# Checking pH and Carbon in a Model Pond

Scoring guide · one credit per question · review written work against each rubric

### Checking pH and Carbon in a Model Pond

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### Question 1

Choice (2)

P and R have the same light condition and differ in whether they contain algae.

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### Question 2

P changes from 10 to 6, so the algae remove carbon dioxide on balance in light. Q changes from 10 to 12, so the algae release it on balance in the dark.

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### Question 3

The lamp alone does not raise pH under these conditions. R has the lamp and no algae, and its pH stays at 7.0. P also has the lamp, but with algae it loses dissolved $CO_2$ and rises to pH 7.5.

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### Question 4

The later pH should stay near 7.0, the reading at 10 $CO_2$ units in R. Holding carbon dioxide steady removes the change that raised pH in P.