

- Circulatory System - Heart completely 4-chambered
 - neither sinus venosus nor truncus arteriosus present.
 - only right aortic (systemic) arch persists in adult
 - Renal portal system vestigial
 - Red blood corpuscles nucleated
- Respiratory System - Respiration occurs by compact, spongy, non-distensible lungs continuous with thin-walled air sacs.
- excretory System - Kidneys metanephric & 3-lobed
 - Ureters open into cloaca
 - Urinary bladder absent
 - Birds are ureotelic
 - excretory substances of urates eliminated with faeces.
- Nervous System - Brain large but smooth
 - cerebrum, cerebellum and optic lobes greatly developed.
 - Cranial nerves 12 pairs
- Olfaction - olfactory organs are poor
- Middle ear contains a single ossicle
- Eyes large and present nictitating membrane; Sclerotic plates & a vascular pecten.

- Reproductive System - Sexes are separate
 - Sexual dimorphism often well marked.
 - Male has a pair of abdominal testes & a pair of sperm ducts
 - A copulatory organ absent except in ratites, ducks, geese, etc.
 - Female has a single functional left ovary and oviduct.

- Fertilization - Fertilization internal, preceded by copulation and courtship.
 - Females oviparous.
 - Eggs large with much yolk and hard calcareous shell.

- Eggs develop by external incubation.
- Cleavage discoidal, meroblastic.
- Development direct
- Extra-embryonic membranes - are present i.e. amnion, chorion, allantois and yolk-sac
- Newly-hatched young fully formed (precocial) or immature (altricial)
- Parental care is well marked.