

Lesson Objectives:

Given a lab involving the both exothermic and endothermic reactions and a discussion on heat transfer students will write a paragraph describing the phenomenon of a cold pack using the concepts of endothermic and exothermic.

Ideas for revision:

Use cold pack for demo: the kind you break and it becomes cold - have students write before and after observations

Quick write: describe what's happening in this situation with regards to heat using what you know about systems and surroundings. Things to keep in mind: that heat is simply molecular motion, what it means that something is hot or cold

Meet in lab groups and discuss what they think is happening. Pick at least one explanation to share with class as a whole.

Create class list of ideas.

Q and A:

What does it mean when something is cold? How does something become cold - in terms of molecular motion? Is coldness added to the system or is heat taken away??

Tomorrow in lab you are going to get 5 chemicals for your lab. Your job today is as a class to design a lab to use these chemicals to determine how temperature/heat/cold is involved in chemical reactions. We know that temperatures affect the rate of a reaction (kinetics) but do reactions create change in temperatures themselves. If so how?

Any ideas?

Mix A with B, A with C, etc. etc.

Does order matter????? - does the same thing happen if you add A to B and if you add B to A

What happens if you mix A with B with C???

(Any more than this is probably really confusing.)