Name Date

Photosynthesis and Cellular Respiration

STUDENT RESOURCE **5.2**
INFORMATION SHEET

Photosynthesis

$6CO_2$	+	$12\ H_2O$	+	sunlight	→ yields	$C_6H_{12}O_6$	+	$6H_2O$	+	$6O_2$
6 carbon dioxide molecules		**12 water molecules**		**light energy**		**sugar (glucose)**		**6 water molecules**		**6 oxygen molecules**

Plants make sugar during photosynthesis. They produce oxygen and water as waste products. Oxygen and water leave the plant through openings in the leaves called stomata. Plants give off oxygen when light energy is available.

Cellular Respiration

$C_6H_{12}O_6$	+	$6O_2$	→ yields	$6H_2O$	+	$6CO_2$	+	energy
1 sugar molecule		**6 oxygen molecules**		**6 water molecules**		**6 carbon dioxide molecules**		**energy**

Cellular respiration is a chemical process that changes sugar (food) to energy. Every cell in your body carries out cellular respiration to produce energy from food. Plant cells also carry out cellular respiration. During cellular respiration, both plants and animals give off carbon dioxide.

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