

Introduction

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Each cell has hundreds of enzymes inside it.

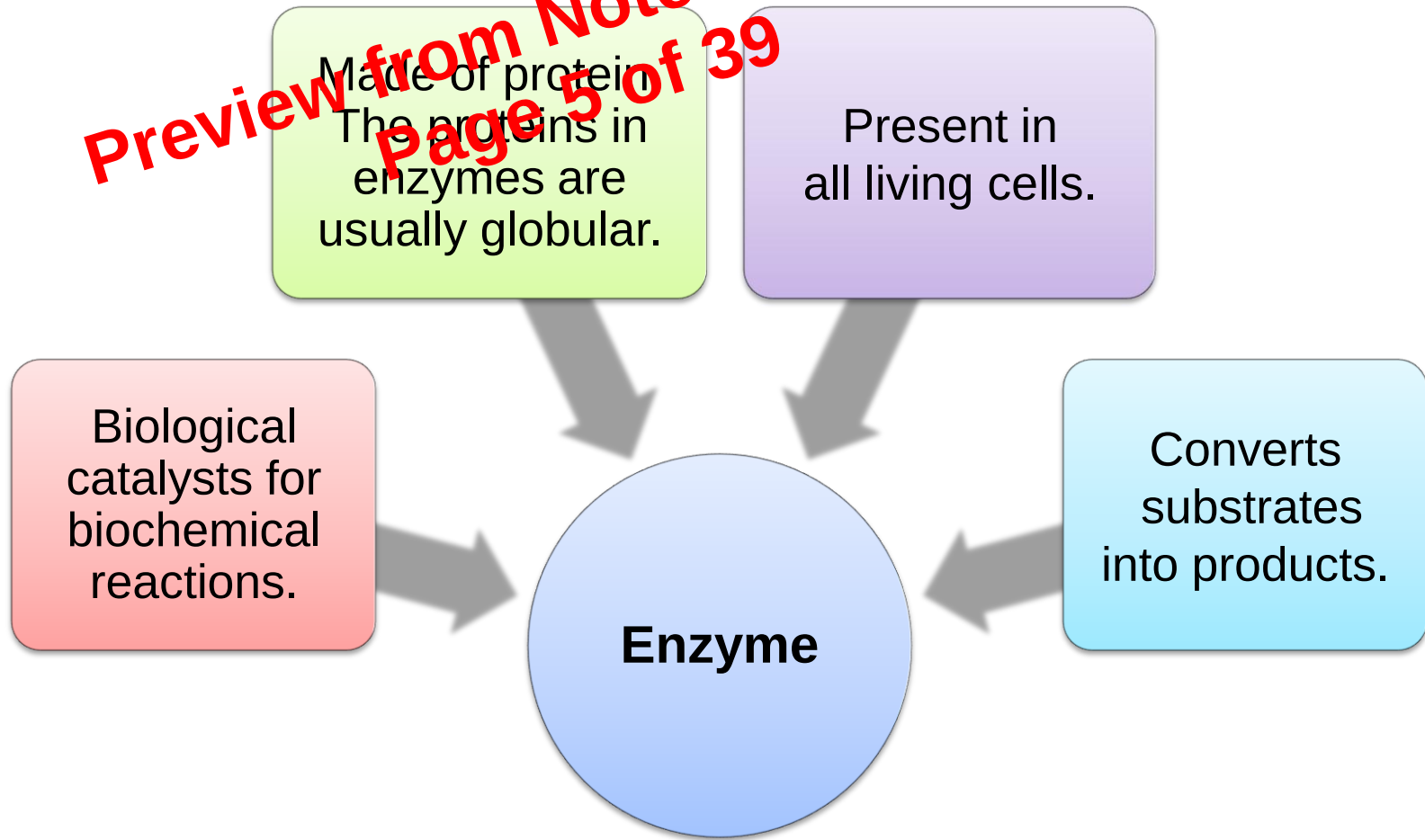
Each enzyme only carries out one reaction.

What is enzyme?



Fig.1

What is Enzyme



Function of Enzymes

The function of enzymes are:

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1 Increase the rate of chemical reactions.

2 Remain unchanged by chemical reaction.

Enzyme Activity

2 pH

Effect pH on Enzymes

- At extreme pH levels, enzymes lose their shape and function and become denatured.



Animation 3
Optimal pH

Key Terms

Term	Definition
Enzyme	Any of several complex proteins that are produced by cells and act as catalysts in specific biochemical reactions
Activation energy	An energy 'barrier' that must be crossed to facilitate a chemical reaction.
Active site	The site where the enzymes and molecules meet
Lock & Key Model	Enzyme and the substrate possess specific complementary geometric shapes that fit exactly into one another.
Induced Fit Model	Enzyme and active site adjust shape to bind with substrate.

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Key Terms

Term	Definition
Optimum Temperature	The best temperature at which the enzyme work
Inhibitor	A molecule that binds to enzymes and cause a loss of catalytic activity.
Competitive Inhibitor	A form of enzyme inhibition where binding of the inhibitor to the active site on the enzyme prevents binding of the substrate and <i>vice versa</i> .
Non-Competitive Inhibitor	A type of enzyme inhibition where the inhibitor reduces the activity of the enzyme, by binding not to the active site on the enzyme, but to a different site.

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