Enzymes: Biochemistry Puzzle Activity

Crossword Puzzle: Enzymes

Instructions:
Fill in the crossword using the clues provided. Each answer relates to topics from Unit 5 Enzymes in Biochemistry.

Across

The protein molecules that speed up biochemical reactions in living organisms.

The graphical method plotting 1/V against 1/ S] to analyze enzyme kinetics.

The non-protein component required for enzyme activity, often derived from vitamins.

Enzyme regulation method involving increased synthesis in response to a molecule.

Enzyme type that changes activity upon binding an effector at a site other than the active site.

Down

The international system for naming and classifying enzymes.

A molecule that decreases enzyme activity by binding to the enzyme.

The plot used to determine Km and Vmax by plotting velocity against substrate concentration.

Enzymes used as markers to diagnose tissue damage in clinical settings.

The process by which enzyme synthesis is decreased in response to a molecule.

Clues & Answers

Clue	Answer No. of Letters)
1 Across	Enzyme 6
2 Down	IUB 3
3 Across	Lineweaver 10
4 Down	Inhibitor 9
5 Down	Michaelis 9
6 Across	Coenzyme 8
7 Across	Induction 9
8 Across	Allosteric 10

Clue	Answer No. of Letters)
9 Down	Isoenzyme 9
10 Down	Repression 10

Bonus: Match the Term

Match each term to its correct definition:

Term	Definition
Enzyme	A. Molecule that speeds up a chemical reaction
Coenzyme	B. Non-protein helper for enzyme activity
Inhibitor	C. Substance that decreases enzyme activity
Allosteric	D. Regulation by binding at a site other than the active site
Isoenzyme	E. Different forms of an enzyme that catalyze the same reaction
Induction	F. Increase in enzyme synthesis
Repression	G. Decrease in enzyme synthesis
Lineweaver-Burk	H. Double reciprocal plot for enzyme kinetics
Michaelis-Menten	I. Plot of velocity vs. substrate concentration
IUB	J. International enzyme classification system

How to Use This Activity

- Use the crossword to reinforce key terms and concepts.
- The matching section helps with quick revision of definitions.
- Discuss answers in pairs or groups for collaborative learning.

This activity covers all major topics: enzyme introduction, properties, nomenclature, IUB classification, enzyme kinetics Michaelis and Lineweaver-Burk plots), inhibitors, regulation (induction, repression, allosteric), therapeutic/diagnostic applications, isoenzymes, and coenzymes structure and function.