

Webquest: Ichthyology - The Study of Fishes

Name: _____

Period: _____

The following websites offer a tour of the Fish groups and some of the specific species. Go to each website, and follow the directions. Put all of your answers on this sheet.

Part A: Devonian Fish

The Devonian Period is called the Age of Fish. Visit the site and answer the questions about this time period.

http://www.fossils-facts-and-finds.com/devonian_period.html

1. When was the Devonian Period?
2. What happened to the continents during this time?
3. Describe the climate.
4. List the different fish groups that developed during this time.

Go to <http://hoopermuseum.earthsci.carleton.ca/placoderms/third.html> and follow the tour by pressing the blue arrow at the bottom of each screen.

1. What are placoderms?
2. What did they look like?

Part B: Overview of the Three Groups

Go to the following website: <http://www.gwu.edu/~darwin/BiSc151/Fishes/Fish.html>

Superclass Agnatha

1. Who are the Agnathans? Give some examples?

Key features of Agnatha

2. List 5 important features of Agnathans.

Class Chondrichthyes

3. What are the Chondrichthyes? What are some examples?

Key features of Chondrichthyes

4. List five important features of Chondrichthyes

Class Osteichthyes

5. What are the Osteichthyes? What are some examples?

Key features of Osteichthyes

6. List five important features of Osteichthyes.

Part C: Agnatha (Jawless Fish)

Lamprey- <http://www.ucmp.berkeley.edu/vertebrates/basalfish/petro.html>

1. Describe a lamprey. How does it feed?
2. Outline the life-cycle of lampreys.
3. In what ways do humans and lampreys interact?

Hagfish- <http://www.ucmp.berkeley.edu/vertebrates/basalfish/myxini.html>

1. Why is there debate over whether hagfish are fish at all?
2. Describe hagfish.
3. What is hagfish slime? How do they make it, and what is it used for?
4. Describe the feeding behaviour in hagfish.

Part D: Chondrichthyes (Cartilage Fish)

Whale Shark- <http://www.extremescience.com/BiggestFish.htm>

1. Give a physical description of whale sharks.
2. How do they feed?
3. Why is the name “whale shark” incorrect?
4. What is the whale shark’s “sixth sense”? What does it do for the whale shark?

Rays- <http://www.flmnh.ufl.edu/fish/education/questions/raybasics.html>

1. What unique ability does the stingray have?
2. What are the differences between rays and skates?
3. Are stingrays dangerous to humans?

Part E: Osteichthyes (Bony Fish)

Seahorses- <http://ocean.si.edu/10-things-you-never-knew-about-seahorses>

1. How many species of seahorses are there?

2. What is the size range of seahorses?

3. Describe mating in seahorses.

4. What is unique about the male seahorse's role in reproduction?

5. Where are seahorses found?

6. What is unique about the seahorse tail?

Fish Anatomy

<http://www.flmnh.ufl.edu/fish/education/Diagrams.htm> (Click on Body Features to view diagrams)

1. Make a detailed sketch of a shark and label the following:	2. Make a detailed sketch of a bony fish and label the following:
<ul style="list-style-type: none">a) 1st and 2nd dorsal finsb) Caudal fin (both upper and lower lobes)c) Caudal keeld) Anal fine) Pelvic fin of male (include clasper)f) Pectoral fing) Gill openingsh) Mouth, nostril and eyesi) Spiraclej) Lateral line	<ul style="list-style-type: none">a) Dorsal fin (both spines and rays)b) Caudal fin (both upper and lower lobes)c) Caudal peduncled) Anal fine) Anus/Cloacaf) Pectoral fing) Pelvic finh) Operculumi) Lateral line