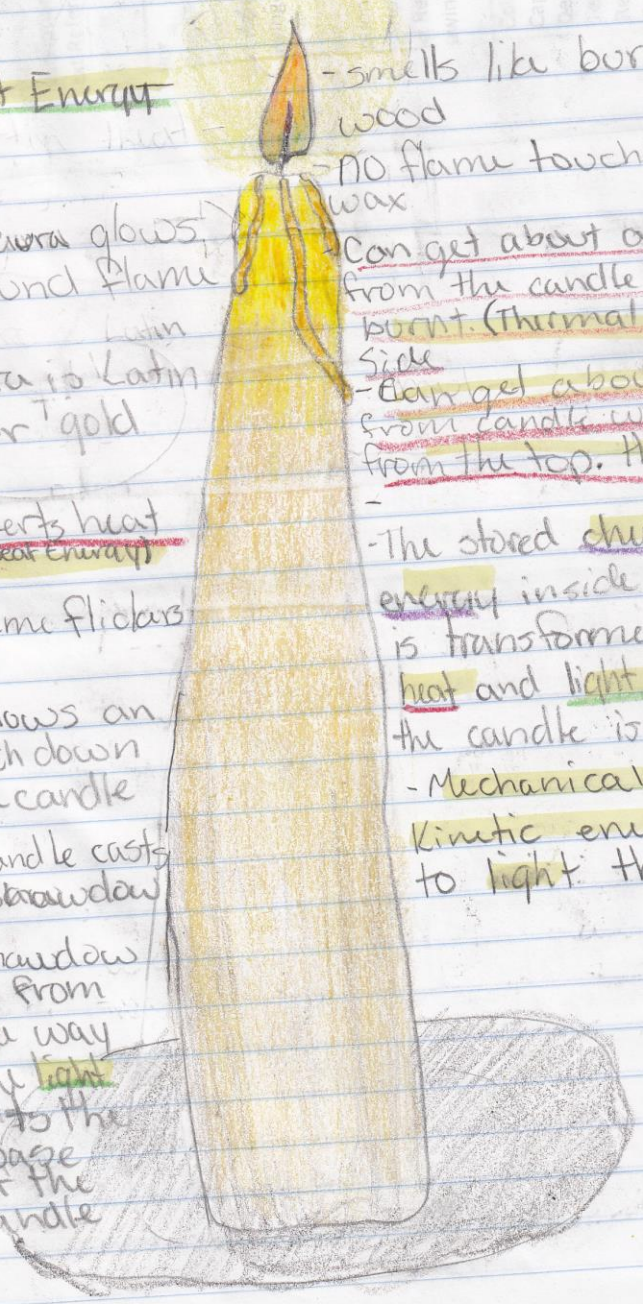
Candle Lab: Part 2 September 26, 2013

LT Identify the energy transformations that occur when a candle is burning.



Light Energy

- An aura glows around flame
- Aura is Latin for "gold"
- Exerts heat (Heat Energy)
- Flame flickers
- Glows an inch down the candle
- Candle casts a shadow
- Shadow is from the way the light hits the base of the candle

- smells like burning wood
- no flame touching actual wax
- Can get about a half em away from the candle before getting burnt. (Thermal Energy) from side
- Can get about 4 in away from candle when coming from the top. Heat rises
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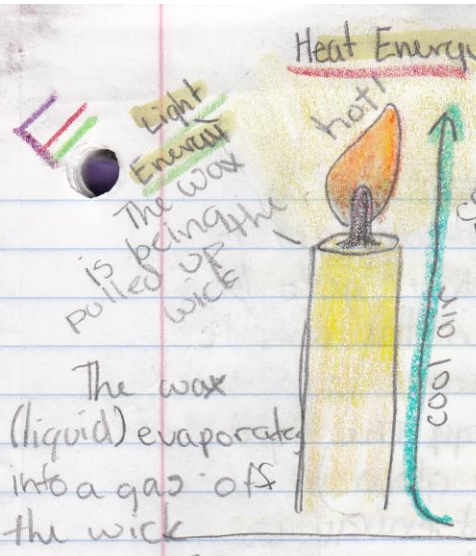
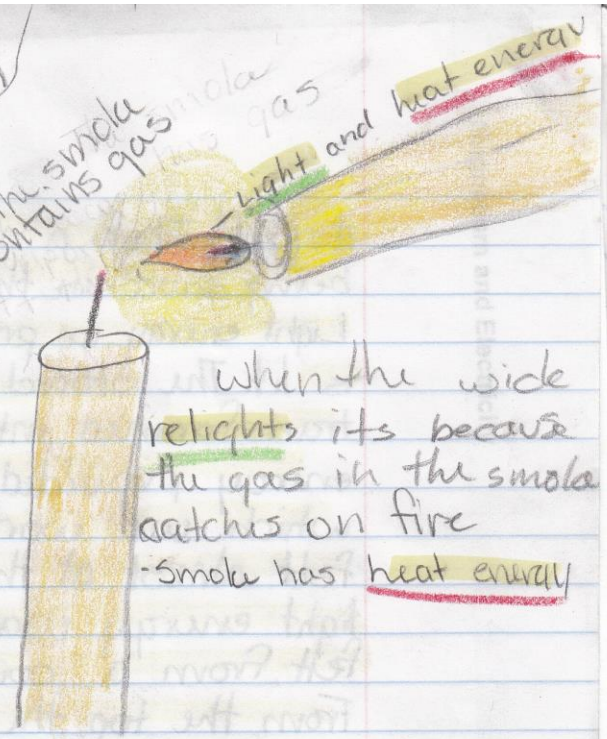
- The stored chemical energy inside the candle is transformed into heat and light energy when the candle is lit.
- Mechanical energy and Kinetic energy were used to light the candle



The reason you can get closer the the side of the flame is because cool air is rising up the side of the candle keeping it firm and heat rises.



when the wick relights its because the gas in the smoke catches on fire
-Smoke has heat energy

There is chemical energy in the candle, and when it is lit heat and light energy are produced.

Lighter -

darker -

-This is a profile of the candle. It is a cut away of the flame

Key
Heat Energy -
Light Energy -
Chemical Energy -

Summary Paragraph

In this lab we observed the different energy transformations that occur when a candle is burning. The three main energies observed were heat energy, light energy, and chemical energy. Each of these were noticed at different times when lighting and burning the candle. The first form of energy is chemical. It is found inside the candle before

it is lit. It is a stored energy because it is being saved in the candle until it gets lit. Light energy is produced when the candle is lit. The stored chemical energy is transformed into light energy. The light energy provided a flickering glow in which we worked by. Heat energy is felt almost at the same time as light energy was seen. Heat energy was felt from a couple of different angles. From the top the closest you could get to the flame was about four inches. This is because heat rises. But, from the side you could get about a centimeter away. This is because cool air is rising up the side of the candle and because the heat of the flame was traveling upwards. Other forms of energys seen were mechanical and kinetic energy. These were both seen when the candles were passed around to light each other. They were also seen when we wrote down observations or had to test where the heat went and how close we could get to the flame. All of these energy types could be seen or felt when observing a burning candle.