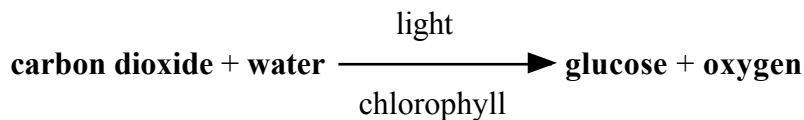


10. The experimental steps required to **test a leaf** for the presence of **starch** include
 (i) boiling the leaf to kill it and break down the cell membranes
 (ii) boiling the leaf in alcohol to remove the chlorophyll
 (iii) washing the leaf in water to soften it and remove excess alcohol
 (iv) covering the leaf in iodine solution - brown to blue black if starch is present.
11. The **conditions** necessary for **photosynthesis** are
light, carbon dioxide, chlorophyll and water.
12. These need for these conditions are shown by removing them from a plant's environment and then testing a leaf for starch
 eg **put a green plant in the dark** for 24-48 hours,
 put a green plant in a bag containing **a chemical that absorbs carbon dioxide**
 test a **variegated leaf** (one that has green and white areas on the leaf) for starch.
13. A green plant converts **light energy** to **chemical energy** using chlorophyll
14. During photosynthesis molecules of **carbon dioxide** combine with molecules of **water** to form simple carbohydrates such as **glucose.**
15. The word **equation** for photosynthesis is



- 16*. Simple carbohydrates (such as glucose) are built into complex carbohydrates such as **starch** (storage carbohydrate) or **cellulose** (structural carbohydrate).
- 17*. The definition of a **limiting factor** is a substance, which in **short supply**, **slows down** the **rate** of photosynthesis.
- 18*. Three examples of limiting factors are
 (i) **light intensity**
 (ii) **carbon dioxide concentration**
 (iii) **temperature**