Introduction to Kingdom Animalia

So…What Makes an Animal?

Heterotrophic – Obtain _____ (organic molecules) from _____

Eukaryotic – membrane bound _____ and _____

Multicellular – made up of _____ cell

Cells that DO NOT have _____

Animals are divided into _____ groups

INVERTABRATES – _____

Ex. Sponge, Jelly fish, Spider

VERTABRATES – _____

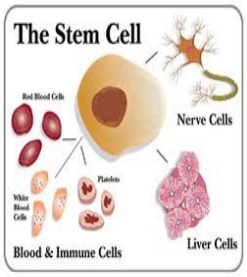
Ex. Bears, Humans

Cell Specialization and Division of Labour

Animals have _____ to _____

Ex.

- Nerve cells for responding to the environment
- Muscle cells for movement



Division of labour - Groups of specialized cells carrying out different tasks for an organism

What Animals MUST Do to Survive

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1) Feeding:

- Carnivores: _____
- Herbivores: _____
- Omnivores: _____
- Parasites: _____
- Filter Feeders: _____
- Detritus Feeders: _____

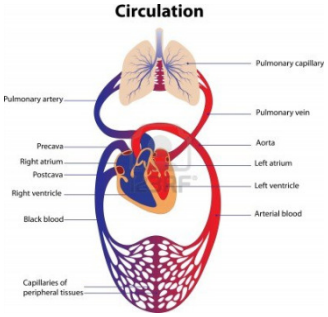
2) Respiration

Living cells use O_2 and give off CO_2

- Animals must _____in order to take in O_2 and get rid of CO_2
- Small animals that _____can breathe through their _____
- Large animals have different adaptations for breathing suited to different habitats

3) Internal Transport

Internal Transport – most multicellular animals have a _____to move gases and nutrients to all body cells

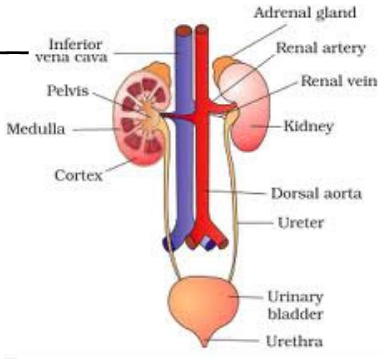


- System includes;
  - Pumping organ (Ex. Heart)
  - Fluid (Ex. Blood)
  - Vessels

Some small animals use _____ instead of a transport system

4) Excretion

Cells produce _____ that are harmful and need to be _____



- _____ (aquatic) use _____ to carry waste from their tissues into the water
- _____have _____ that store and then eliminate waste

5) Response

Animals have the ability to _____ by using specialized cells called nerve cells

- Sense organs like eyes, ears, nose allow animals to:

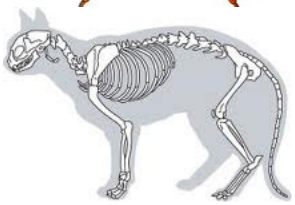
- _____of danger
- Find others of their own kind
- Find _____
- Brain – nervous system's _____

6) Movement

Movement: Most animals _____ but some are _____(non-moving)

Most animals that move use muscles and a skeleton

- Skeleton on the _____ = *exoskeleton*
  - Ex. Crab
- Skeleton on the _____ = *endoskeleton*
  - Ex. Cow



7) Reproduction

Animals must _____ in order for their species to _____

- Some animals switch back and forth between asexual and sexual reproduction
  - Both stages are _____

Direct Development – baby animals that _____ _____

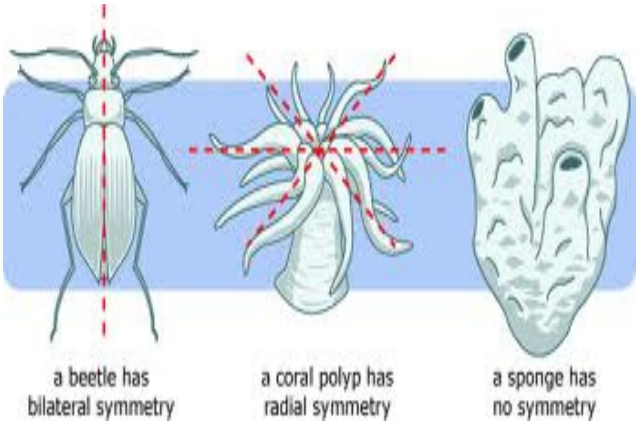
Indirect Development – eggs hatch into larvae

- Immature young look _____
- Larvae undergo metamorphosis

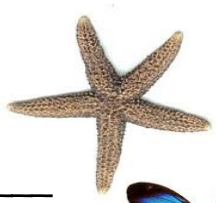
Trends In Animal Evolution

Levels of organization _____ as animals become _____

- More specialized
  - _____
  - _____
  - _____

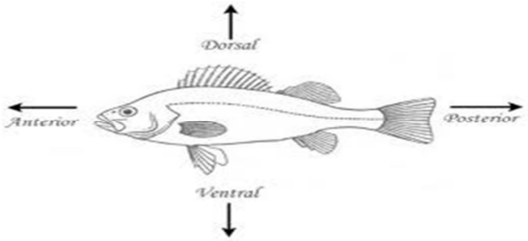


Trends in Animal Evolution - **Symmetry**



- Simple animals have _____ symmetry
  - Body parts that repeat around an _____
- Complex animals _____ symmetry
  - Body parts that repeat around an imaginary line drawn down the middle

Animals with bilateral symmetry have specialized _____ends, _____ sides



Concentration of sense organs and nerve cells

More complex animals have _____and _____ concentrated in the "head", this is called _____

Try This…

- What is an animal?
- List seven essential functions in animals. Define them in your own words
- Compare two different kinds of symmetry found in the animal kingdom
- Describe three basic trends in animal evolution