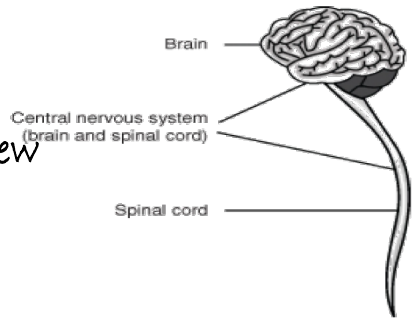
Chordates

Study Notes & Vocabulary Review



Name: _____

- The order of the classes is from "Least evolved -→ Most evolved"
- These study notes contain ***most*** of the information in the Chordate PowerPoint Notes.
- Characteristics that apply to more than one class, have the words used more than once.
- Next to each class in the "hand printing font", I have put the **Must Know Items**. Quiz each other on them (or put them on flashcards).

General Characteristics of Phylum Chordata

_____—surface of the body where the ***hollow nerve cord*** is located

_____—a supporting rod running below the nerve cord at some point in the life span of chordates

_____—pouches, found near the throat region, are present in all chordates, also known as "gill pouches or gill slits", they only appear in early development in some chordate classes

_____—extends beyond the anus for at least part of their lives

Sub-Phyla of Chordata

- Non-Vertebrate Chordates: lack a bony backbone of vertebrae surrounding the nerve cord

  _____—invertebrate chordates which look a bit like a fish, but do not have fins

  _____—filter-feeding, invertebrate chordates

- Vertebrata: have a bone / vertebrae surrounding the nerve cord (like our backbone)

  _____—individual segments which together make up a backbone

Class Agnatha: - these fishes are jawless

_____—the class which includes the ***jawless*** fishes

_____—the jawless fish which produces copious amounts of slime

_____—the parasitic jawless fish which sucks the body fluids out of its host

_____—structures covering the outer surface of fish

_____—structures used by fish for respiration

_____—the number of chambers in the heart of a fish

Class Chondrichthyes: these fishes have jaws and cartilage

_____—class which includes the ***sharks, skates, and rays***

_____—major advancement in their ability to feed

_____—makes up the skeleton of sharks and rays

_____—structures covering the outer surface of fish

_____—structures used by fish for respiration

_____—the number of chambers in the heart of a fish

Class Osteichthyes - these fish have jaws and bones

_____—the class which includes fish like perch, salmon, and tuna

_____ **-finned** —fish which have thin fins

_____ **-finned** - terrestrial organisms are believed fish ancestor

_____—structures covering the outer surface of fish

_____—structures used by fish for respiration

_____—the number of chambers in the heart of a fish

_____—fishes whose eggs hatch outside the mothers body Latin words ovi = egg

_____—fishes whose eggs develop and hatch within the mother's body leading to "live" birth
Latin words: ovi = egg; vivi = live

_____—fishes whose young develop inside the mother without the presence of an egg
Latin words: vivi = live

Class Amphibia – this class is making the "jump" onto land
-they must lay their eggs in water

_____—the class of organisms that are aquatic as larvae and terrestrial as adults

_____—an additional respiratory organ in amphibians - it must be kept moist to do its job

_____—a membrane which serves as a transparent eyelid in frogs

_____—a membrane involved a frog's sense of hearing **SKIN**—an additional respiratory organ in amphibians - it must be kept moist to do its job

_____—large, piercing teeth found on the roof of the frog's mouth

_____—structures present in adult amphibians for respiration

_____—a structure, found in many organisms, through which digestive wastes, urine, and gametes leave the body

_____—the number of chambers in the amphibian heart

Class Reptilia:

Well adapted for living on land, and dry environments. Adaptations include:

- Well-developed lungs and "3 ½" chambered heart
- Strong limbs
- Water-conserving excretory system
- Internal fertilization and amniotic egg

_____—class of vertebrates which have dry, scaly skin, lungs, and terrestrial eggs

_____— egg which can develop in a terrestrial environment without drying out

_____—the number of chambers a reptilian heart, (some types of reptiles show evolution toward a 3.5 chambered heart)

Body Temperature: the dividing line

All of the Classes ABOVE are "cold-blooded".

- _____—organisms whose body temperature depends on the surrounding environment

The Classes below are "warm-blooded".

- _____—organisms whose body temperature is regulated internally

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<u>Class Aves:</u> Adaptations for flight include:

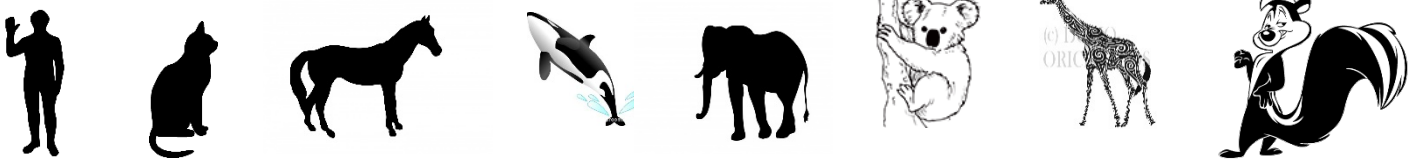
- Two legs covered in scales for walking or perching;
- Two limbs (wings) covered in feathers, -most species can fly
- One way flow of air through the respiratory system via air sacs and then the lungs – allows higher metabolic rate
- Internal fertilization and amniotic egg with shell

_____the class of vertebrates which includes birds

_____—structures which aid in flight and provide insulation in birds

_____—the number of chambers in a bird's heart

<u>Class Mammalia:</u> Feed young from mammary glands, and bodies covered with hair.



Groups: •Monotremes–lay eggs

•Marsupials–most development occurs in pouches

•Placental Mammals– development occurs inside the mother

_____—glands which produce milk

_____—this substance covers the outer surface of most mammals

_____—substance found beneath the skin in mammals which conserves body heat and provides a storage form of energy

_____—the number of chambers in a mammals heart