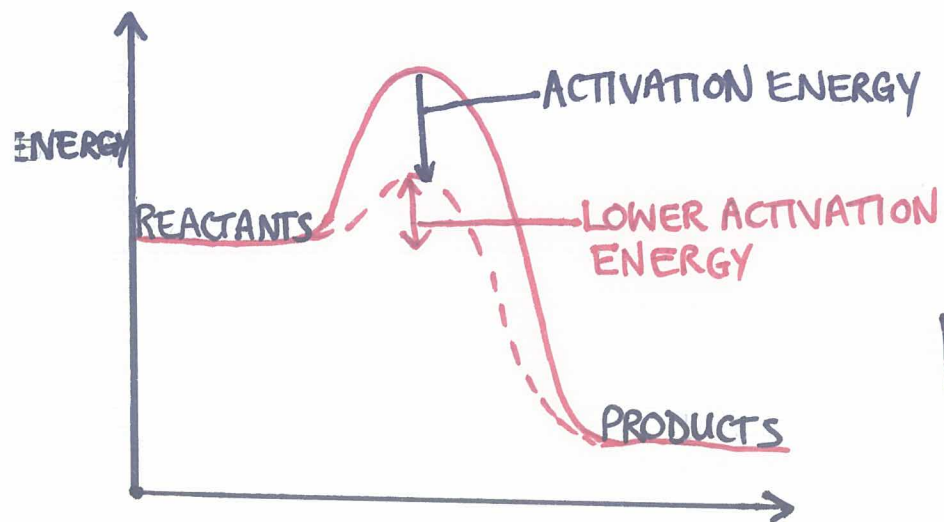


ENZYMES LOWER THE ENERGY NEEDED FOR A REACTION TO OCCUR → **ACTIVATION ENERGY**

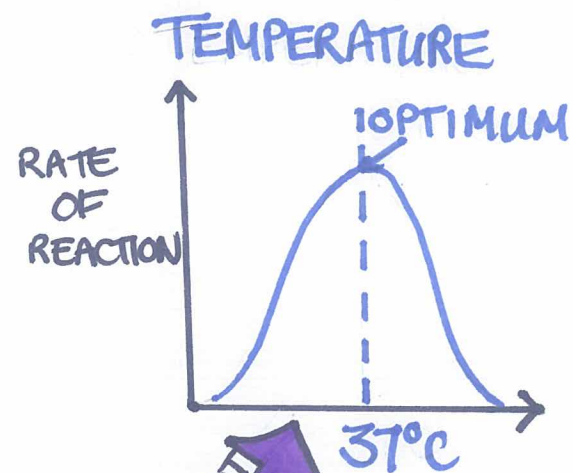


ENZYMES ARE BIOLOGICAL CATALYSTS - SPEED UP CHEMICAL REACTIONS BUT CAN BE RE-USED
MADE OF PROTEINS

METABOLIC REACTIONS CAN BE

↓
CATABOLIC
(BREAK DOWN)

↓
ANABOLIC
(BUILD UP)



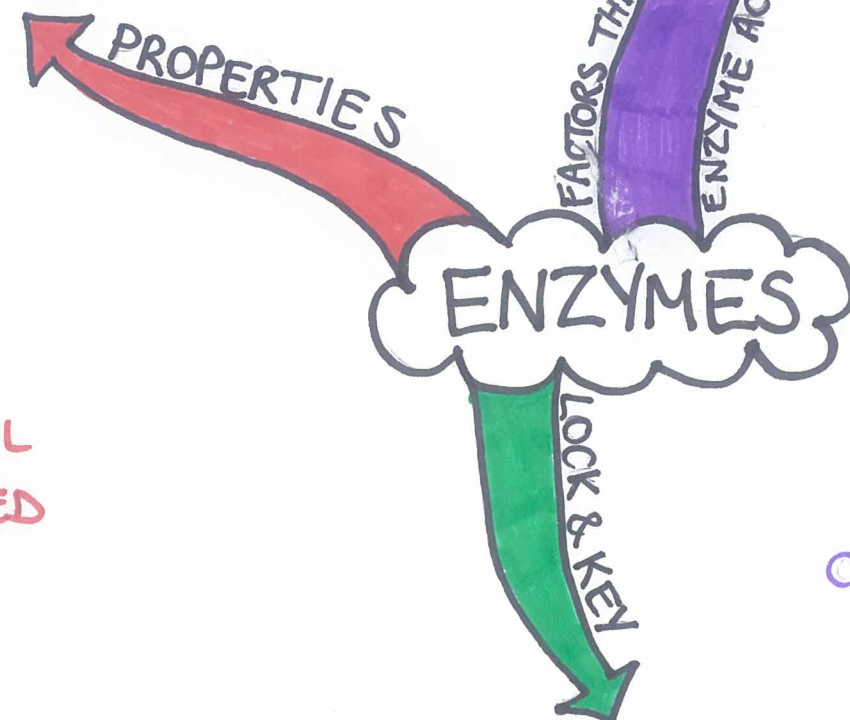
↑ TEMP ↑ RATE OF REACTION

EXCESSIVE TEMPERATURES CHANGE PROTEIN STRUCTURE → ENZYME DENATURES
→ CANNOT BIND WITH SUBSTRATES

pH - ENZYMES OUTWITH pH RANGE WILL NOT PERFORM AT OPTIMUM RATE

ENZYME CONC. - LOW CONC WILL LIMIT RATE OF REACTION

SUBSTRATE CONC. - LOW CONC WILL LIMIT RATE OF REACTION

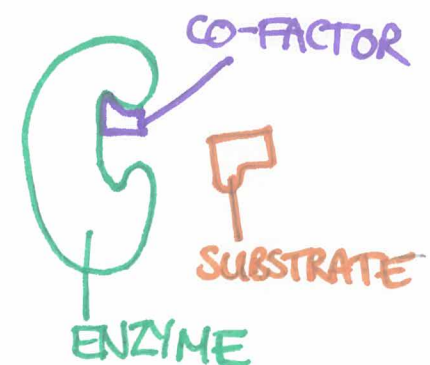


CO-FACTORS

↳ HELP SUBSTRATE & ENZYME TO COMBINE

↳ NON-PROTEINS/IONS eg Mg

CO-FACTORS → NON-PROTEIN ORGANIC MOLECULES eg VITAMINS



ENZYMES ARE SPECIFIC TO PARTICULAR SUBSTRATES

↳ FIT TOGETHER LIKE A LOCK & KEY



↳ THE ACTIVE SITE IS PART OF THE ENZYME WHERE SUBSTRATE COMBINES

INHIBITORS

↳ SLOW / STOP ENZYME ACTION

↳ BLOCK ACTIVE SITE

↳ CHANGE ACTIVE SITE

