

REPRODUCTION

INTRODUCTION zoology

biological process in which new offsprings are produced from the parent(s) is called as Reproduction.

ASEXUAL

- Progeny from a single parent.
- individuals are genetically & morphologically identical to the parent as well as one another
- Thus, the progeny are also called as clones.

SEXUAL

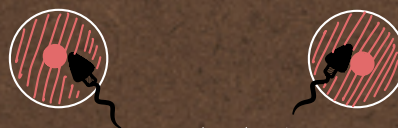
- Involves two parents i.e. requires fusion of the male & the female gamete thus forming a zygote.
- Offsprings are genetically different from each other as well as the parents.

FRATERNAL TWINS

In some cycles, it's possible for both ovaries to release an egg cell each simultaneously. Thus, after copulation, when both these eggs are fertilised, the twins so formed will be termed as fraternal twins.

- Called as dizygotic twins, since two different eggs are fertilized separately by two sperms, thus forming two zygotes.

∴ Hence: - Separate placenta
- Genetically distinct
- Separate amniotic sacs



Gender Possibilities: GG / BB / GB / BG

also called unidentical / dizygotic / fraternal twins

Can twins have different blood groups?

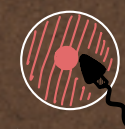
⇒ Yes, twins having same blood groups may fall in both the categories, but the twins having different blood groups fall in the category of fraternal twins.

Conjoined Twins

- They are the twins who are born physically connected to each other.
- The reason behind this is that, when the identical twins case is in action the zygote fails to split completely and the part which is still attached / connected remains conjoined and thus the twins share some parts of their body.
- They fall in the category of identical twins.

MONOZYGOTIC TWINS

- The condition here starts normally, one zygote is formed after the fusion of 1 sperm and 1 egg. Thereafter the zygote splits into two cells which are like a zygote each.
- Since only 1 zygote is initially formed after the fusion of 1 egg and 1 sperm, they are called as monozygotic twins.
∴ Hence - Shared placenta (may/not)
- Separate amniotic sacs
- Genetically identical
- Same gender
< BB OR GG >
- Also called as identical twins.



Embryonic Development

Q: what are the major features of the embryonic development at various

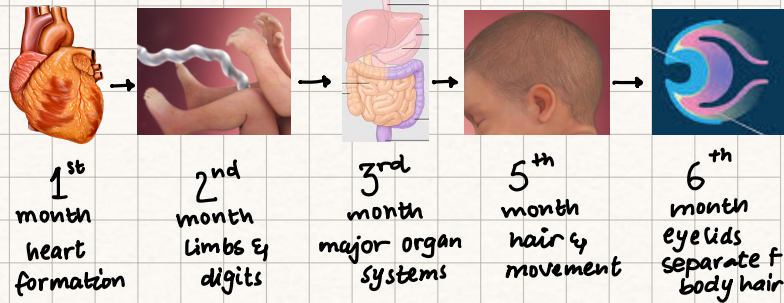
stages of pregnancy!!

Ans: human Pregnancy lasts for 9 months, that is known as the gestation period.

At the end of 9 months the fetus is fully developed & is ready for delivery.

- Names for the baby in the womb also change along with time & their development:
 - 1 cell (right after fusion) → Zygote
 - More than 1 cell (8 weeks) → Embryo
 - after 8 weeks till delivery → Fetus

After 1st month → heart is formed
After 2nd month → Limbs & digits
After 3rd month → organ systems
< 1st trimester >
After 5th month → Hair develops + movements start
After 6th month → fine body hair + eyelashes formed
< end of 2nd trimester > & the eyelids separate.



Now let's see what main development stages occur during the gestation period:

GESTATION period of other animals:

- Opossum (Virginia) → 12-13 days
- Dogs → 58-68 days (1.9 - 2.2 months)
- Cats → 58-67 days (1.9 - 2.2 months)
- Horse → 330 - 342 days (11 - 11.4 months)
- Elephant → 617 days (20.5 months)