7-PS3-5. Construct, use, and present arguments to support the claim that when the kinetic energy of an object changes, energy is transferred to or from the object.

6th - 8th Grade Workshop Model Science Lesson Example

Mini-Lesson: Discussion

-I had a headache and took some Alka Seltzer this morning, does anyone know what that is?
-Who can remind us of what KE is?
-What are some ways in which we can measure KE?
-We have discussed physical and chemical changes. What's the difference?

Group Work:

Everyone: Discuss and form a hypothesis. If we drop an alka seltzer tab into water, what type of change do we expect to happen? Do we expect a temperature change - increase or decrease?
Person 1: Get a cup, a graduate, a beaker, a thermometer, and an alka seltzer tab.
Person 2: Measure and pour 25mL of water into the cup.
Person 3: Measure the temperature of the water. Record it. Leave the
Person 4: Drop in the alka seltzer tab.
Everyone: Observe as the tab is dropped into the water. Record the new temperature. Calculate the temperature change.

Individual Observations:

Expectations	Initial Temp.	Final Temp.	Temperature Change	Qualitative Observations	Explanations - Why do you think you obtained these results?
			(Final - Initial = Change)		

Sharing: Discussion

What did you observe when you added the alka seltzer to the water?
What kind of change was this?

How did the temperature change?
What does this mean was happening at the molecular level?

Some would argue that chemical changes that produce bubbles always release heat?
What would you say?