Phylum and Class List

**Porifera** (Super Phylum) – Sponges
   - Calcarea (Phylum) – Calcium Sponges
   - Silicarea (Phylum) – Silica sponges

**Cnidaria** (Phylum) – jellies, hydra, corals

**Platyhelminthes** (Phylum) – flatworms, planarians, tapeworms

**Rotifera** (Phylum) – Rotifers

**Annelida** (Phylum) – Segmented worms, earth worms, leeches

**Mollusca** (Phylum) – Clams, Octopus, Snail

Nemertea or **Nematoda** (Phylum) – Roundworms

**Arthropoda** (Phylum) – Insects, Crustaceans

**Echinodermata** (Phylum) – Star fish, sea urchins, sea cucumber
Chordata (Phylum) – dorsal nerve cord, notochord, pharyngeal gill slits, post anal tail

Urochordata (Sub-phylum) – Tunicates

Cephalochorata (Sub-phylum) – Lancelets

Craniata or Vertebrata (Sub-phylum) – backbone

Agnatha (SuperClass) – hagfish, lamprey

  Myxini (Class) – hagfish (note craniate not vertebrate)

  Cephalaspidomorphi (Class) – lamprey, ammocetes

Chondrichthyes (Class) – sharks, rays

Osteichthyes (SuperClass) – boney fish

  Actinopterygii (Class) – rayfin fish

  Actinistia (Class) – lobefin fish

  Dipnoi (Class) – Lungfishes

Amphibia (Class) – Frog, salamanders

Reptilia (Class) – lizards, snakes, turtles, birds

  Aves (Subclass) – birds

Mammalia (Class) – Dogs, Monkeys, Humans, Kangeroos,
Kingdom: Animalia
Phylum: Annelida
Circulatory System: Closed
5 pairs of hearts (aortic arches)
Pair of kidneys each segment
Gas X-change through skin
Hermaphrodite
Segments increase body size

Phylum: Nematoda
Heartworms

Unsegmented
Body enclosed by cuticle
First Complete “tube within a tube”
Phylum: Porifera

Asymmetrical Symmetry
Begin as larve

Phylum: Cnidaria

Polyps (anemones) and Medusa (jellyfish)
Radial Symmetry
Ectoderm and endoderm tissue
Mesoglea

Phylum: Platyhelminthes (Flat/Tapeworms/Flukes)

Eye Spots
Bilateral Symmetry
Unsegmented
Incomplete Gut (mouth only)
Phylum: Arthropoda

Bilateral Symmetry
Open circulatory system
Exoskeleton made of chitin
Phylum: Mollusca

- Bilateral Symmetry
- Shell (Calcium Carbonate)
- 3 Major Parts (Mantle, Visceral mass, Muscular foot.)
- Open Circulatory system
- Umbo Located anterior side closest to mouth.

**Gills**

**Foot**

**Incurrent Siphon**

**Excurrent Siphon**

**Phylum:** Mollusca

**Umbo**

**Mouth**

**Stomach**

**Intestine**

**Kidney**

**Heart**

**Umbo**

**Posterior Adductor**

**Anterior Adductor**

**Foot**
A. Feeding Mechanism of clam.

Water enters the mantle cavity from the rear and is pulled forward by the beating of cilia to the gills and mouth. Water flowing over the gill is filtered, tiny food particles are caught in the mucus coating and carried by cilia in a mucus string, to the mouth. Sand and other indigestible debris are moved to the mantle cavity and removed.

B. Clam anatomy

- Anterior aorta
- Nephridiopore
- Ventriculus
- Pericardium
- Posterior aorta
- Kidney
- Rectum
- Posterior adductor
- Anus
- Excavent siphon
- Incurrent siphon
- Incurrent siphon
- Gonad
- Intestine
- Mantle
- Right gill pair

Foot

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Phylum: Echinodermata

- Bilateral symmetry as larve
- Radial symmetry as adult
- Endoskeleton Calcium Carbonate
- Open Circulatory System

Phylum: Cordata

Subphylum: Cephalochordata

4 Characteristics
1) Postanal Tail,
2) Notochord,
3) Pharyngeal gill slits,
4) Dorsal hollow nerve cord

Subphylum: Urochordata

Bilateral symmetry
Phylum: Cordata

Class: Chondrichthyes
(Sharks/StingRay) No Bone

Liver

Stomach

Pancreas

Spleen

Heart

Intestine
Phylum: Cordata

Class: Osteichthyes
(Bony Fish)
Phylum: Cordata

Class: Amphibia
(Two different life cycles)
Phylum: Cordata
Class: Mammalia
(Hair, Nurse young,)

Class: Reptilia