

CHAPTER 8 HOW DO ORGANISMS REPRODUCE

REPRODUCTION: Making new copies of its own kind by an individual/creating new individuals of its own kind by an organism

Importance: 1. Continuity of species on earth/ life on earth
2. Brings about variations which lead to better adaptation
3. helps in evolution

BASIC EVENT IN REPRODUCTION

- ▶ DNA COPYING IS THE MOST BASIC EVENT.
- ▶ DNA IS THE HEREDITY MATERIAL THAT IS RESPONSIBLE FOR TRANSMISSION OF CHARACTERS FROM PARENTS TO OFFSPRINGS.
- ▶ DNA IS THE INFORMATION SOURCE FOR MAKING PROTEINS.
- ▶ PROTEINS DECIDE BODY DESIGN
- ▶ IF PROTEINS ARE CHANGED BODY DESIGN IS CHANGED
- ▶ BODY DESIGN DEPENDS ON BLUE PRINT
- ▶ BLUE PRINT IS DECIDED BY DNA
- ▶ PROTEINS DECIDE BODY ORGANISATION/ORGANISATION

Variations during DNA copying

- ▶ First DNA has to make its own copy to be able to transfer to the new cell
- ▶ During copying of DNA due to faulty biochemical pathways variations occur.
- ▶ After duplication of DNA cytoplasm divides and two new cells are created.
- ▶ Each new cell is similar to the parent cell but not identical.
- ▶ If variations are drastic the new cells will not survive.
- ▶ Thus variations are caused during reproduction.
- ▶ This inbuilt tendency of variation is the basis of evolution.
- ▶ Variations are more in sexual reproduction

Importance of variations

- ▶ It promotes survival of species
- ▶ Organisms are able to occupy habitats(niche) due to consistency of DNA copying.
- ▶ If all individuals are alike and without variation and If a habitat changes suddenly due to rise in temperature, change in water level or meteorite hit then population may be wiped out altogether and species will come to an end.
- ▶ But if there are few variants they may tolerate these changes and would survive.
- ▶ Thus species will not come to an end .
- ▶ Reproduction provides stability to population due to same basic body design

TYPES OF REPRODUCTION

1. ASEXUAL- UNIPARENTAL

NO FORMATION AND FUSION OF GAMETES

LESS VARIATIONS

2. SEXUAL - BIPARENTAL

FORMATION AND FUSION OF GAMETES

MORE VARIATIONS

THANK YOU

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