

PHYLUM ARTHROPODA

Wednesday, August 2, 2023 8:05 PM

ARTHROPODA → Greek → $\begin{cases} \text{Arthros} \rightarrow \text{Jointed} \\ \text{Pods} \rightarrow \text{Limbs} \end{cases} \rightarrow \text{Jointed appendages}$

HABITAT

- Marine water
- Fresh water
- Terrestrial → Fly

BODY STRUCTURE

- Segmented body → Head, Thorax, abdomen
- Coelomate
- Triploblastic



SKELETON

- Exoskeleton
- Outer covering → chitinous cuticle → Secreted by Epidermis

COELOM

- Haemocoel → Body cavity
- Blood → hemolymph

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BODY SYSTEMS

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DIGESTIVE SYSTEM

- Alimentary canal → openings $\begin{cases} \text{Mouth} \\ \text{Anus} \end{cases}$

EXCRETORY SYSTEM

- Malpighian Tubes
- Nitrogenous waste → Solid uric acid

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NERVOUS SYSTEM

- Well developed Nervous System
- Simple Brain (Paired Ganglia) → Connected → Nerve cord
- A Ganglion present in each segment
- Ganglia → Nerves
- Pair of Compound eyes and antennae

RESPIRATORY SYSTEM

- Tracheal System → Trachea → Exchange of Gases
- Aquatic arthropods → Gills
- Arachnids → spider → Book Lungs

CIRCULATORY SYSTEM

- open Circulatory System
- Primitive heart and Blood vessels
- Colourless blood → without haemoglobin

LOCOMOTION

- Active and Swift → Movement
- Swim, Fly, crawl
- organ of Locomotion → paired appendages

REPRODUCTION

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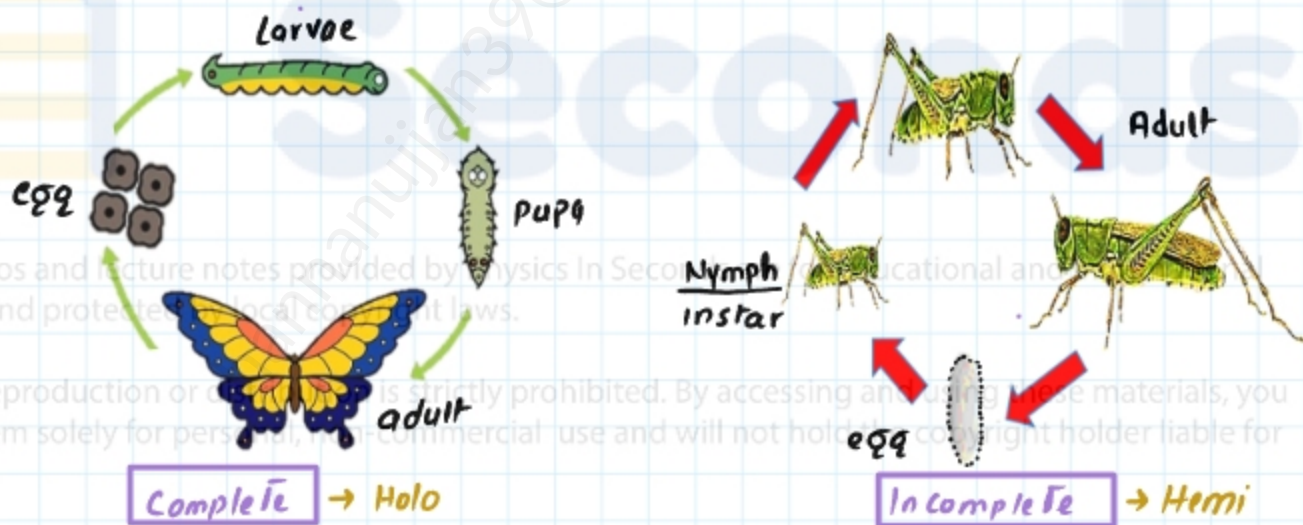
- Separate → **Sexes**
- Male → Testes → **Sperm**
- Female → ovaries → **egg**
- Fertilization → **Internal**

METAMORPHOSIS

→ An abrupt change of form or structure during the life cycle

CLASSIFICATION

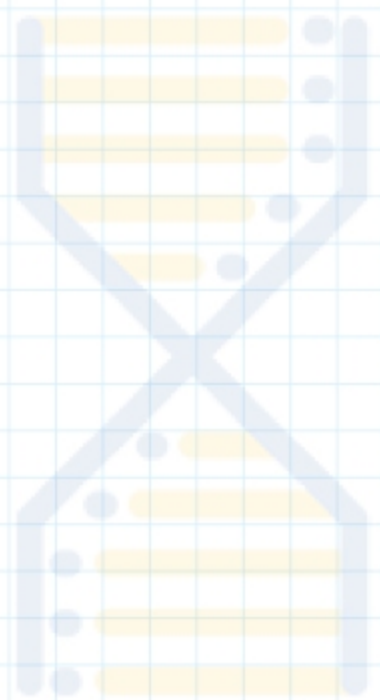
- **Ametabola** → No metamorphosis
- **Holometabola** → Complete metamorphosis
- **Hemimetabola** → Incomplete metamorphosis



MOLTING OR ECDYSIS

- Development of new Exoskeleton and casting (removing) the old skeleton
- Molting does not involve the changes

→ Molding does not involve the changes in the life cycle stages



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