B3.1 Gas exchange in plants: data-based questions

What the Cell · DP Biology · data-based questions

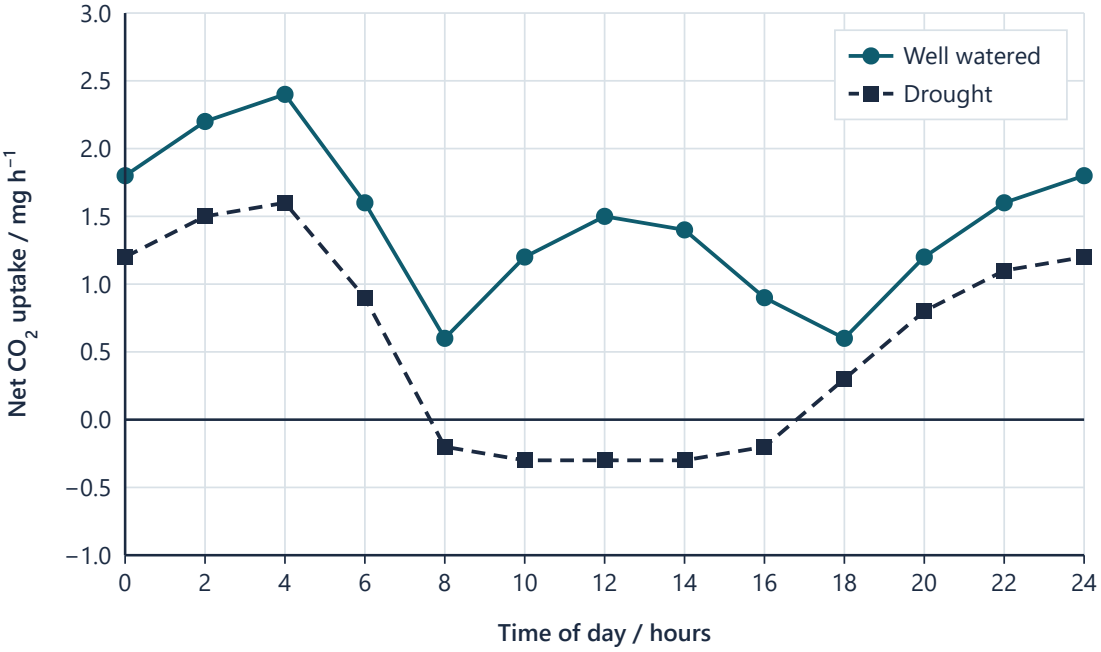
Name _____ **Date** _____ **Total** _____ / 6

Read the data carefully before you answer. The number of marks shows how many separate points to make. Show your working in calculations.

1 Carbon dioxide uptake by a succulent

6 marks

Aeonium is a succulent shrub from the Canary Islands. Net carbon dioxide uptake by one plant was measured over 24 hours, when well watered and after two weeks without water. It was dark from 18:00 to 06:00. Negative values mean carbon dioxide was released.



a **State** the time of the highest carbon dioxide uptake by the drought plant. **[1]**

b **Compare** the watered and drought plants during the day (06:00 to 18:00). **[2]**

c **Explain** why the uptake of the drought plant is negative at midday. **[1]**

d **Suggest** two advantages of taking up carbon dioxide at night in dry conditions. **[2]**

What the Cell. Original questions written for this course, with data based on published patterns.