Plants and Photosynthesis
Lesson 11 - Application of Knowledge

Biology - Key Stage 3

Miss White

Quick check

1. Write the word equation for photosynthesis

2. Identify the reactants

3. Identify the products

Analysing Data

The table shows the data a student collectected from five leaves

Leaf	Number of Stomata	
	Upper Surface	Lower Surface
1	3	44
2	0	41
3	1	**Y**
4	5	42
5	1	40
Mean	**X**	42

Analysing Data

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Mean		42

Write a conclusion for the students results

- Describe the patterns using data from the table
- Explain why these patterns occur

Copy and complete the sentences using the keywords in bold

Transpiration is the movement of _____ molecules from the _____ to the _____ of a plant.

This water enters the roots by _____ and then travels up the _____, where it is then used for _____ or _____ from the surface of the leaf.

Evaporates **Leaves** **Osmosis** **Roots** **Xylem** **Photosynthesis** **Water**

So if stomata were on the upper side of the leaf...

Would this **increase** or **decrease** the rate of transpiration?

If stomata were found mainly on the upper side of the leaf, it would _____ the rate of transpiration because...

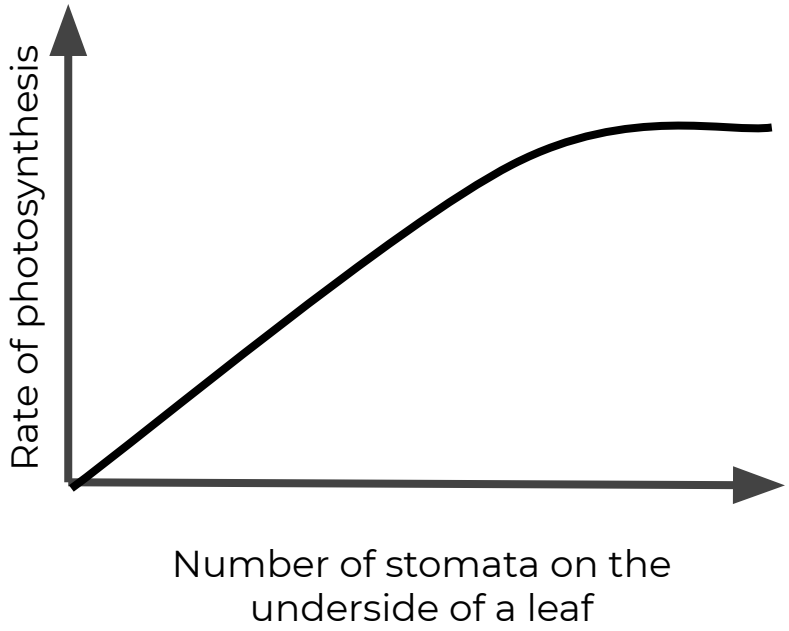
Photosynthesis

Word equation for photosynthesis

Carbon dioxide + Water  **Glucose + Oxygen**

Water is a _____ of the photosynthesis reaction

Rate of photosynthesis



Source: Miss White

If the number of stomata on the **underside of the leaf** were to increase, what would happen to the rate of photosynthesis?

Choose the correct answer

A	B	C
If there were more stomata on the upper side of the leaf, the rate of photosynthesis would increase. This is because...	If there were more stomata on the upper side of the leaf, the rate of photosynthesis would decrease. This is because...	If there were more stomata on the upper side of the leaf, the rate of photosynthesis would remain the same. This is because...

Name the 4 uses of glucose

1. _____
2. _____
3. _____
4. _____

1. Used in respiration
2. Converted into new chemicals
3. Stored in the leaves, stem and roots
4. Converted to starch

Copy and complete the sentences using the keywords in bold

If there are more stomata on the upper side of the leaf there will be _____ photosynthesis. This means there will be less _____ and _____ produced. If there is less _____ produced this will mean plant will grow _____.

Less **Glucose** **Less** **Oxygen** **Glucose**