

VERTEBRATES AND INVERTEBRATES

The animal kingdom is divided into two groups: vertebrates and invertebrates. Vertebrates have been around for millions of years but have evolved and changed over time. The word vertebrate means “having a backbone.” Many animals have backbones. You have a backbone. So does a cow, a whale, a fish, a frog, and a bird. **Vertebrates** are animals that have a backbone. Most animals have a backbone that is made of bones joined together to form a skeleton.

Our skeleton gives us our shape and allows us to move. Mammals, fish, birds, reptiles, and amphibians have backbones so they are all vertebrates.

Scientists classify vertebrates into five classes:

- Mammals
- Fish
- Birds
- Reptiles
- Amphibians

Animals without a backbone are called **invertebrates**. Most animals are invertebrates. In fact, 95% of all living creatures on Earth are invertebrates.

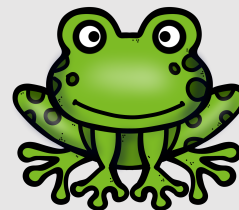
Arthropods are the largest group of invertebrates. Insects make up a large part of this group. All insects, such as ladybugs, ants, grasshoppers, and bumblebees have three body sections and six legs. Most arthropods live on land, but some of these fascinating creatures live in water. Lobsters, crabs, and shrimp are arthropods that live in the oceans. Many invertebrates have skeletons on the outside of their bodies called exoskeletons. An **exoskeleton** is a hard outer layer that protects an animal’s soft insides. Insects, spiders, and crustaceans have exoskeletons.

Soft-bodied animals called **mollusks** are the second largest group of invertebrates. Octopuses, jellyfish, sponges, and starfish are a few of the many mollusks that live in or near the water. Some mollusks, such as snails, clams, and oysters, do not have an exoskeleton. Instead, they have a hard outer shell made of calcium that protects them.

VERTEBRAE

Each bone that makes up the backbone is called a vertebra. These are the building blocks that form the backbone, also known as the spinal cord. The vertebrae protect and support your spine. Without a backbone, you would not be able to move any part of your body.

The human backbone has 26 vertebrae.



A frog only has 9 vertebrae.



Some snakes have as many as 500 vertebrae.



Name: _____

VERTEBRATES AND INVERTEBRATES

What is a vertebrate?

Name the five classes of vertebrates below:

1. _____
2. _____
3. _____
4. _____
5. _____

How does having a backbone help us?

What is an invertebrate?

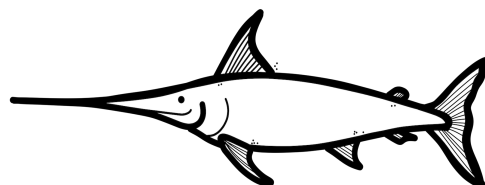
Name two invertebrates that can be found on land:

1. _____
2. _____

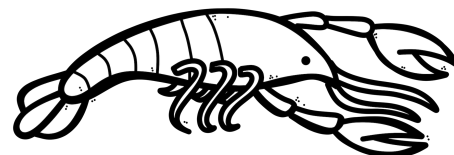
Name two invertebrates that can be found in the water:

1. _____
2. _____

Circle the correct answer below:



Vertebrate or Invertebrate

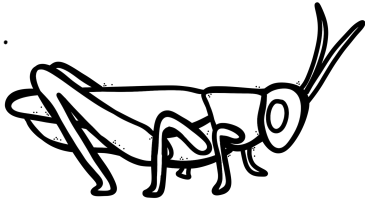


Vertebrate or Invertebrate

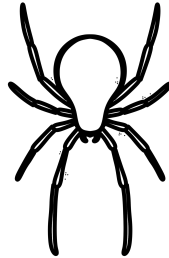
NAME THAT INVERTEBRATE

Animals without a backbone are called invertebrates. Most animals are invertebrates. In fact, 95% of all living creatures on Earth are invertebrates. Can you name all the invertebrates below?

A.



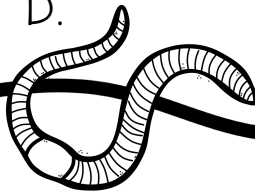
B.



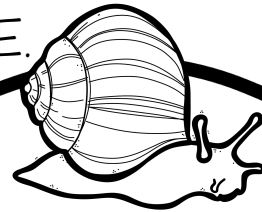
C.



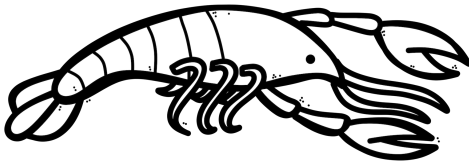
D.



E.



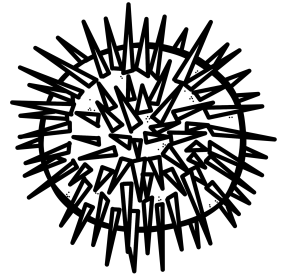
F.



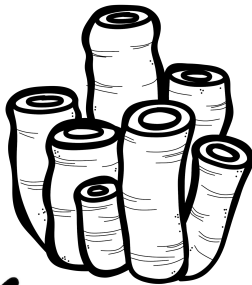
G.



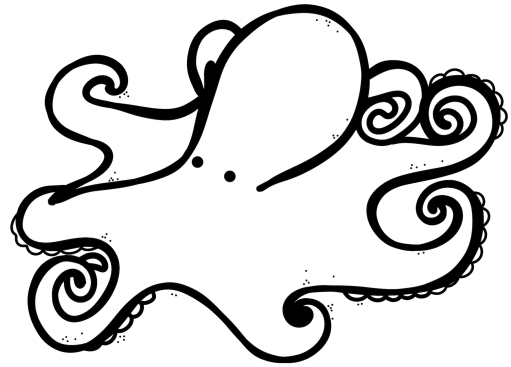
H.



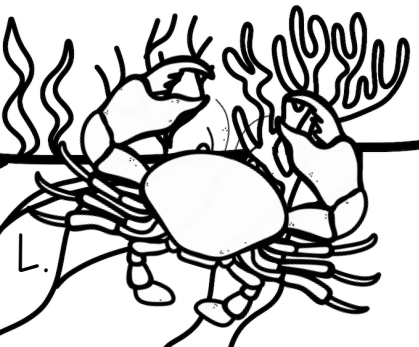
I.



K.



J.



NAME THAT INVERTEBRATE

Directions: Can you name the invertebrates shown on the opposite page beside the correct letter below?

A. _____

B. _____

C. _____

D. _____

E. _____

F. _____

G. _____

H. _____

I. _____

J. _____

K. _____

L. _____

Draw a picture of your three favorite invertebrates below:

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vertebrates or Invertebrates?

Directions: Cut out the pockets below. Carefully paste the pockets (around the outside edges) into your notebook. Then cut out the animal cards on the next two pages. Sort the cards by whether they are vertebrates or invertebrates. Place the cards inside the correct pocket.

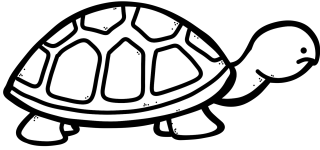
Hint: There are 12 cards for each group.

VERTEBRATES

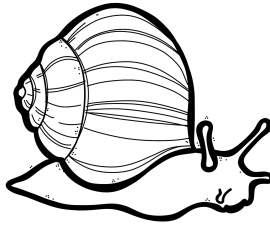
INVERTEBRATES

Vertebrates or Invertebrates?

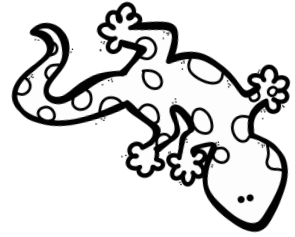
turtle



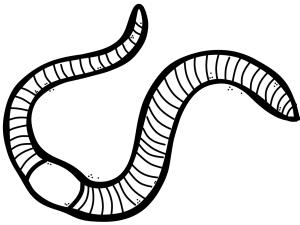
snail



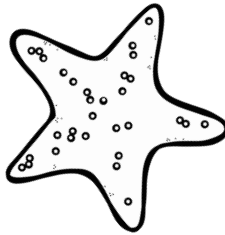
salamander



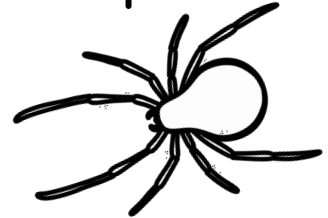
worm



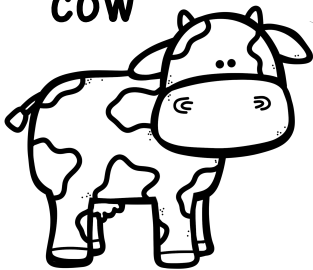
starfish



spider



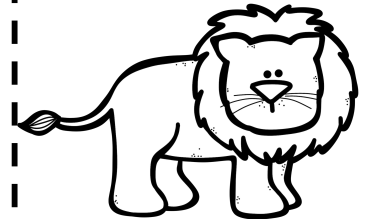
cow



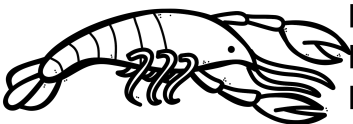
sea sponge



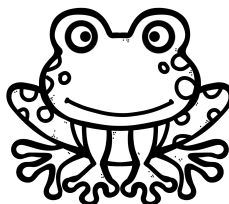
lion



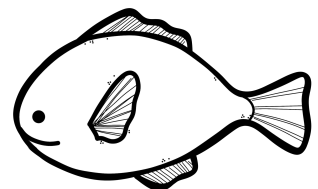
lobster



frog

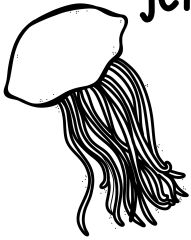


fish

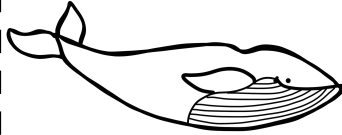


Vertebrates or Invertebrates?

jellyfish



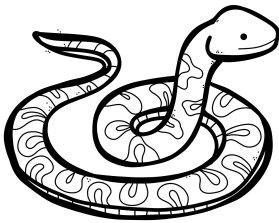
whale



dragonfly



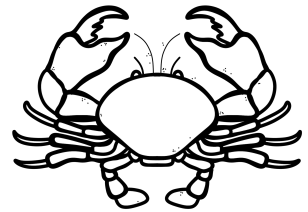
snake



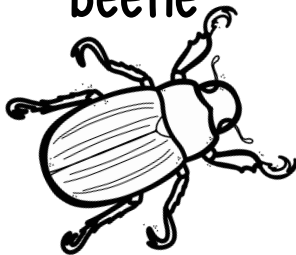
raccoon



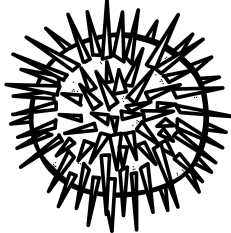
crab



beetle



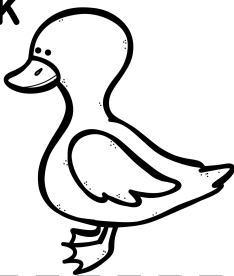
sea urchin



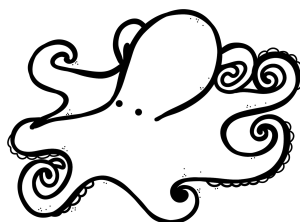
bat



duck



octopus



bear

