

Name: \_\_\_\_\_

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## Energy in Food Chains

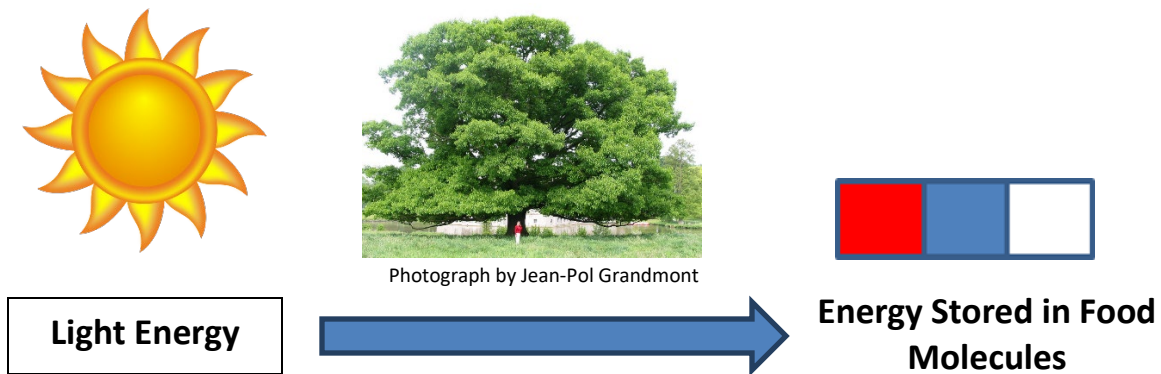
Read about scientists' ideas on energy in food chains. Then draw and label a simple diagram in your science notebooks showing how energy flows into and out of a food chain.

### Scientists' Ideas about Energy in Food Chains

Just like matter, energy never completely disappears. It just changes forms. **But in food chains, energy can't be recycled.**

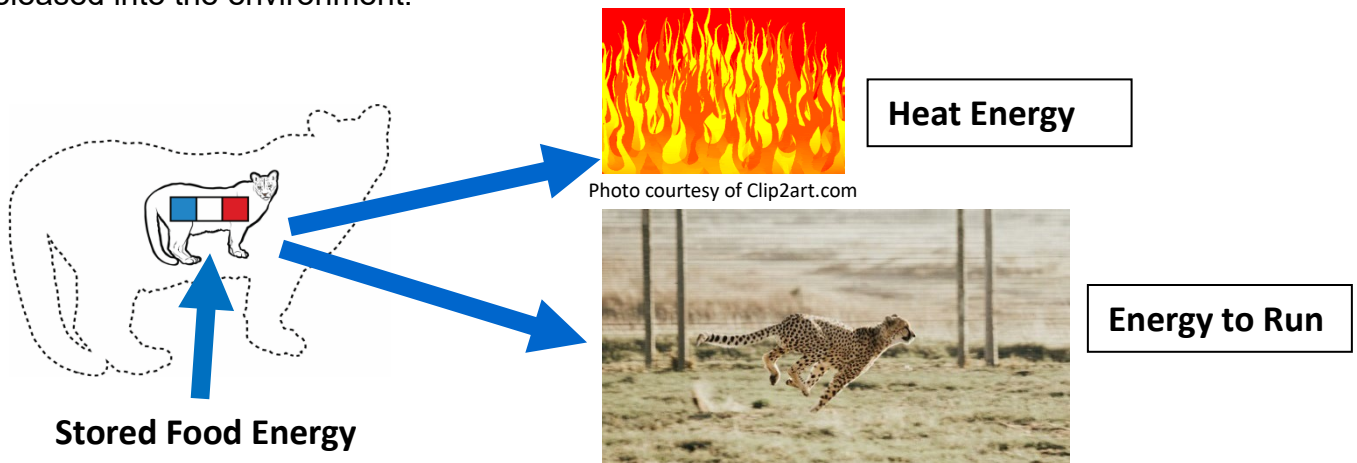
Why not? What happens to energy in a food chain?

First, energy flows into a food chain as light from the Sun. Producers change this light energy into energy stored in food molecules.



All living things use these food molecules to get the energy they need to live and grow.

When an organism, like a mountain lion, breaks down food molecules, energy is released that the organism can use to live and move and grow. Heat energy is also released into the environment.



Think about how hot you feel after running really hard. You feel this way because you're using food molecules in your body to get the energy you need to run. When this happens, some of the food energy is changed into heat energy. When you run, you give off heat energy into your surroundings. Organisms can't recapture this heat energy and use it again to live and grow.



Photo courtesy of Clipart-library.com

## Summary

Energy enters food chains as light energy from the Sun, and producers (plants) change this light energy into energy stored in food molecules. When living things use stored food energy to live and move and grow, heat energy is released into the environment, but living things can't capture and reuse this energy.

So energy is **not** recycled in food chains. This means that a constant supply of new energy is needed in food chains.

Where do you think this constant supply of new energy comes from?

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