Name: _____ Date: _____ Class: _____

LIMITING FACTORS OF PHOTOSYNTHESIS ORGANISER

PHOTOSYNTHESIS EQUATION

$$6CO_2 + 6H_2O \xrightarrow{\text{LIGHT}} C_6H_{12}O_6 + 6O_2$$

carbon dioxide + water → glucose + oxygen

WHAT IS A LIMITING FACTOR?

A factor that, when in shortest supply, slows down the rate of photosynthesis. Increasing other factors will not increase the rate until this factor increases.

THE FOUR MAIN LIMITING FACTORS

LIGHT INTENSITY

The brightness of light available for the plant.

CARBON DIOXIDE CONCENTRATION

The amount of carbon dioxide available in the air.

TEMPERATURE

The temperature affects the rate of enzyme-controlled reactions in the plant.

WATER AVAILABILITY

The amount of water available for the plant.

LIMITING FACTOR	HOW IT AFFECTS PHOTOSYNTHESIS (LOW LEVELS)	PREDICT: WHAT HAPPENS TO THE RATE IF THIS FACTOR INCREASES?	HOW COULD YOU INVESTIGATE THIS FACTOR?	WHAT DID YOUR RESULTS SHOW?
LIGHT INTENSITY				
CO_2 CARBON DIOXIDE CONCENTRATION				
TEMPERATURE				
WATER AVAILABILITY				

REFLECTION

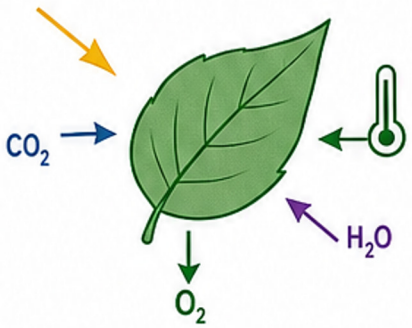
Which factor was the limiting factor in your investigation?

_____

How do you know?

_____

_____



KEY VOCABULARY

Rate – how fast something happens.

Limiting factor – the factor that slows the rate the most.

Increase – make something greater.

Decrease – make something smaller.

Constant – kept the same.