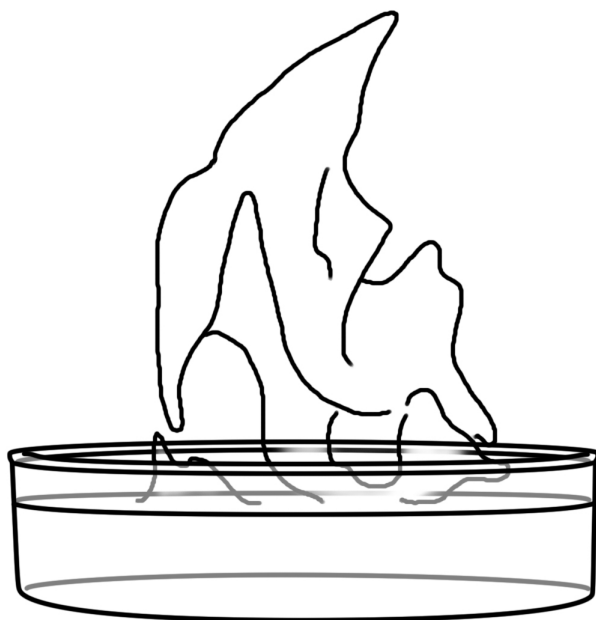


Name _____ Teacher _____ Date _____

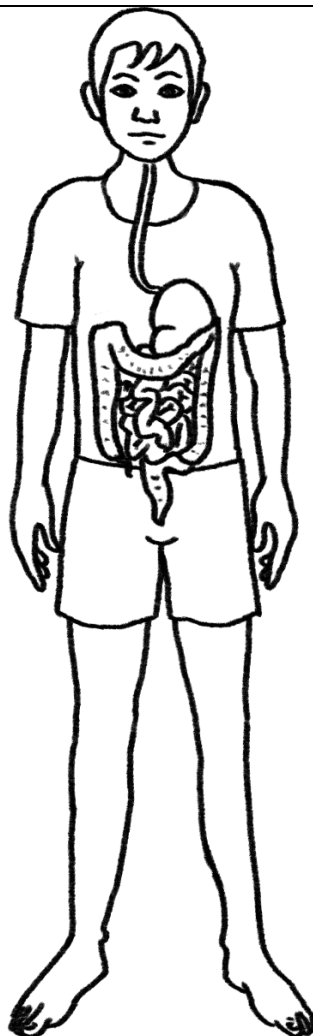
6.2 Comparing Animals and Flames Worksheet

Compare the pathways that carbon atoms take through a burning flame and a growing child.



Draw arrows to show where carbon atoms enter the flame and the pathway that they take through the flame.

Label the arrows as organic molecules (OM) or carbon dioxide (CO₂).



Draw arrows to show where the carbon atoms enter the child and the pathway through the child that they take to reach a moving leg muscle.

Label the arrows as large organic molecules (LOM), small organic molecules (SOM) or carbon dioxide (CO₂).

Tell the story of what happens to the carbon atoms as they travel through the flame and the child by completing the table on the next page.

Telling the story of the carbon atoms

Use the table below to tell a step-by-step story of what happens to the carbon atoms in the flame and the child.

Stage in the story	Flame story	Child story
Words to use:	Include these words in your flame story (you can use a word more than once): <ul style="list-style-type: none"> • Combustion • CO₂ • Organic molecule • Oxygen (O₂) 	Include these words in your child story (you can use a word more than once): <ul style="list-style-type: none"> • Digestion • CO₂ • Oxygen (O₂) • Organic molecule • Cellular respiration
1. Where do the carbon atoms come from? Explain where and how carbon atoms enter the flame or child and what kind of molecules the atoms are in.		
2. Why do the flame and the child both need oxygen? Explain how oxygen helps the flame to burn and the child to move.		
3. What energy transformations take place? Explain how energy is transformed when the flame burns or the child moves.		
4. How is matter transformed when the flame to burns or the child moves? Explain the chemical change that goes with the energy transformation.		
5. How do carbon atoms leave the flame or the child Explain how carbon atoms leave the flame or the child.		

Which is more true?

Flames and children can both grow larger. And there are chemical changes when they grow. Compare the chemical changes, then choose one of the statements below that you think is more true than the other:

MORE TRUE LESS TRUE A growing flame is like a child growing larger and stronger.

MORE TRUE LESS TRUE A growing flame is like a child running faster.

Explain your reasoning. When a flame grows, is it more like a child growing or a child running faster?
