Always be polite and respectful, pay attention to the speaker, and use the digital platform and its features appropriately.

CONTRIBUTIONS

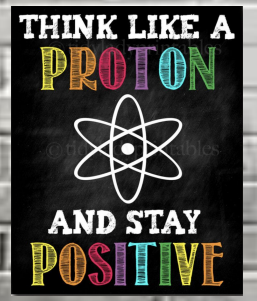
When you have something to contribute to the discussion, type it in the chat box OR use the "raise hand" button for the teacher to give you permission to unmute yourself so that you can speak.

SOUND

If you can, wear headphones so you can hear better. Try your best to find a quiet place, free from distractions.

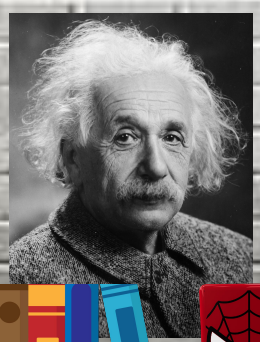
QUESTIONS

When you have a question, type it in the chat box OR use the "raise hand" button so that you can unmute and ask your question.



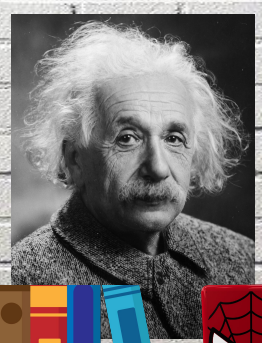
Today's Agenda

- Class discussion-Action and Reaction
- Vocabulary
- **In-class assignment**



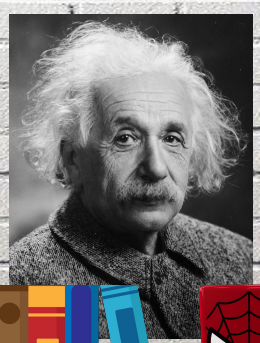
Student Friendly Objective:

I can describe forces as interactions between bodies. (Newton's 3rd Law of Motion)



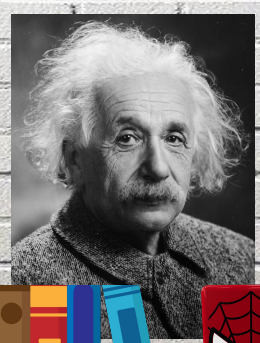
Essential Questions:

1. What are action and reaction forces? What are some examples of action and reaction forces?



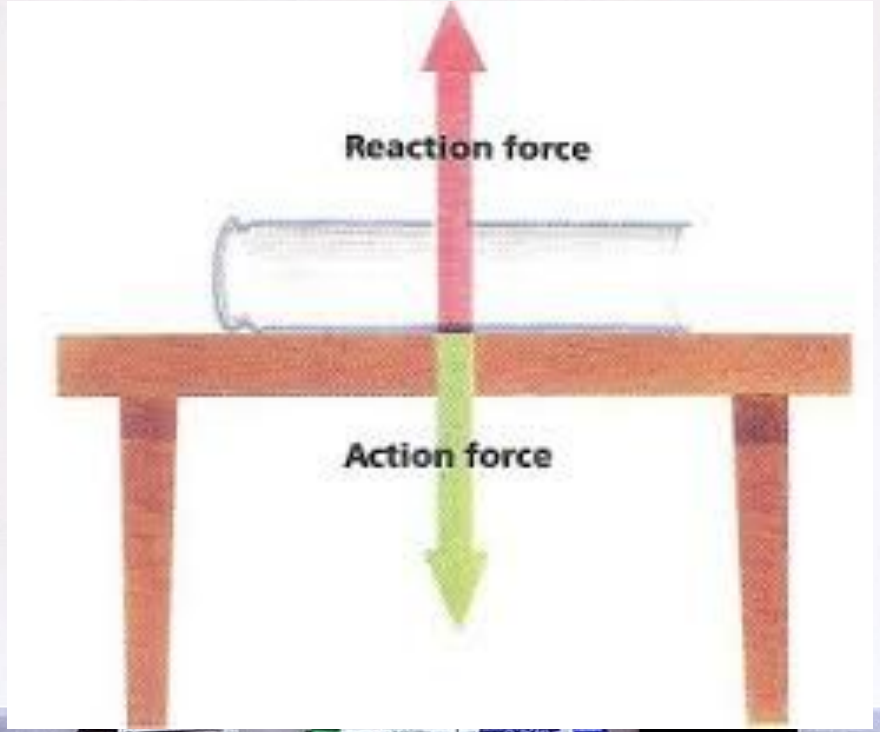
Essential Questions:

2. Why don't action and reaction forces cancel out like balanced forces do? Since action/reaction forces do not cancel out, how does this affect the motion of an object according to Newton's 3rd Law?



Action force **is** force acting in one direction.

Reaction force **is** force acting **in the** opposite direction



Class Discussion

For each of the following interactions, identify action and reaction forces (action-reaction pairs):

1.)

Action Force	Reaction Force
What exerts it?	What exerts it?

2.)

Action Force	Reaction Force
What exerts it?	What exerts it?

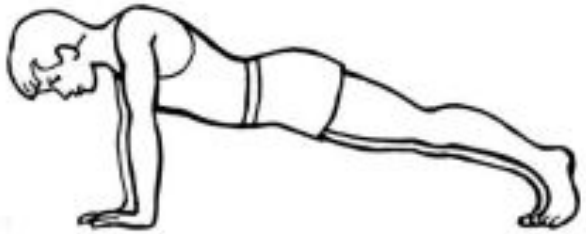
3.)

Action Force	Reaction Force
What exerts it?	What exerts it?

4.)

Action Force	Reaction Force
What exerts it?	What exerts it?

5.)

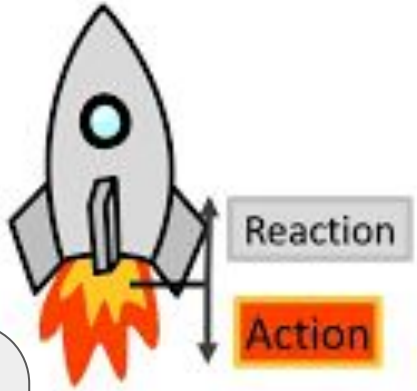


Action Force	Reaction Force
What exerts it?	What exerts it?

Weekly Vocabulary

- force pair
- momentum
- law of conservation of Momentum
- Newton's third law of motion

Force pair: the forces two object apply to each other

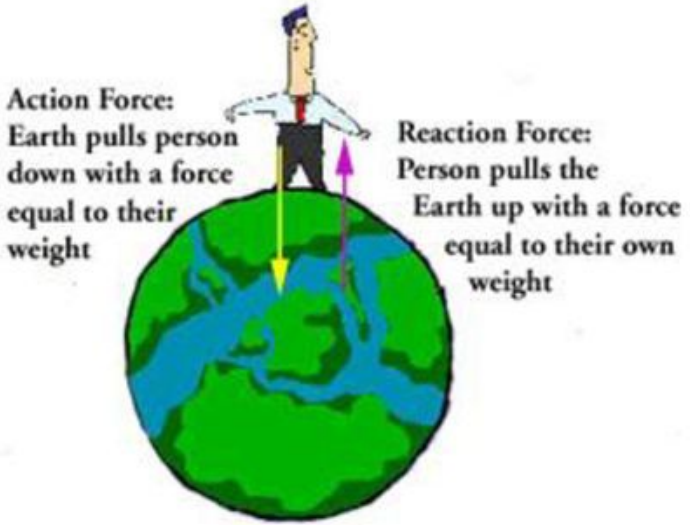


Forces always **come in pairs** - known as "action-reaction **force pairs.**"

Force pair

- If one of the pairs is much more MASSIVE you will only see the LESS MASSIVE object MOVE

- Example – When you push down on the Earth, you won't see the Earth move, only you jumping in the air



momentum: a measure of how hard it is to stop a moving object

Which has more momentum?

Which has more momentum?

Can we tell…or do we need more information ??????

Which has more momentum?

1. A sedan or truck moving at the same velocity

2. Two bees of same size moving at same velocity
3. Two bees of same size moving at different velocities

2. The tall guy or the short guy if they are traveling at the same velocity

law of conservation of momentum: the law that states that the total momentum of a group of objects stays the same unless outside forces act on the object.

*Outside forces include friction.

Newton's Third Law of Motion:

For every action...

The "Action Reaction Law"

Newton's Third Law of Motion: the law that states when one object exerts a force on a second object, the second object exerts a force of the same size but in the opposite direction on the first object.

Today's Assignment

In Class- Kahoot!

We will review the three laws of motion.