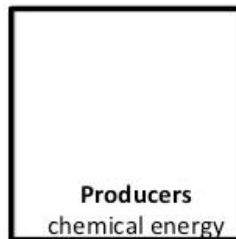
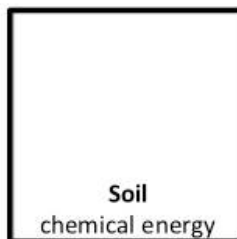
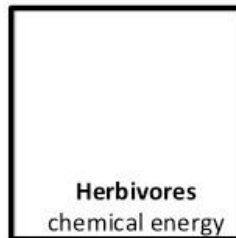
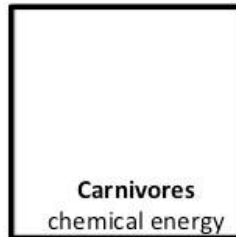


Name \_\_\_\_\_ Teacher \_\_\_\_\_ Date \_\_\_\_\_

## 3.5: Tracing Energy Worksheet

You are going to use the figure below to trace energy in an ecosystem.

- 1) Draw arrows (- - ->) to show how carbon moves through an ecosystem and label the carbon-transforming processes responsible for that movement (photosynthesis, cellular respiration, eating, death and defecation).
- 2) Next to each arrow, label the form of energy involved with the carbon-transforming process (sunlight, chemical, heat).



3) When energy is in the form of chemical energy, it is associated with matter in the form of a food (or fuel). Put stars on your diagram where matter and energy part ways. What is the name of the process that happens when matter and energy part ways?

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**The Answers to the Energy Flow Question:** Where does the chemical energy in ecosystems come from? How is it transformed? How does it flow through carbon pools?

4) Explain how energy enters an ecosystem. Where does it come from? How is it transformed?

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5) Explain how chemical energy moves between carbon pools. What process sets the limit for how much chemical energy exists in living systems?

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6) Explain how chemical energy is transformed when plants or animals use it. When an animal dies, does it still have chemical energy?

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7) Explain how chemical energy eventually leaves an ecosystem. Can plants or animals in this ecosystem use that energy again?

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