

Name: _____

Period: _____

Dichotomous Keys

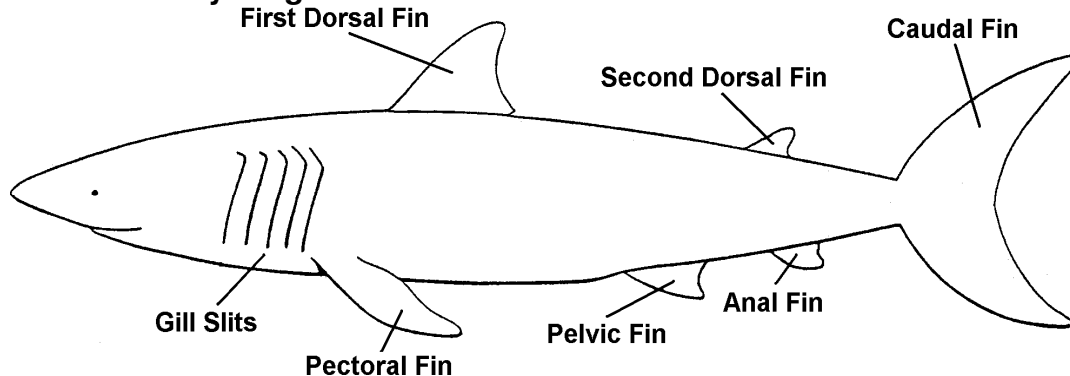
Purpose:

To investigate the usefulness of dichotomous keys.

Shark Procedure:

Use the shark anatomy diagram and shark dichotomous key in order to identify the sharks in the shark pictures.

Shark Anatomy Diagram:

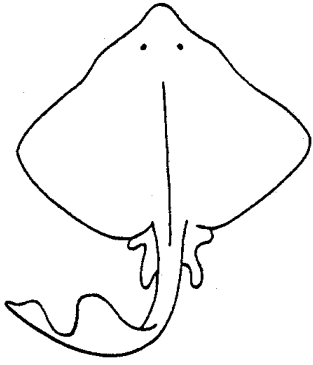


Shark Dichotomous Key:

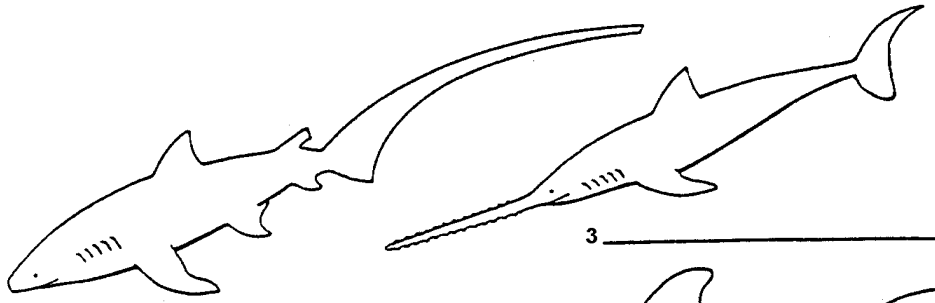
- | | | |
|-----|---|--|
| 1A | Body kitelike if viewed from top | Go to 2 |
| 1B | Body not kitelike if viewed from top | Go to 4 |
| 2A | Dorsal fin near tip of tail present | Family Rajidae (Skates) |
| 2B | Dorsal fin near tip of tail absent | Go to 3 |
| 3A | Two hornlike appendages at front of body present | Family Mobulidae (Manta Rays) |
| 3B | Hornlike appendages at front of body absent | Family Dasyatidae (Sting Rays) |
| 4A | Pelvic fin absent | Family Pristiophoridae (Saw Sharks) |
| 4B | Pelvic fin present | Go to 5 |
| 5A | Six gill slits present | Family Hexanchidae (Cow Sharks) |
| 5B | Five gill slits present | Go to 6 |
| 6A | One dorsal fin present | Family Scyliorhinidae (Cat Sharks) |
| 6B | Two dorsal fins present | Go to 7 |
| 7A | Mouth at front of snout | Family Rhincodontidae (Whale Sharks) |
| 7B | Mouth on underside of head | Go to 8 |
| 8A | Head expanded with eyes at end of expansion | Family Sphyrnidae (Hammerhead Sharks) |
| 8B | Head not expanded | Go to 9 |
| 9A | Caudal fin same shape and size on top and bottom | Family Isuridae (Mackerel Sharks) |
| 9B | Caudal fin different shape and size on top and bottom | Go to 10 |
| 10A | First dorsal fin almost half as long as body | Family Pseudotriakidae (Finback Catsharks) |
| 10B | First dorsal fin regular length | Go to 11 |
| 11A | Caudal fin almost as long as body | Family Alopiidae (Thresher Sharks) |
| 11B | Caudal fin regular length | Go to 12 |
| 12A | Sharply pointed snout present | Family Scapanorhynchidae (Goblin Sharks) |
| 12B | Sharply pointed snout absent | Go to 13 |
| 13A | Anal fin absent | Family Squalidae (Dogfish Sharks) |
| 13B | Anal fin present | Family Carcharhinidae (Typical Sharks) |

Shark Pictures:

Top View



1 _____

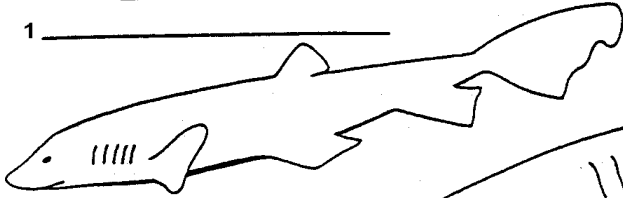


3 _____

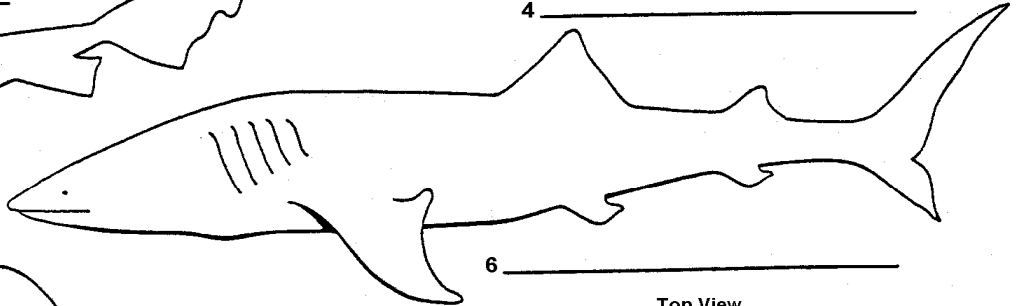
2 _____



4 _____

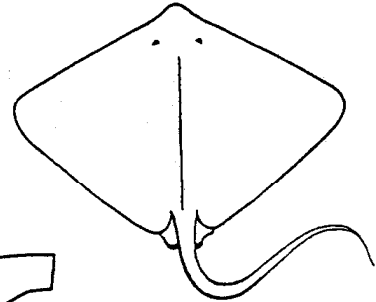


5 _____

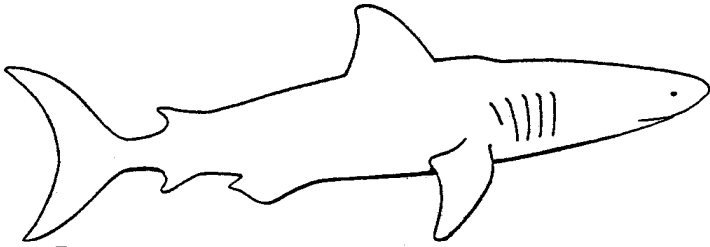


6 _____

Top View



9 _____



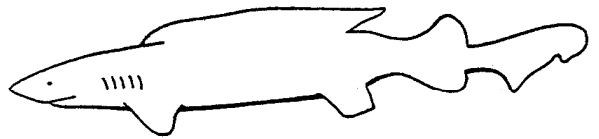
7 _____



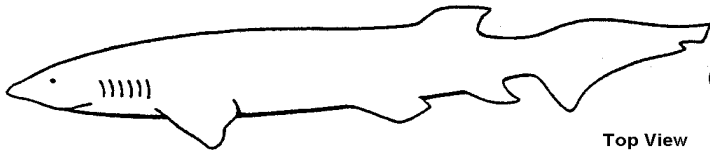
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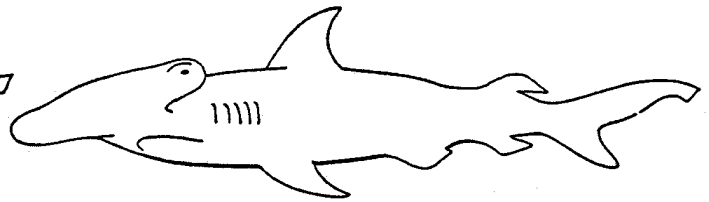
10 _____



11 _____

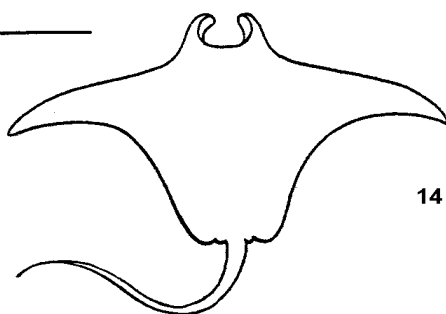


12 _____



13 _____

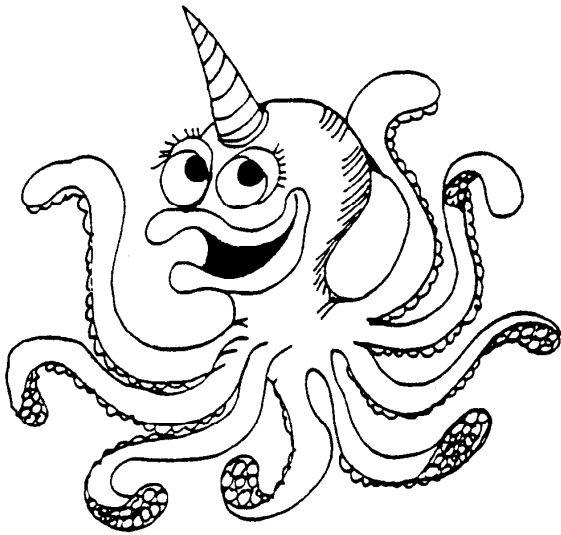
Top View



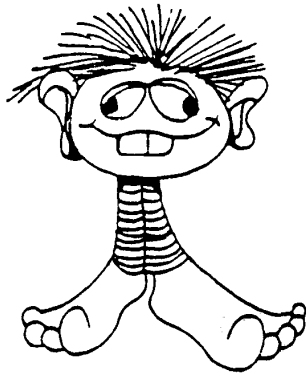
14 _____

EXTRA CREDIT...Alien Procedure:

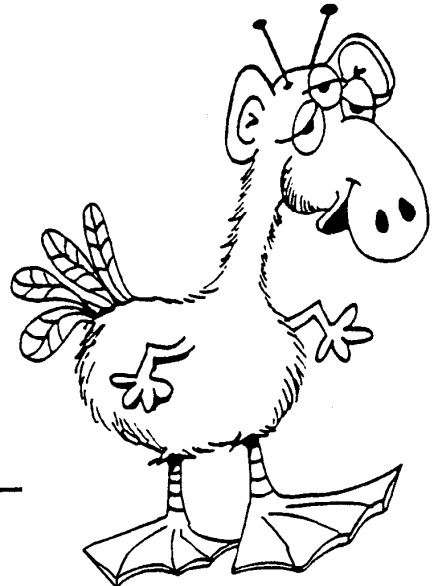
Name and use the aliens in alien pictures in order to create an alien dichotomous key. Start by giving them scientific names. Next: use the sample shark key as a guide to create one of you own.



A _____



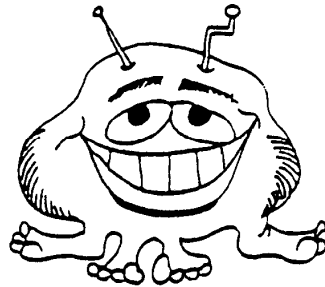
B _____



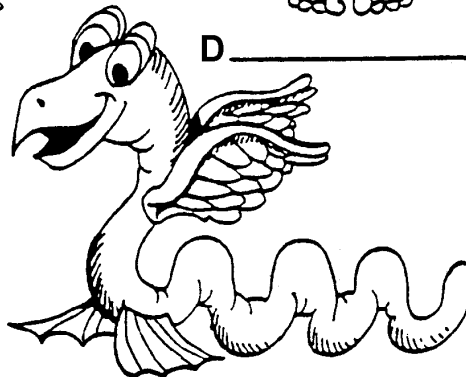
C _____



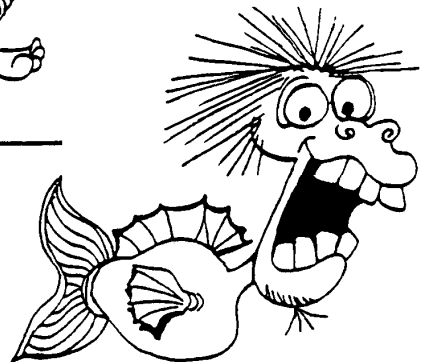
E _____



D _____



F _____



G _____



H _____



I _____



J _____

Binomial Nomenclature

- Use the **Key** to figure out which scientific name from the **Name Bank** goes with the common name for the **Living Organisms** in the chart.
- Look for clues within the names and similarities with names of other organisms to help you solve the puzzle!
- After you write the scientific name in the second column, then write your translation for it in the third column.

KEY:

dent = tooth

bi = 2

rubra = red

alba = white

saccharum = sugar

cyano = blue

nigrum = black

helia = sun

quadra = 4

NAME BANK:

*Acer rubrum**Acer saccharum**Asclepis quadrifolia**Asclepis rubra**Cyanocitta cristata**Dentaria maxima**Egretta alba**Eurycea bilineata**Helianthus annuus**Hydrophyllum virginianum**Iris cristata**Leontodon autumnalis**Piper nigrum**Saccharum officinarum**Trillium grandiflorum*

LIVING ORGANISMS:

Common Names	Scientific Name	Translation
1. Blue Jay		
2. Virginia Waterleaf		
3. Black Pepper		
4. Sugar Maple		
5. Two-Lined Salamander		
6. Common Sunflower		
7. Snowy Egret		
8. Red Milkweed		
9. Large Toothwort		
10. Sugar Cane		
11. Four-Leaved Milkweed		
12. Red Maple		
13. Crested Dwarf Iris		
14. Large Flowered Trillium		
15. Fall Dandelion		