

<b>CHAPTER 5</b>	<b>Thought Lab 5.1: Modelling the Source of Oxygen in the Light-Dependant Reactions Answer Key</b>	<b>BLM 5.2.6A</b>
<b>ANSWER KEY</b>		

### Answers to Analysis Questions

1. The radioactive isotope form of an atom can be differentiated from its non-radioactive form. This allows the tracing or “following” of that atom through a chemical reaction, from reactant to product. Products can be analyzed for the isotope in order to identify the source of a particular atom in it.
2.
  - a) Based on your model and the chemical equation given, you should predict that oxygen atoms that originate from carbon dioxide end up in  $\text{CH}_2\text{O}(\text{s})$  and  $\text{H}_2\text{O}(\ell)$ .
  - b) Based on your model and the chemical equation given, you should predict that all carbon atoms from carbon dioxide end up in  $\text{CH}_2\text{O}(\text{s})$ .
  - c) Based on your model and the chemical equation given, you should predict that all hydrogen molecules from water end up in  $\text{CH}_2\text{O}(\text{s})$  and  $\text{H}_2\text{O}(\ell)$ .