

Gas exchange in flowering plants

Which two gases are waste products of metabolism in a leaf?

Gas exchange in flowering plants **Biology only**

What is the role of diffusion in gas exchange in a leaf?

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When do plants respire and when do they photosynthesise?

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What is the role of stomata and guard cells?

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What is the compensation point?

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Net gas exchange of a leaf in darkness?

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Hydrogen-carbonate indicator colours: red/orange, yellow and purple?

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What colour is the indicator with a leaf in bright light?

Carbon dioxide and oxygen move into and out of the leaf down a concentration gradient.

Carbon dioxide (from respiration) and oxygen (from photosynthesis). Both leave by diffusion through the stomata.

Stomata are pores for gas exchange. Guard cells open and close them.

Plants respire all the time, but photosynthesise only when there is light.

Only respiration happens, so there is a net release of carbon dioxide and net uptake of oxygen.

The light intensity at which photosynthesis equals respiration, so there is no net gas exchange.

Purple, because photosynthesis is faster than respiration and the leaf takes in carbon dioxide.

Red/orange: normal air. Yellow: more carbon dioxide. Purple: less carbon dioxide.