

REPRODUCTION IN VERTEBRATES

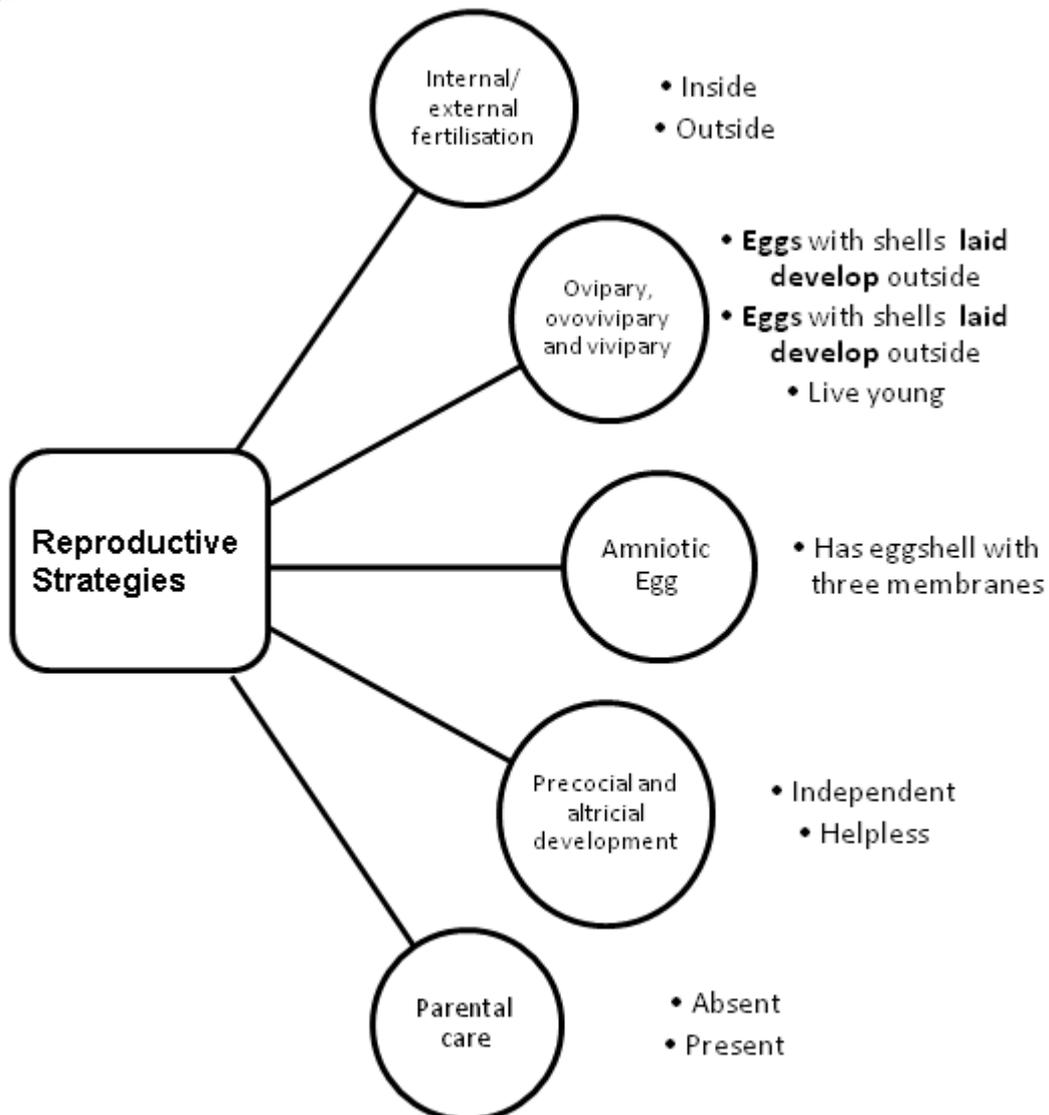
26 FEBRUARY 2014

Lesson Description

In this lesson we:

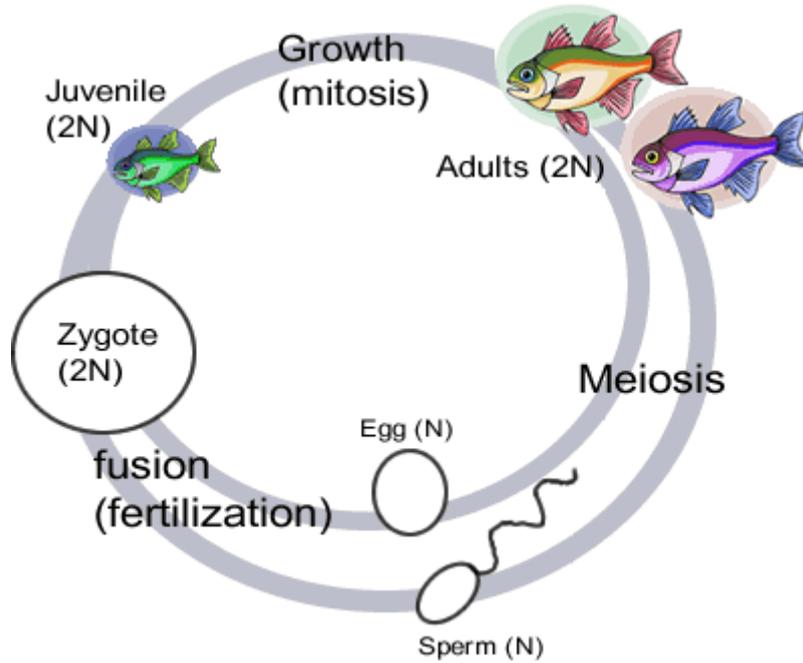
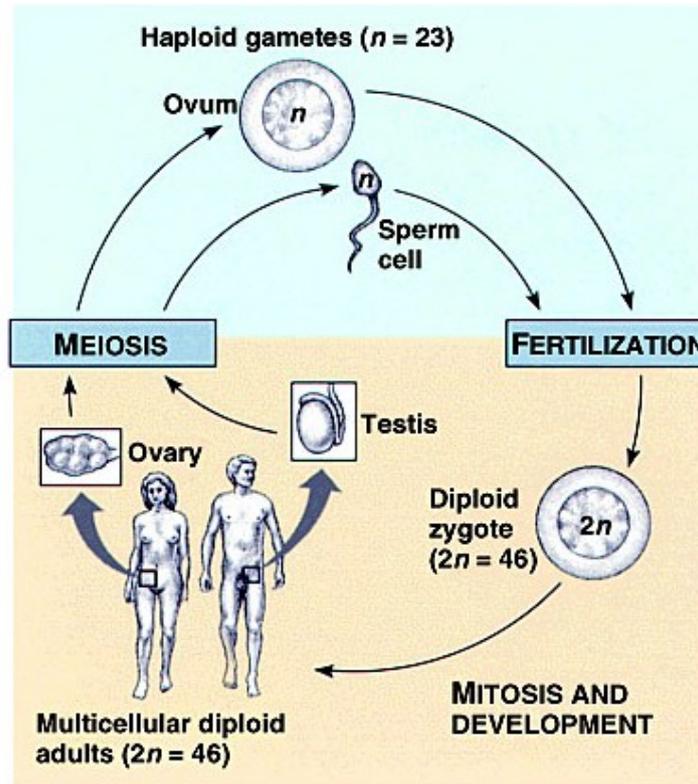
- Review the schematic outline of the human life cycle to show the role of meiosis, mitosis and fertilisation.
- Define Sexual and asexual reproduction, copulation, fertilisation
- Describe the role of the following reproductive strategies in animals in maximising reproductive success in different environments (using relevant examples):
 - External fertilisation and internal fertilisation
 - Ovipary, ovovivipary and vivipary
 - Amniotic egg
 - Precocial and altricial development
 - Parental care

Summary



notes for...

The Human Life Cycle





Test Yourself

Select the most correct answer from the options given. Write down only the correct letter

Question 1

Which organisms produce a small number of large, well-cared for offspring?

- (i) Fish
- (ii) Frogs
- (iii) Humans
- (iv) Buffalo

The correct combination of organisms that meet the above criteria.....

- A (ii) and (iii)
- B (i) and (iii)
- C (iii) and (iv)
- D (i) and (ii)

Question 2

The part of the amniotic egg that surrounds the developing embryo

- A Allantois
- B Chalaza
- C Albumen
- D amnion

Question 3

An example of an ovoviviparous animal

- A Lizard
- B Both result in different cells forming
- C Both result in diploid cells forming
- D Both involve cytokinesis

Question 4

Organisms which display altricial development

- A Always lay eggs
- B Always give birth to live young
- C Young can fend for themselves when they hatch or are born
- D Young are helpless when they hatch or are born

Question 5

Indicate whether each of the statements in COLUMN I applies to **A only**, **B only**, **both A and B** or **none** of the items in COLUMN II. Write **A only**, **B only**, **both A and B** or **none** next to the question number (1.3.1–1.3.8) in the ANSWER BOOK.

COLUMN I		COLUMN II
1	Albumen	A: White part of inside of egg B: Yellow part of inside of egg
2	Allantois	A: Nourishment B: Excretion
3	Precocial development	A: Bird born with feathers B: Bird born eyes closed with no feathers
4	Oviparous	A: Bird B: Frog
5	High degree of parental care	A: Fish B: Frog

Question 6

Give the correct biological term for each of the following descriptions. Write only the term next to the question number (a to d) in below.

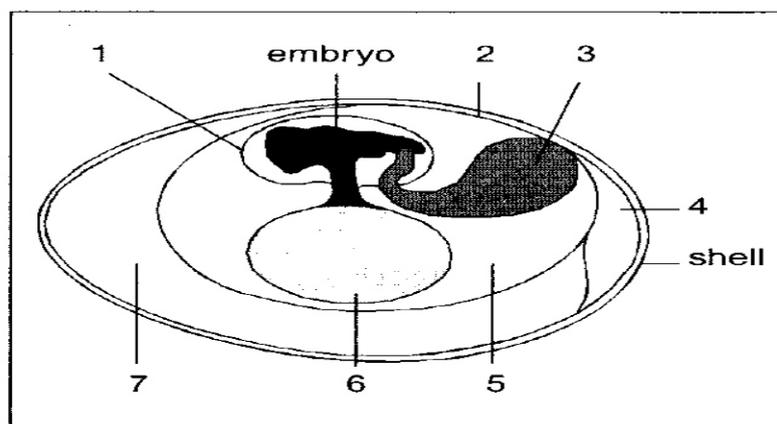
- The type of fertilisation where egg and sperm fuse in the water in the environment
- The part that holds the yolk in place in an amniotic egg
- The type of reproduction where the young are born alive
- The type of reproduction where eggs are laid and develop outside the body



Improve your Skills

Question 1

Study the diagram and answer the questions that follow:



notes for...

- 1.1 Identify the membrane numbered 1, 2 and 4
- 1.2 Provide the functions of the fluid found within part 1.
- 1.3 Provide the number that represents the allantois in this diagram
- 1.4 What is the function of the allantois?
- 1.5 Explain the difference between viviparous and oviparous embryo development.
- 1.6 Briefly explain the meaning of the terms:
 - a) precocial young
 - b) altricial young

Question 2

A



B



C



D



- 2.1 Provide the letter of the diagram above that depicts:
 - a) Internal fertilisation
 - b) Oviparity
 - c) Altricial development
- 2.2 Provide the disadvantages of the type of fertilisation shown in D
- 2.3 Provide the advantages of the type of development (altricial or precocial) depicted in diagram B.
- 2.4 What are the advantages of the amniotic egg shown in diagram B and D.

Question 3

Name and describe SIX different strategies that animals use to ensure reproductive success in different environments. Provide suitable examples.