Light –dependant flowchart

Carbon dioxide enters, leaves through the stomata

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Carbon dioxide diffuses into the stroma of the chloroplast

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Carbon dioxide combines with the 5C compound, ribulose bisphosphate (RuBP)

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The enzyme rubisco catalyses the reaction to form two molecules of glycerate-3-phosphate(GP)

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GP is reduced to from triose phosphate, using hydrogen ions from reduced NADP while…

↓

Energy from ATP is used to turn GP into triose phosphate (TP)

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Most TP is used to regenerate RuBP by combining energy and phosphatate from ATP with TP to form RuBP

↓

The cycle needs to turn six times to make enough TP to form a single glucose molecule

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This means that six carbon dioxide molecules are needed to make each glucose molecule

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Other carbohydrates can be made from glucose by joining sugars in different ways

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Lipids, amino acids and nucleic acids can also be made using TP

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