

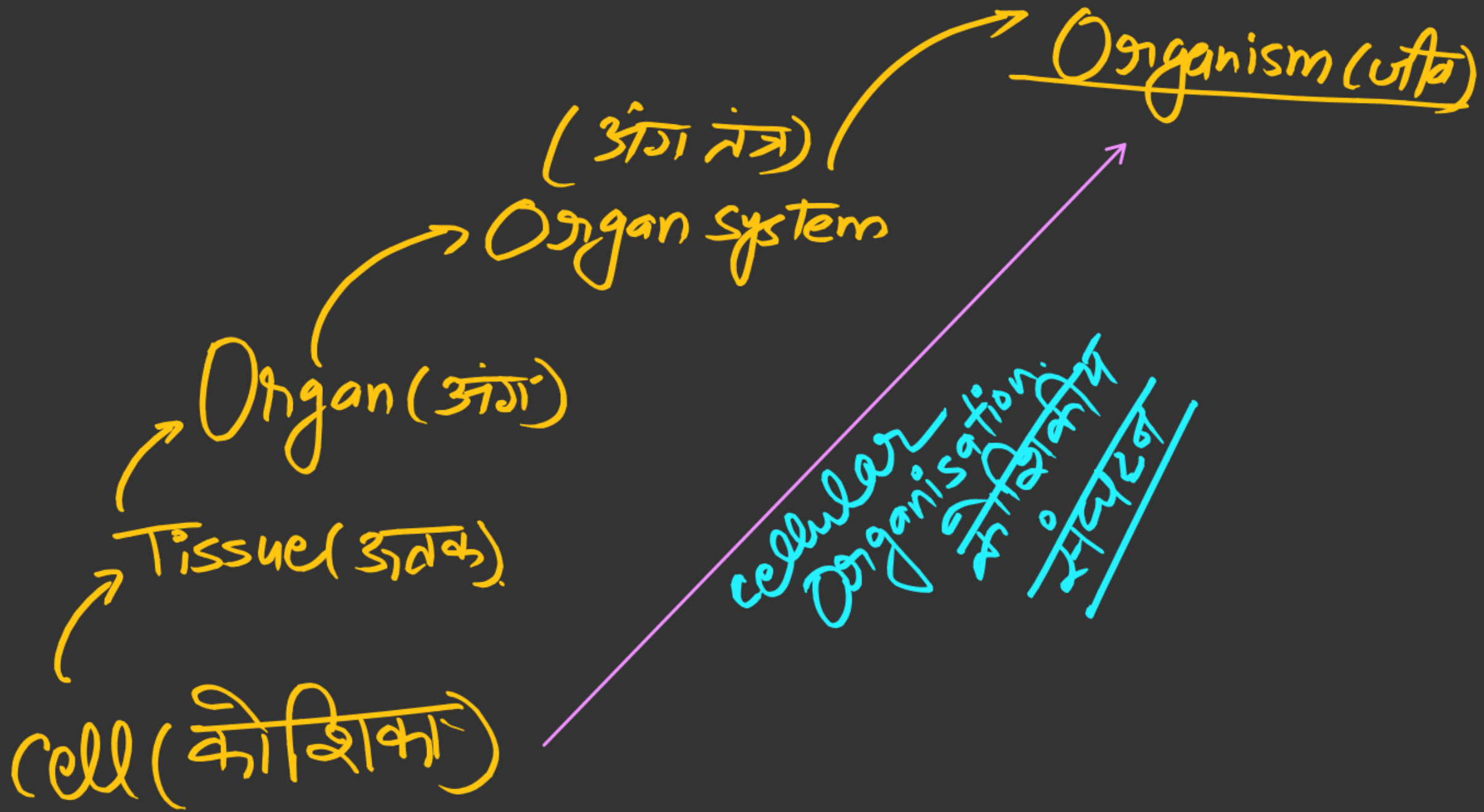


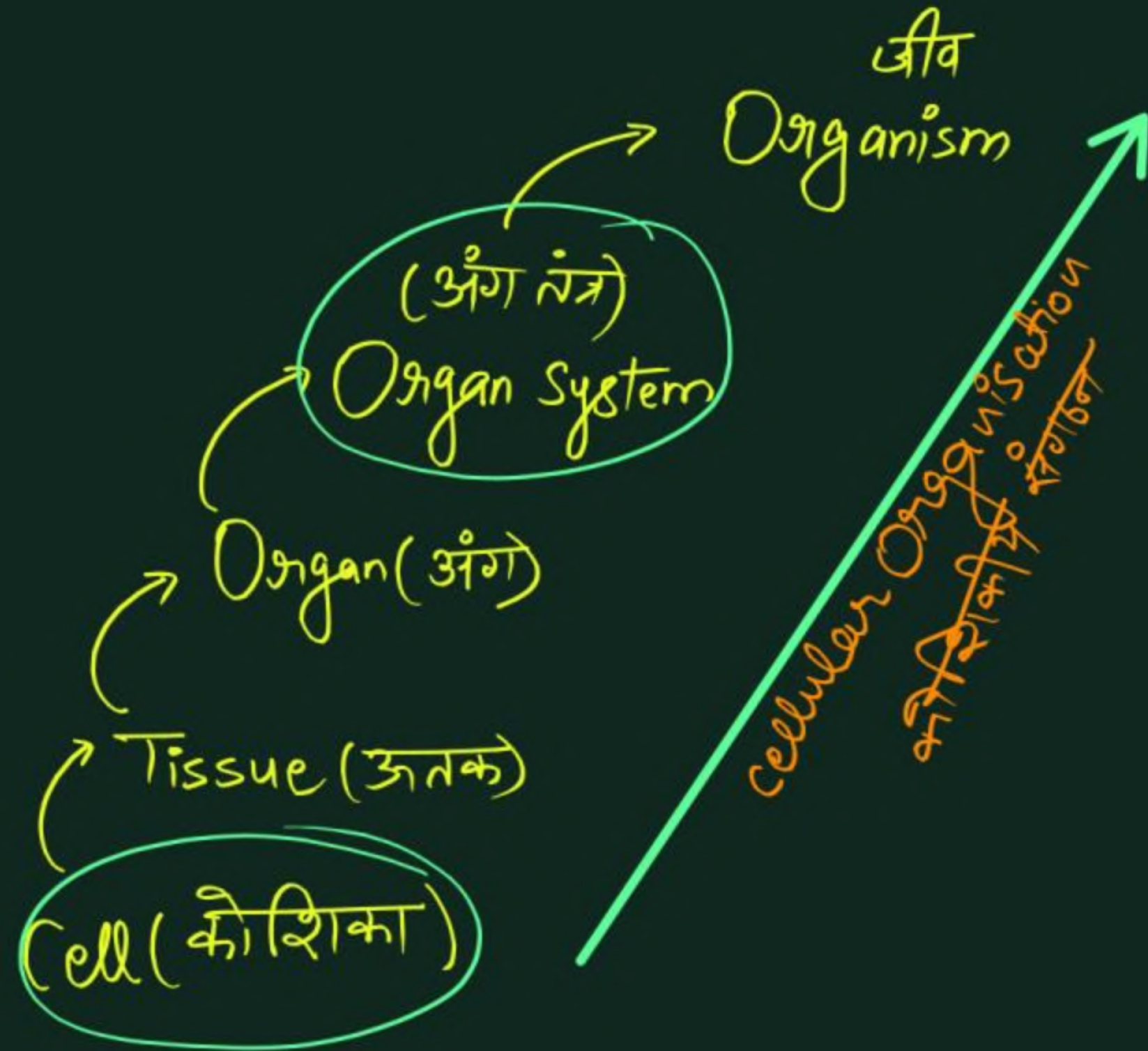
# Animal kingdom

By Amrita Ma'am

જાન્યુ જાગત







Amoeba (अमीबा)

↓  
Unicellular  
एककोशिकीय

Human (मानव)

↓  
Multicellular  
बहुकोशिकीय

## Germ Layer (जर्म परत)

Triploblastic  
[त्रिपरतीय]

- ① endoderm (अन्तर्दर्म)
- ② Mesoderm (मीजोडर्म)
- ③ Ectoderm (ऐक्टोडर्म)

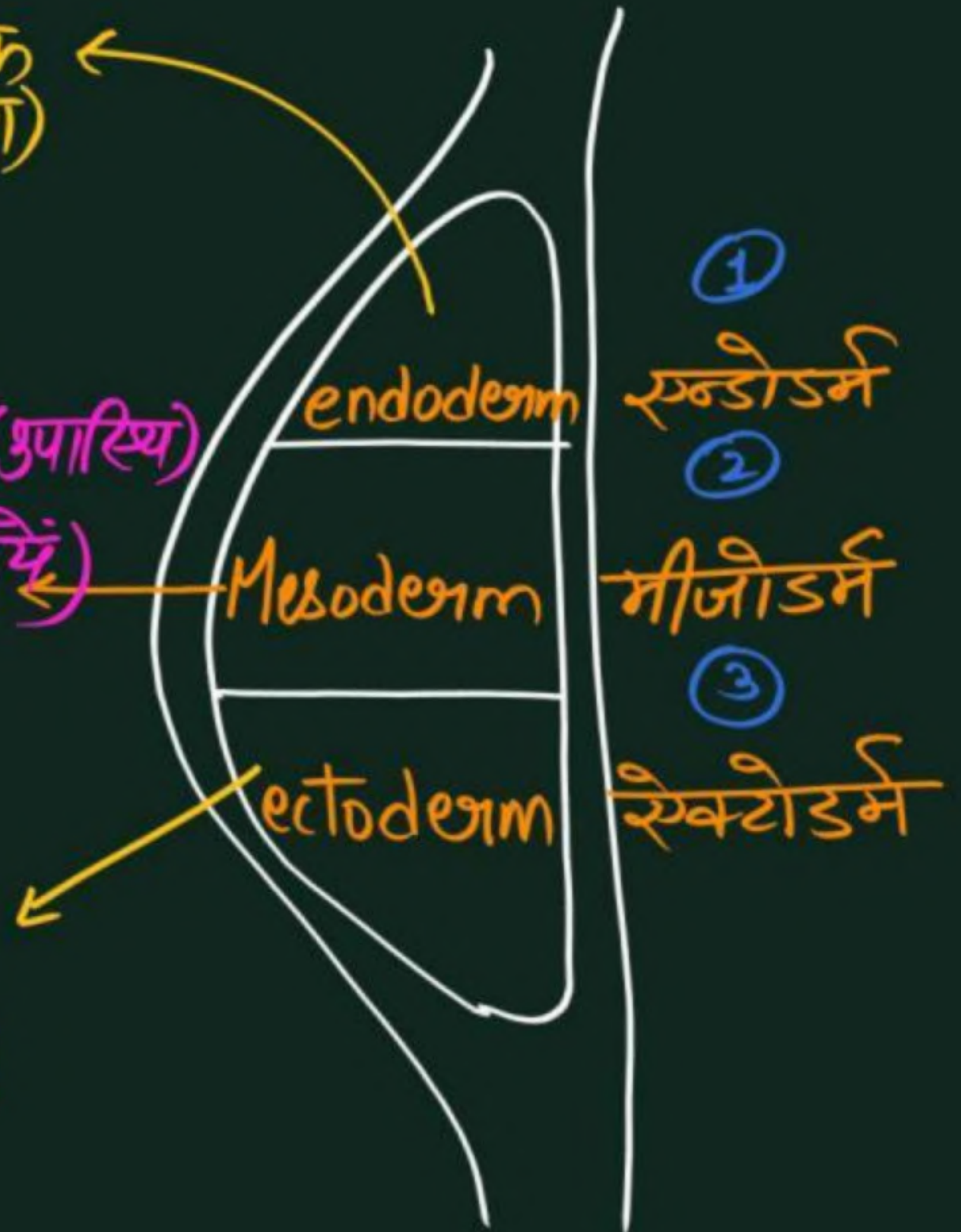
Diploblastic  
(द्विपरतीय)

- ① endoderm (अन्तर्दर्म)
- ② ectoderm (ऐक्टोडर्म)

Internal Organs (आन्तरिक अंग)

Red Bone marrow (लाल अस्थिमज्जा)  
Blood (रक्त), Bones (अस्थि), Cartilage (अपास्थि)  
Heart (हृदय), Blood Vessels (रक्त नलिकाएँ)

Skin (त्वचा), Kidney (पूतक), Brain (मस्तिष्क)





# 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



दामोदर ०१

Metamorphosis

# Development (विकास)

(अप्रत्यक्ष विकास)

Indirect Development

Larva (लार्वा) ✓

"Metamorphosis" ✓

(कायान्तरण)

# Butterfly (तितली)

# Silk Moth (रेशम का कीड़ा)

# Mosquito (मच्छर)

# Frog (मोड़क)

(प्रत्यक्ष विकास)

Direct Development

Larva → X

# Fish (मछली)

# Reptiles (सरीसृप)

# Birds (पक्षी)

# Mammals (स्तनधारी)



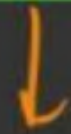
# Fertilization

| 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

जन्मदात्री

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)