Sexual Reproduction

Zygote (fertilized egg)

Planula - Free swim larval form

Alternation of Generations

Asexual Attack
Mollusks

Defining Characteristics:
  "Soft body"
  - Muscular foot
  - Complex ganglia that controls breathing, movement, digestion

- Circulatory system to carry material throughout body.
  - Most have open c. system
  - Squid & octopi have a closed c. system
  - Heart that pumps blood through vessels that form closed loop.

- Have mantle, covers organs, secretes shell

Additional notes:
- Shell protects & keeps from drying out.
Gastropods - Snails & Slugs
- Snails have shell
  - move w/ muscular foot
  - **Radula** ➔ rasping tongue for scraping algae from rocks
- Bivalves - Clams, mussels
  - Have 2 shells, connected by hinged joint
  - Filter feeders, take in $H_2O$, filter, expel $H_2O$
  - Open circ. system, fluid not contained in vessels
  - Carries materials throughout body

Cephalopods - Tentacles (modified muscular foot)
- Closed circ. system w/ heart that pump blood
- Defined head w/ complex eyes & senses
Annelids
- Segmented; having nearly identical repeating body parts called metamersism
- Closed circ. system
- Complex nervous system w/ brain
- Nerve cord connects brain to ganglia in e. segm.
- Fresh salt H2O + on land

Earthworm
- 100-175 segments
- Leave behind castings; make soil rich
- Move w/ little hairs called setae

Marine Worms
- Common here - Clamworms
- Many bristles called parapodia used for respiration & locomotion
- Some eat-mollusks; others filter feed.
- Polychaetes - tube worms

Leeches
- Some parasites, but not all
- Have 32-34 segments
- Some have anticoagulant
  - Chemical that thins blood to keep it flowing; not clot.
1. Worms line up head to tail.
2. Exchange sperm
3. Slime tube forms around clitellum
4. Dries & fills w/ fluid
5. Worms wiggle out of the tube
6. Tube passes over female pore which deposits eggs into capsule
7. Then passes over male pore & deposits stool sperm
8. Slime tube slips off & forms cocoon for fertilized eggs
9. Bacteria decay outer part of cocoon, releasing baby worms when conditions are favorable.