

1.2 CLASSIFICATION OF ANIMALS II

Procedure A

1. Classify the animals on the right according to the listed anatomical features on the chart on the next page. If you do not know the anatomical part of a specific organism, look it up. Make the first classification according to the support structure used by the animals.
2. Make the next classification according to body covering.
3. The third classification should be according to the reproductive system used by the animals.
4. In the last classification row, write the animal in the correct row depending on whether it is classified as a carnivore or herbivore and in the appropriate column for its habitat.
5. Answer the questions after you are satisfied with your classification system.

Thinking Critically

1. Do some of the animals fit into more than one group? Do some of the animals seem to be borderline?
2. Do any of the groups seem to be made up of very dissimilar organisms?
3. In these cases, do you think that the classification systems have not worked? Why or why not?
4. If these animals do not always fit into neat, orderly classifications, what is the point of constructing such a system?
5. The platypus seems to be classified a mammal almost entirely on the basis of hair and milk. Do you agree with this classification? Explain.

Procedure B

1. Classify the biological groups listed under Procedure B according to the same characteristics as Procedure A. You may choose to add the names onto your original

Procedure A:

Irish setter
Sea cucumber
Sponge
Felis domesticus
Pigeon
Archeopteryx
Rattle snake
Shark
Squirrel
Dodo
Sea turtle
Mosquito
Amoeba
Coral
Platypus
Earthworm
Snail
Clam
Bat
Porpoise
Crocodile
Chicken
Rana pipiens
Ground hog
Rabbit
Dragonfly
Dragon
Euglena
Shrimp
Flounder
Crayfish
Opossum
Armadillo

Procedure B:

Mammalia
Vertebrata
Arthropoda
Echinodermata
Insecta
Chordata
Mollusca
Amphibia
Aves
Osteichthyes
Reptilia
Crustacea
Chondrichthes
Annelida
Protista
Carnivora

chart or make a second copy for procedure B.

Thinking Critically

1. Look up the terms **arthropoda**, **echinodermata**, **chordata**, **amphibia**. Do the terms seem to have meaning as regards to the animals they identify?
2. Why do you think that Latin was adopted as the language to use in the classification of organisms?

<i>Support System</i>	<i>External hard skeleton</i>	<i>External soft skeleton</i>	<i>External membrane</i>	<i>Soft, cartilaginous internal</i>	<i>Unarticulated internal hard</i>	<i>Articulated internal hard</i>	
<i>External Covering</i>	<i>Scales</i>	<i>Feathers</i>	<i>Hair, fur</i>	<i>Rough skin</i>	<i>Smooth skin, hairless</i>	<i>Shell</i>	<i>Membrane</i>
<i>Method of Reproduction</i>	<i>Hard shelled egg</i>	<i>Soft, jelly-like eggs</i>	<i>Division</i>	<i>Live birth, placenta</i>	<i>Live birth, eggs</i>	<i>Soft, leathery eggs</i>	
	<i>Type of consumer</i>	<i>Marine: pelagic (free swimming)</i>	<i>Marine: benthic</i>	<i>Aquatic</i>	<i>Grassland</i>	<i>Desert</i>	<i>Forest</i>
	<i>Carnivore</i>						
	<i>Herbivore</i>						

	<i>External hard skeleton</i>	<i>External soft skeleton</i>	<i>External membrane</i>	<i>Soft, cartilaginous internal</i>	<i>Unarticulated internal hard</i>	<i>Articulated internal hard</i>		
<i>Support System</i>	clam coral snail	dragonfly shrimp crayfish mosquito	euglena amoeba earthworm sea cucumber	shark	sponge	chicken <i>Rana pipiens</i> ground hog rabbit dragon flounder squirrel oppossum armadillo Irish setter <i>Felis domesticus</i> pigeon archeopteryx rattle snake dodo sea turtle platypus	bat porpoise crocodile mammalia vertebrata amphibia aves osteichthyes reptilia	
	<i>Scales</i>	<i>Feathers</i>	<i>Hair, fur</i>	<i>Rough skin</i>	<i>Smooth skin, hairless</i>	<i>Shell</i>	<i>Membrane</i>	
<i>External Covering</i>	flounder rattlesnake armadillo osteichthyes reptilia mammalia (armadillo)	chicken pigeon dodo archeopteryx aves	Irish setter squirrel platypus groundhog rabbit bat (many others) mammalia	shark rattlesnake dragon crocodile chondrichthes reptilia crustacea echinodermata	earthworm amoeba euglena <i>Rana pipiens</i> protista annelida amphibia	clam snail mollusca	amoeba euglena protista	
	<i>Hard shelled egg</i>	<i>Soft, jelly-like eggs</i>	<i>Division</i>	<i>Live birth, placenta</i>	<i>Live birth, eggs</i>	<i>Soft, leathery eggs</i>		
<i>Method of Reproduction</i>	chicken pigeon aves	<i>Rana pipiens</i> flounder amphibia osteichthyes	amoeba protista	(many in list) mammalia	shark rays skates chondrichthyes	snake dragon rattlesnake platypus reptilia mammalia (platypus)		
	<i>Type of consumer</i>	<i>Marine: pelagic (free swimming)</i>	<i>Marine: benthic</i>	<i>Aquatic</i>	<i>Grassland</i>	<i>Desert</i>	<i>Forest</i>	
	<i>Carnivore</i>	shark flounder shrimp porpoise	coral sea cucumber sponge clam	mosquito (larvae) amoeba crayfish	Irish setter <i>Felis domesticus</i> armadillo chicken pigeon	rattle snake armadillo	dragonfly opossum bat	
	<i>Herbivore</i>	sea turtle	coral sea cucumber sponge clam	euglena	pigeon ground hog rabbit chicken earthworm snail bat	rabbit	squirrel rabbit earthworm	

* Boldface answers listed are from Procedure B. You may have animals placed in more than one classification. These are only examples of possible answers and are not meant to be conclusive.