

Name That Fish

OBJECTIVE

The student will be able to use a *dichotomous key* to identify shark and batoid families.

MATERIALS

- copies of *Name That Fish* funsheet on page 10
- copies of *Key to Families* on page 11
- pens or pencils

BACKGROUND

All sharks and batoids belong to a group of fishes called the *Chondrichthyes*. To help learn about them, scientists divide them into groups called families. All the sharks in one family usually will look more like each other than sharks in other families.

To find out which family a shark is in, you would examine the shark carefully. You would count the gill slits on the sides of the shark's head. You would look at the shark's paired pectoral fins and paired pelvic fins, its one or two dorsal fins, and its anal fin (if it has one – not all sharks do). And you would look at the shark's tail, called a caudal fin.

A useful tool for listing characteristics and identifying a shark's family is a dichotomous key. The key presents a sequence of questions. Each question offers two choices.



ACTION

1. Distribute copies of the *Name That Fish* funsheet and *Key to Families* to the students. For this activity, students may work individually or in learning groups.
2. Instruct students to always begin at number one of the *Key to Families* for each shark on the *Name That Fish* funsheet.

Students read sentences 1A and 1B of the key. They study Shark 1 for the characteristics referred to in 1A and 1B. For each shark, they choose either 1A or 1B, and then follow the directions given in that letter. When they can identify the shark family, they write the family name on the line below each animal. Lead them through one or two examples.

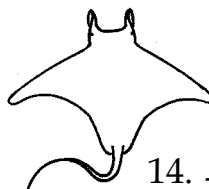
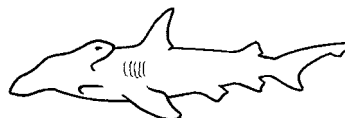
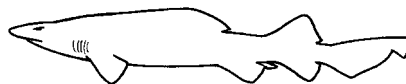
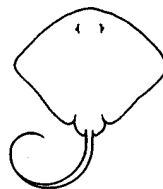
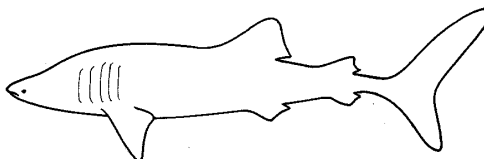
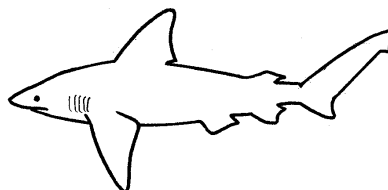
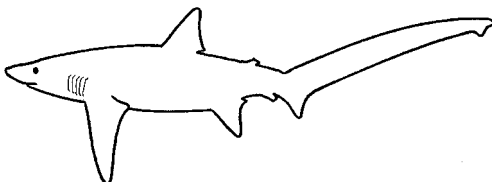
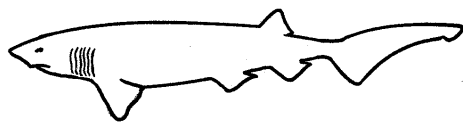
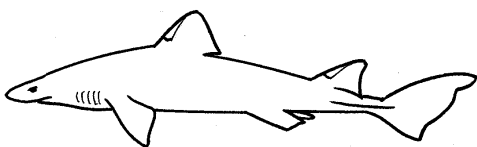
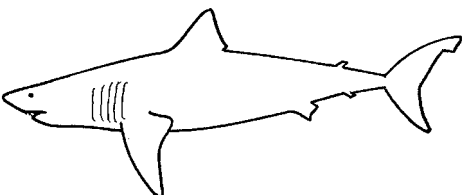
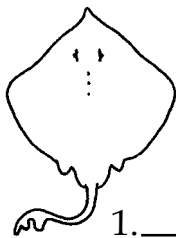
ANSWERS

1. Rajidae
2. Scyliorhinidae
3. Lamnidae
4. Squalidae
5. Heterodontidae
6. Hexanchidae
7. Alopiidae
8. Pristiophoridae
9. Carcharhinidae
10. Rhincodontidae
11. Dasyatidae
12. Pseudotriakidae
13. Sphyrnidae
14. Mobulidae

Name _____

Name That Fish

Use "Key to Families" to help you identify the family of each shark or batoid on this page.



Key to Families

1. A. body kitelike if viewed from the top go to 12
B. body not kitelike if viewed from the top go to 2
2. A. anal fin absent go to 11
B. anal fin present go to 3
3. A. six gill slits present Family Hexanchidae
B. five gill slits present go to 4
4. A. dorsal fin with spines Family Heterodontidae
B. no spines on dorsal fins go to 5
5. A. mouth at front of snout (rather than
on underside of head) Family Rhincodontidae
B. mouth on underside of head go to 6
6. A. head expanded with eyes at ends of expansion Family Sphyrnidae
B. head not expanded go to 7
7. A. top half of caudal fin about the
same size as bottom half Family Lamnidae
B. top half of caudal fin different
in size than bottom half go to 8
8. A. first dorsal fin very long, almost
half the total length of the body Family Pseudotriakidae
B. first dorsal fin regular length go to 9
9. A. caudal fin very long, almost as long as entire body .. Family Alopiidae
B. caudal fin "regular" length go to 10
- 10 A. base of first dorsal fin behind pelvic fins Family Scyliorhinidae
B. base of first dorsal fin in front of pelvic fins Family Carcharhinidae
11. A. long point on the end of snout Family Pristiophoridae
B. snout without long point Family Squalidae
12. A. front of animal has two hornlike appendages Family Mobulidae
B. no hornlike appendages go to 13
13. A. small dorsal fin present near tip of tail Family Rajidae
B. no dorsal fin present near tip of tail Family Dasyatidae