



Animal kingdom

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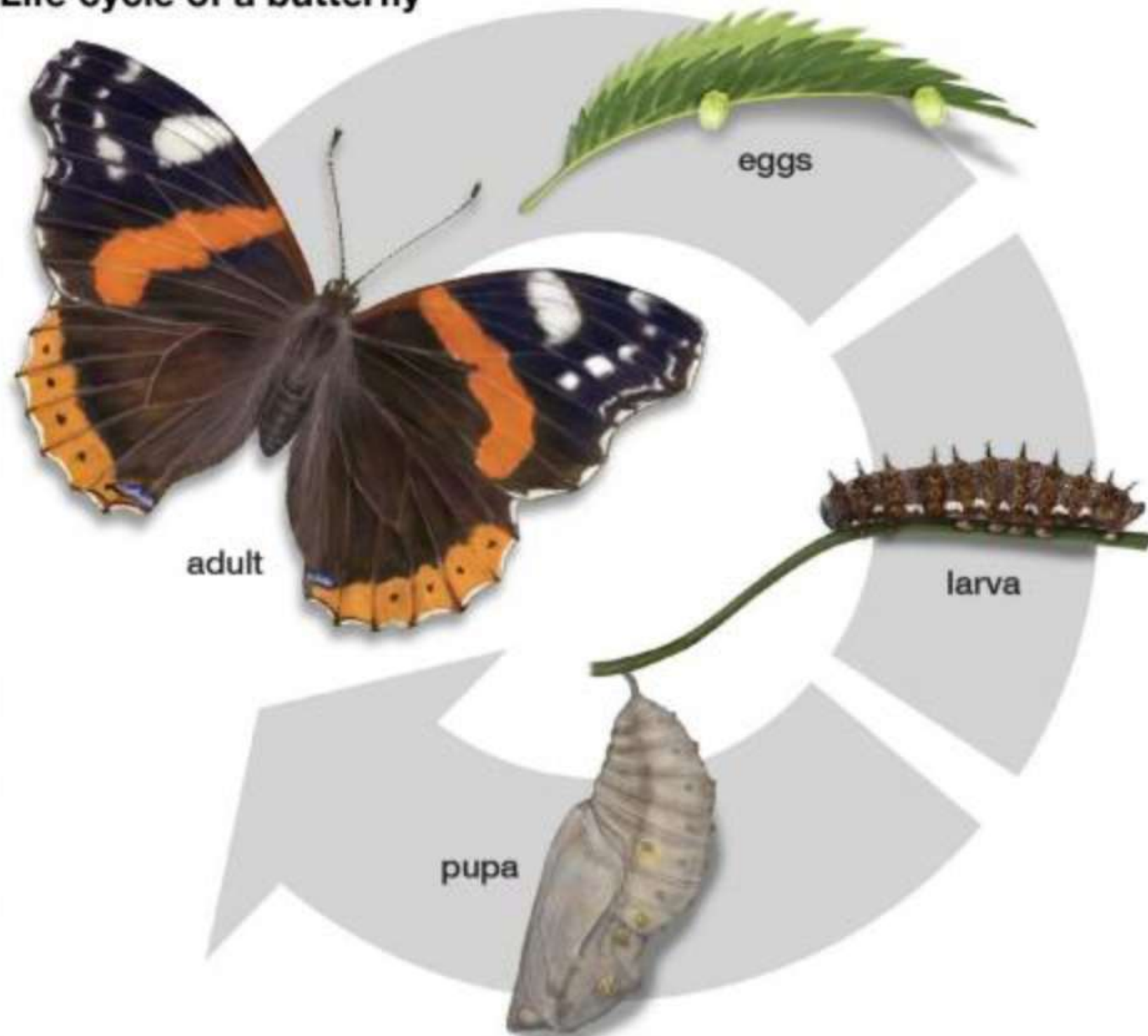




Development

Direct development	Indirect development
1. It is a type of development in which an embryo develops into a mature individual without involving a larval stage.	1. It is a type of development that involves a sexually - immature larval stage, having different food requirements than adults.
2. Metamorphosis is absent.	2. Metamorphosis involving development of larva to a sexually mature adult is present.
3. It occurs in fishes, reptiles, birds, and mammals.	3. It occurs in most of the invertebrates and amphibians.

Life cycle of a butterfly





Fertilization

EXTERNAL FERTILIZATION	INTERNAL FERTILIZATION
1. Takes place outside the female's body.	1. Takes place inside the female's body.
2. Usually, a large number of gametes are released in the surrounding medium (for example water).	2. Male gametes are released inside the body of the female by a copulatory organ.
3. Usually, a large number of gametes are released in the surrounding medium (for example water).	3. Examples: Reptiles, Birds, Mammals, Bryophytes, and Tracheophytes.

Fertilization [निषेचन]

① Internal Fertilization
आन्तरिक निषेचन



in side of mother's Body.

(माता के शरीर के अंदर)

Reptiles (सरीसृप) # Birds (पक्षी)

Mammals (स्तनधारी)

बाह्य निषेचन

② External fertilization



जल/Water

Fishes (मछलियाँ)

Amphibians (उभयचर)

अंडज



Oviparous

(Egg-laying organisms)

जरायु



Viviparous

(Directly give birth to young ones)

Mammals

जन्तु

① Fishes
मछली

② Amphibia
उभयचर

③ Reptiles
सरीसृप

④ Birds
(पक्षी)



Difference Between Cold Blooded And Warm-Blooded Animals

- ❖ Cold-blooded animals can be defined as animals that cannot regulate their internal body temperature with the change in the environment.
- ❖ They cannot survive in extreme temperature conditions.
- ❖ Examples of cold-blooded animals are reptiles, fish, etc.

- ❖ Warm-blooded animals are defined as animals that can regulate and maintain constant internal body temperature.
- ❖ They can survive in any temperature range as they can adapt to it easily. Mammals are the best examples of warm-blooded animals.

Animals (जन्तु)

① Warm Blooded Animals.
(गर्म रक्ततापी)



Controls internal temp.

[आन्तरिक तापमान को
नियंत्रित कर सकते हैं।]

Birds (पक्षी)

Mammals (स्तनधारी)

② Cold Blooded Animals.
(शीत रक्ततापी)



X

Fishes (मछली)

Amphibians (उभयचर)

Reptiles (सरीसृप)

Chordates
(OR) Vertebrates
(कशेरुकीय प्राणी)

Chord → X
कांड
↓
की हड्डी → X
Backbone

जंतु जगत्

Chordates
(OR) Vertebrates
(कशेरुकीय प्राणी)



⇒ Fish (मछली)

⇒ Amphibians
(उभयचर)

⇒ Reptiles
(सरीसृप)

⇒ Mammals (स्तनधारी)

Notochord
नोटोकांड

⇒ Birds (पक्षी)