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Energy for Life

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Energy for Life

Trapping and Using Energy

1) total of all chemical reactions is metabolism
2) enzymes break down molecules and are needed for all chemical reactions
3) Enzymes each have a specific purpose
4) chemical energy is stored in food molecules
5) All activities in an organism involve chemical reactions in some way

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Photosynthesis

1) Producers make their own food - ex. plants
2) Consumers do not make their own food - ex: humans
3) photosynthesis - using light energy to make sugar (glucose)

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Producing Carbohydrates

1) producers use a green pigment called chlorophyll in photosynthesis to capture light energy
2) light energy powers chemical reactions. produces raw materials air and soil

Storing Carbohydrates

1) plants make more sugar during photosynthesis than they need to survive. This sugar gets stored.

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Respiration

1) cellular respiration - chemical reaction occur that break down food molecules into simpler substances and release stored energy

Breaking down Carbohydrates

1) carbohydrates are broken down into sugar. Every time they are broken down, more energy is released

Fermentation

1) if cells do not have enough oxygen for cellular respiration, fermentation will occur - glucose is released

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Metabolism	sum of all chemical reactions
Photosynthesis	Converting light energy into glucose to use as chemical energy
Respiration	Chemical reactions occur that break down food molecules into simpler substances
Fermentation	In place of respiration uses stored energy

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