

1

CHEMICAL REACTION

reactants

→

products

2

Reactants

(left side of the arrow)

Product

(right side of the arrow)

$\text{NH}_3 + \text{HCl} \longrightarrow \text{NH}_4\text{Cl}$

3

Reactants- the starting molecules

$6\text{CO}_2 + 6\text{H}_2\text{O}$

Products- the final molecules

$\text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$

chemical change

4

$2\text{H}_2 + \text{O}_2 \longrightarrow 2\text{H}_2\text{O}$

Reactants (Substrates)

Products

5

Reactants (substrates)

Product

6

1

Substrates

2

ENZYME + Substrates

3

Product

7

Reactants

Enzyme-Substrate Complex

Products

8

Substrate attaches to enzyme

Reaction takes place

Products leave enzyme

9

Reactant Molecules

ENZYME

10

Enzyme 1

Enzyme 1's active site

Enzyme 2

Enzyme 2's active site

Enzyme 3

Enzyme 3's active site

11

Enzyme 1

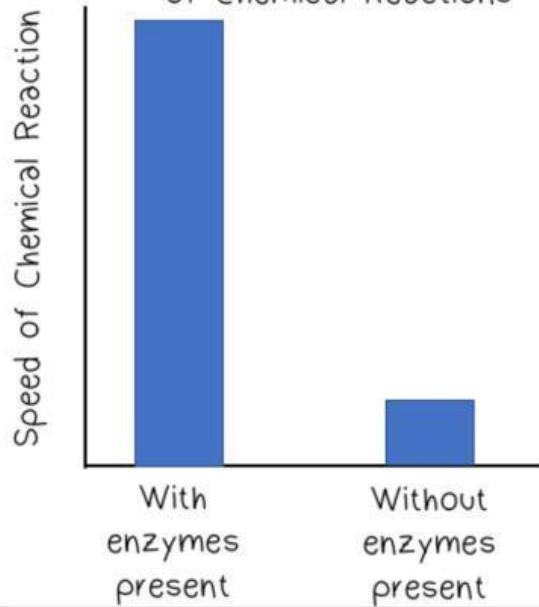
Enzyme 2

Enzyme 3

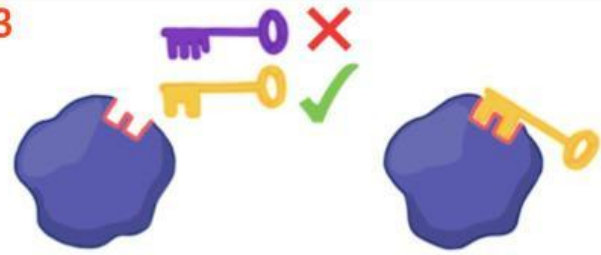
LIVEWORKSHEETS

12

Enzyme Effect on the Speed of Chemical Reactions



13



The active site matches the yellow key

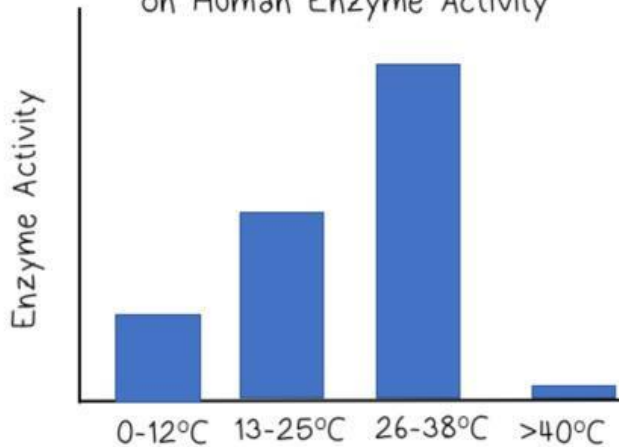
14

Enzymes work like a lock & key



15

The Effect of Temperature on Human Enzyme Activity



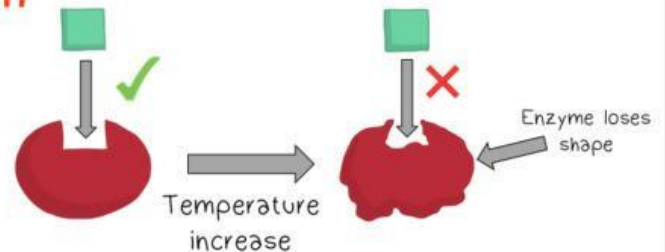
16



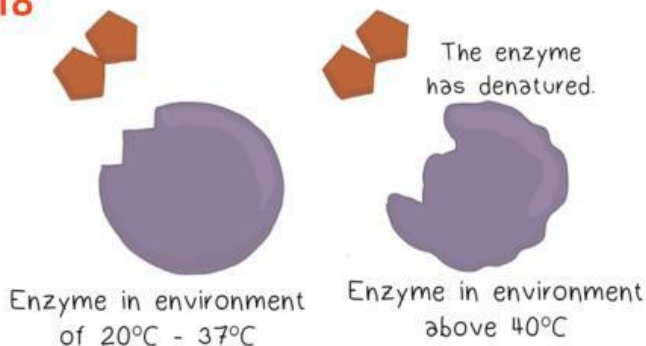
Enzyme in environment of 15°C - 30°C

Enzyme in environment above 32°C

17



18



Enzyme in environment of 20°C - 37°C

Enzyme in environment above 40°C

19

