

DARWINISM

DARWIN → Origin of Species 1859
(1809–1882)

↓
"THEORY OF ORGANIC EVOLUTION BASED ON
NATURAL SELECTION"

VOYAGE OF BEAGLE → **NORTH AMERICA** → **GALAPAGOS ISLANDS**

• 965 Km West to
Equador

GIANT TORTOISE → **SHELL**

Saddle shaped Dome shaped

FINCHES

Types

FTB*

(14)

(13)

BTB*, KDK*

DARWIN'S CONCEPT OF NATURAL SELECTION

- Descent with modification
- Natural Selection

DESCENT WITH MODIFICATION → Backbone of Evolution theory

Parents → Passing on Traits → Off-springs

↓ modified

Crossing over → Genetic Recombination

NATURAL SELECTION

↓
Survival of fittest → Pass on

ARTIFICIAL SELECTION

↳ Desired characters from
Plants and Animal.

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• **DESERTIFICATION.**

Alternate Food

Long Neck
(↑↑)

Short Neck

↓
Going to be dead.

OVER-PRODUCTION

Species have capacity to reproduce.

OVER-PRODUCTION

Species have capacity to reproduce.

- House Fly \rightarrow 120 eggs
 - Rabbit \rightarrow 4 times/year
 - Elephant \rightarrow 6 offsprings
- Population Rate $\uparrow\uparrow$ $\xrightarrow{750 \text{ years}}$ 19 million population
Resources $\downarrow\downarrow$

STRUGGLE FOR EXISTENCE

Population $\uparrow\uparrow$, Individuals $\uparrow\uparrow \rightarrow$ Competition $\uparrow\uparrow$

INTRA-SPECIFIC

- Among individuals of same species.

INTER-SPECIFIC (Prey - Predator)

- Among individuals of different species.

- ENVIRONMENTAL STRUGGLE (EXTRA-SPECIFIC)
Against Natural Forces.

VARIATION

\rightarrow Genetics

- +ive** \rightarrow Supportive to survival and successful reproduction in individual.
No. of individual $\uparrow\uparrow$
- ive** \rightarrow Do not support reproduction in individual.

Human \rightarrow Black, Brown, White \rightarrow Skin Colour

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SURVIVAL OF FITTEST

+ive / useful variations \rightarrow Survival

FLOOD

- Can breathe in water \rightarrow Survival chances $\uparrow\uparrow$ (Favourable)
- Can not breathe in water \rightarrow Dead (Unfavourable) \rightarrow

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