WHAT ARE THE MAJOR GROUPS OF VERTEBRATES?
    FISH
    AMPHIBIANS
    REPTILES
    BIRDS
    MAMMALS
       **FISH -**[**TYPES OF FISH VIDEO**](https://www.youtube.com/watch?v=ZlUpovIkvaA)

The various fish groups account for more than half of vertebrate species. There are almost **28,000** known extant species, of which almost 27,000 are bony fish, with 970 sharks, rays, and chimeras and about 108 hagfish and lampreys. **VERTEBRATE,
                 LIVES IN WATER ECTOTHERMS, SCALES
                  OBTAIN OXYGEN THROUGH GILLS**
            JAWLESS FISH
                        no scales
                        no jaws
                        scrape suck or stab food
                        skeleton made of cartilage flexible
hagfish <http://clubtukinews.com/wp-content/uploads/2009/11/hagfish2.JPG>  [hagfish slime video](http://www.discovery.com/tv-shows/other-shows/videos/nasty-by-nature-hag-fish-slime/)

 

lamprey[http://upload.wikimedia.org/wikipedia/commons/e/e5/Lamprey\_illustration\_side.png](https://ez002.k12.sd.us/Chapters/Lamprey_illustration_side.png)   <http://www.cnsweb.org/digestvertebrates/Photos/LampreyPacificMouth%20CL04_1c.jpg>    [Lamprey video](https://www.youtube.com/watch?v=9JQ6oHjpeqU)


cartilage fish (caliginous fish)
        have jaws
        cartilage skeleton
shark  http://www.top-adventure-tours.com/image-files/shark-picture.jpg
 

[Ray video](http://www.arkive.org/reef-manta-ray/manta-alfredi/video-00.html)

                BONEY FISH
                        skeleton is made of hard bone


walleye

[salmon spawning video](https://www.youtube.com/watch?v=SOllUTBYZtE)      [sockeye salmon life cycle](http://www.arkive.org/sockeye-salmon/oncorhynchus-nerka/video-08a.html)     [handfish video](http://www.arkive.org/spotted-handfish/brachionichthys-hirsutus/video-08.html)
[go to my website for fish dissection](http://dj003.k12.sd.us/science%20labs/dissection/fish%20dissection.htm)
**circulatory system
1. HEART - pumps blood
2. VENTRICLE - pumps blood to body
3. ATRIUM - pumps blood to ventricle

Excretory system
1. KIDNEY - filters liquid waste

nervous system
1. BRAIN - controls body
2. SPINAL CORD - sends and receives messages
3. SWIM BLADDER - allows fish to float at any level
4. LATERAL LINE - senses vibrations and pressure
5. NOSTRIL - smell
6. EYE - vision**digestive system
**1. MOUTH - opening for food
2. esophagus - forces food from mouth to stomach
3. STOMACH - breaks down food
4. GALL BLADDER - stores bile made in liver
5. bile- breaks down fat
6. LIVER - makes bile and digestive enzymes detoxes you**7. spleen**- filters out old and dead red blood cells,  dumps them in the intestine.  that is why your poop is reddish brown   6 million per second.
8. INTESTINE - breaks down and absorbs food
9. ANUS - opening for wastes
10. fat - stores food, cushions organs, insulates ( helps keep warm)

reproductive system
1. GONADS - makes sex cells
2. ovary - makes eggs
3. testis - makes sperm**

 **respiratory system
1. GILLS - breathing oxygen and carbon dioxide diffuses here**

 **skeletal system
1. VERTEBRAE - protects spinal cord
2. SCALES - protect skin
3. ANTERIOR DORSAL FIN - protection
4. POSTERIOR DORSAL FIN - protection
5. PECTORAL FIN - steering and movement
6. PELVIC FIN - steering and movement
7. ANAL FIN - steering
8. CAUDAL FIN - movement
9. OPERCULUM - protects gills**