Animal Bauplan

Animals

- Eukaryotic, multicellular and heterotrophic organisms •
- Tissues that develop from embryonic layers
- Possess mitochondria •
- Enzymes to digest food inside the body •
- No cell walls
- Proteins Collagen only found in animals •
- Two cell types which are not found in any other organisms •
 - Muscle cells
 - Nerve cells
- Cells organised into tissues

Reproduction and development

- Sexual reproduction (except parthenogenesis) •
- **Diploid stage dominates** •
- Haploid stage sperm and eggs produced by meiosis
- Flagellated motile sperm and eggs produced by meiosis
 Flagellated motile sperm and non-motile egg forming zygote
 Body plan results from:

 Pattern of development driven by genome
 Millions of years of evento
 Gastrulation

 Symmetry presence or above •
- Symmetry presence or abrence
- Ussues some have tissue, formed from Gastrulation
- Body Cavity (Coelom) in triploblastic animals, a fluid or air filled cavity between the digestive system and the outer body cover - protection of organs
- Segmentation
- Appendages
- Skeleton

Evolution of Animals

- Choanoflagellate aquatic protist •
- Adhesive cell bodies allow formation of colonies
- Collar consisting of microvilli and flagellum move and form water current, bringing in bacteria and other organisms and trapping them to be consumed
- Collar cells found in many animals such as cnidarians, echinoderms and flat worms, almost identical to Choanoflagellate - not found in protists, plants or fungi
- DNA sequences show choanoflagellates and animals are sister groups •