

### Lesson 3: Energy Transformations

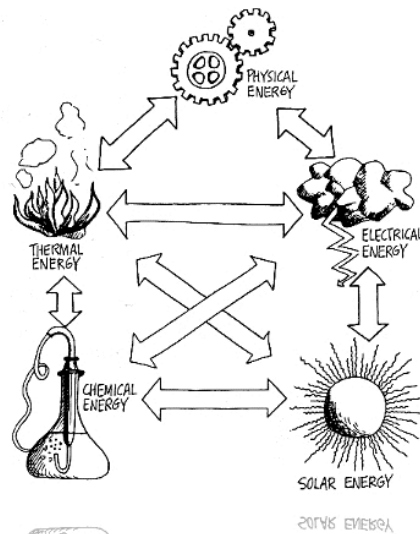
Energy can be transformed from one form to another, which makes things in our world happen. When something or somebody moves or jumps or falls or explodes or breathes or thinks or dances or does anything, it's because energy is being transformed.

**Energy transformations** are when energy changes from one form of energy to another. For example, when you eat a banana, your body transforms chemical energy (stored in the banana) to thermal energy to keep your body warm.

**Thermal conductivity** is the ability to transfer heat.

There are two ways that energy can be transferred - by work or by heat flow.

Energy is always transferred from high to low.



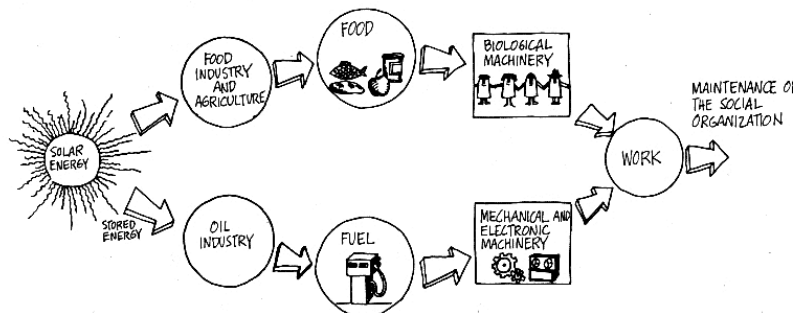
### Thermal Energy to Chemical Energy

The sun's thermal energy is changed by photosynthesis into chemical energy stored in plant cells.

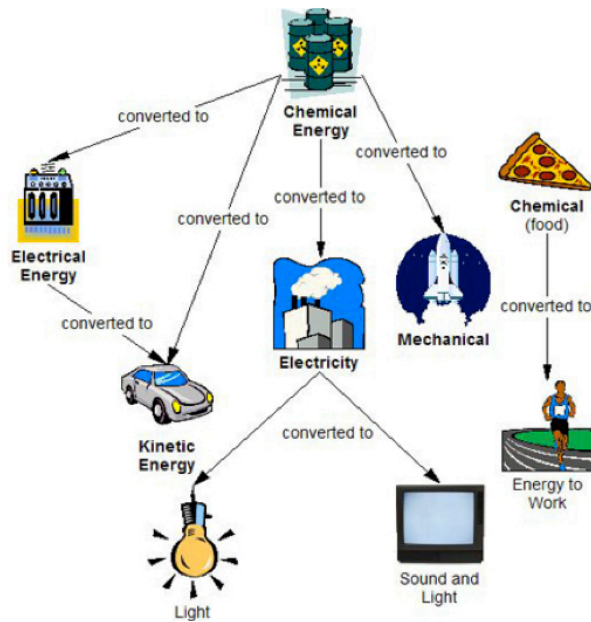
### Chemical Energy to Other Energy

A human eats a plant. The **chemical energy** stored in the plant (or animal) cells is moved into the cells of the human's body.

Or a human harvests that fossilized plant. The energy is transformed into electrical energy via **fossil fuels**.



**Action Item:**



Choose one form of energy and draw a concept map showing how it might be transferred to other forms of energy. Use examples.

You should have at least 4 examples of transformations.

**My Concept Map:**