

# Classifying Invertebrates

Scientists have identified at least 1.7 million kinds of organisms on Earth. It is important for biologists to have the living things organized into groups.

Classification is the process of grouping things based on their shared traits. Biologists use classification to organize living things into groups so that the organisms are easier to study.

Animals are classified into two major groups. One group is made up of animals with backbones – called vertebrates. The other group is made up of animals without backbones. Animals without backbones are called invertebrates. Most animals are invertebrates. In fact, invertebrates make up 97% of the animal kingdom.

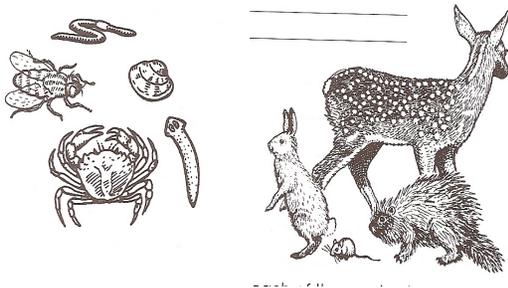
The table below identifies some characteristics of invertebrates and vertebrates.

1. Look at the pictures and determine which animals are vertebrates and which are invertebrates.

Invertebrates	<ul style="list-style-type: none"> <li>• Has external skeleton</li> <li>• Has no legs or more than four</li> <li>• May have a shell</li> <li>• Do not have hair or fur</li> </ul>
Vertebrates	<ul style="list-style-type: none"> <li>• Has internal skeleton</li> <li>• Has 2-4 legs</li> <li>• Mammals have fur</li> </ul>

2. Color the invertebrates yellow.

3. Color the vertebrates blue.



**Materials:** Invertebrate cards and titles, Invertebrate Trait Sheet

**What To Do:**

1. Find the bag with the invertebrate cards and titles.
2. Place the titles in a row across your table.
3. Use the Animal Traits Sheet to determine into which group the animals belong.
4. Write your answers below.
5. There are a few pictures that are not listed on the traits paper. Predict in which group you would find them.

Phylum	Examples
Sponges	
Cnidarians	
Flatworms	
Roundworms	
Segmented Worms	
Mollusks	
Echinoderms	
Arthropods	

**Questions:**

1. Which phylum had the most members? \_\_\_\_\_
2. Which phylum had the least members? \_\_\_\_\_



**Directions:**

1. Watch the video Arthropods from [www.missdoctorbailer.com](http://www.missdoctorbailer.com).
2. Listen for the following answers then discuss them with your partners.

**Questions:**

1. How many different arthropods are there?  
\_\_\_\_\_
2. What is an exoskeleton? \_\_\_\_\_
3. What is the most impressive adaptation of the arthropods?  
\_\_\_\_\_
4. Which of the following is not an arthropod?  
insects      centipedes      bats      scorpion
5. What does a praying mantis eat? \_\_\_\_\_
6. How are arthropods beneficial to the environment?  
\_\_\_\_\_  
\_\_\_\_\_



**Invertebrates**

C	A	N	O	Y	S	T	E	R	S	Q	S
S	R	B	S	H	R	I	M	P	U	M	B
E	S	A	U	M	U	Z	K	L	A	E	S
O	R	S	B	T	O	J	O	L	E	F	E
T	E	M	C	S	T	B	C	S	H	G	G
I	D	R	P	I	S	E	S	X	I	L	N
U	I	O	R	T	K	S	R	L	G	P	O
Q	P	W	E	S	O	C	L	F	U	S	P
S	S	R	H	A	N	T	S	I	L	G	S
O	S	T	A	R	F	I	S	H	A	Y	S
M	O	Q	S	E	H	C	A	O	R	N	S
M	Q	J	E	L	L	Y	F	I	S	H	S

- |            |            |          |
|------------|------------|----------|
| ANTS       | LOBSTERS   | SLUGS    |
| BEES       | MOSQUITOES | SNAILS   |
| BUTTERFLYS | MOTHS      | SPIDERS  |
| CLAMS      | OYSTERS    | SPONGES  |
| CRABS      | ROACHES    | STARFISH |
| JELLYFISH  | SHRIMP     | WORMS    |

Name \_\_\_\_\_

period \_\_\_\_\_

## EXIT TICKET

Classifying Invertebrates

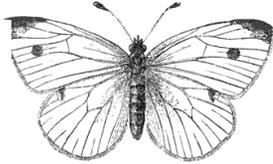
A



B



C



D



Order of Arthropod	Characteristics
Odonata	2 pair of wings that can't be folded
Dictyoptera	Flattened body and long antenna
Coleoptera	Four wings with top pair protecting second pair
Lepidoptera	Four large wings

Using the information in the chart answer the following questions.

1. Which insect is from the Order Dictyoptera?

A                  B                  C                  D

2. Which insect is from the Order Lepidoptera?

A                  B                  C                  D

Name \_\_\_\_\_

period \_\_\_\_\_

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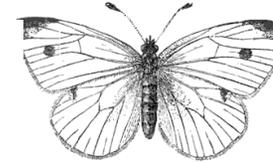
A



B



C



D



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1. Which insect is from the Order Dictyoptera?

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2. Which insect is from the Order Lepidoptera?

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