Biology

Enzymes

- Enzymes are biological catalyst they make chemical reaction inside living things happen faster
- Enzymes are made up of proteins.There amino acid chain folds into special shape where other substances can fit
- The place where the substrate fits is called active site
- Each enzyme is specific means only the right substrate with the correct shape can fit into its active site
- When enzymes lose their shape they are called the denatured.Then the substrate cannot fit anymore and the enzymes stops working

Factors that affect the enzyme action

The speed of enzyme action is affected by

- Temperature
- pH
- Substrate concentration
- Enzyme concentration

- High temperature or wrong pH makes enzymes lose their shape,denatured
- Low temperature makes reactions happen slowly
- Different enzymes work best at different pH levels depending on where they work in the body
- Most human enzymes work best at about 37 degree Celsius which is normal body temperature
- If substrate concentration increases the reaction becomes faster until all enzymes are being used
- If enzyme concentration increases the reaction becomes faster until all substrate is used up

Scientist can test enzyme action in many ways for example

- Catalyse an enzyme in liver and plants breakdown hydrogen peroxide (a poison)
- This reaction gives of Oxygen gas
- The gas is collected and measured overtime and find the rate