NON-Amniotes--> amphibian (moist, scallesless, permebale skin , loss of limbs derived character in some, most have four well develped limbs)

amphibian

shared derived characters:
mosit,permeable skin(cutaneous gas exchange), poison granular glands,papilla amphibiorum, levator bulbi muscle of orbit, Other feature(all adults--carnivores, unique anuran body form, cannibalism common, most lay eggs on land(oviparity), amphibian skin defense mechanism(mucus glands and posion glands, some have aposmetic coloration, cane toad introduced as pests

moist, scallesless, permebale skin , loss of limbs derived character, most have four well develped limbs

MONOPHYLETIC LINEGAE)

Order Caudata(Salamanders): walking trout locomotion

Anurans(frogs and toads)

Specialization of Body for jumping , hindlimbs and muccles form a lever systme for catapulting , eyes large --placed forward on head for binocular vision know anurans locomotion specialized)

gymnophionans(caecilians)

in trophics, specialized body fr burrowing and derived loss of limbs, gretaly reduced eyes , dermal folds, **UNIQUE TO CAECILIANS(scales over the skin and protrusible temticles**), feed on ground invert, internal fertilization, oviparity and viviparity, young 20-60% adult length, fetuses obtain energy by scarping maternal from sidewalls of oviduct using specialized embryonic teeth, gas exchange btw fetal gills and oviduct walls

salamander diversity
Paedomorphosis: retention of larval chrctristcs in adult form:
tooth and bone pattern
eyelids absent
functional lateral line and retntn of gill slits e.g. mudpuppy
Plethodontidae: often lost lungs, no aquatic larval stg, modifcitns of hypobranchial apparaus for protruding tongue to captr prey

Diversity:
1)semiaquatic dampers and swimmers
2)Burrowers
3)specialized aquatic
4) teerestrial walkers and hoppers
5) arboreal

blowimp hunting--why still able to eat posinous frog--

bcz cooking kills poison

courstship pattern imp for species recognitn, phermones, mainly internal fertilization via spermatophore(species variation in size and shape), elaborate display sexual dimorphism, refelect sexual selelctn by female, MIMICRY BEST KNOWN IN SALAMANDERS

Anurans vocalization **for mating and reduce watre loass) (varry among and within species, identify sexes, speccies and individual) benefit --attarct mates, cost--energy expenditure and cue for predator**, mainly external sometimes internal fertilization, parallel evolution of similar repeoductive habits in different lineages, parental care in frogs, 3 stages of tadpole metamorphosis(stimulated by thyroxine)--inc in tadpole size--fast growth, hind leg develp--slow grwth, fore legs emerge and tail regresses(rapid)--reduces predation at a stage when individ are most vulnerable, dart poisonous frogs in trophics--consists alkanoids in their skin obtained from prey

video: in newt tetradetoxin which paralyzes predators such as bullfrogs eats newts so inside stomach--race between acids and newts poison and bullfrog callapses and dies so Newt is posionous bcz it kills not venomous