

# THERMAL ENERGY UNIT

Mar. 10, 2020

Day 3/119



**At the end of today's lesson you will be able to determine;**

- Why do things change temperature? What is happening when the air in the school gets warmer?

## **Classwork-**

- Thermal Energy 2.2/2.3
- Students begin in section 2.2 by continuing to investigate why molecules change speed by reading "How Air Conditioners Make Cities Hotter," an engaging text that builds on students' emerging knowledge of kinetic energy to explain how air conditioners can actually make cities hotter during the summertime. The article provides an initial opportunity for students to consider how changes in the kinetic energy of molecules actually happen in the context of real-world phenomena. The purpose of this lesson is for students to become familiar with "How Air Conditioners Make Cities Hotter" so that they are prepared to use evidence from the text to support a claim when they revisit it during the next lesson. Students then begin section 2.3 by gathering evidence from the Sim and the article "How Air Conditioners Make Cities Hotter" in order to choose between two claims about why molecules change speed. Using the Sim, students observe that when two things at different temperatures are placed in contact, kinetic energy transfers from the faster molecules of the hotter thing to the slower molecules of the colder thing, which results in a corresponding change in the molecules' speed. This happens through a series of collisions between the faster molecules and the slower molecules, which moves energy from one part of the system to the other. Students then reread a passage from "How Air Conditioners Make Cities Hotter" that reinforces the fact that energy is neither created nor destroyed. Finally, students revisit the two claims from the beginning of the lesson and choose between them again. The purpose of this lesson is for students to understand that molecules speed up or slow down because of the transfer of kinetic energy through collisions..

## **Homework-**

- Finish up all of the TE 2.2/2.3 activities.
- Review the new vocabulary terms we will use in this unit.
- Thermal Energy Quizlet.