Contents

Before You Read

NAME: _____

What Do We Classify?

1. Fill in each blank with a word from the list. You may use a dictionary to help.

classify | organism | senses | biologist | category

a) A group of things that are classified together is called a _____.

b) To _____ something means to divide things into groups based on similarities.

c) People use their five _____ (sight, touch, smell, sound, taste) to describe something.

d) Someone that studies living things is called a _____.

e) A living thing such as a plant or animal is called a(n) _____.

2. Look at the word BIOLOGIST. Can you find the root of this word? Use a dictionary to find the definition of BIOLOGY and write it in the box below. Underneath your definition, draw a picture showing a biologist hard at work.

NAME: _____

Reading Passage

What Do We Classify?

Think about an elephant. In your mind, can you picture what it looks like? How would you describe it to someone who has never seen one before? You probably visualized a large trunk, gray leathery skin, big ears, heavy feet and a skinny tail. Is that what you imagined?

Everything we just described used your eyes to describe the elephant. You just **classified** an elephant! To **classify** something means to group or to categorize something based on something about them. This time, you used your own eyes to put the elephant into a group of animals that, for example, have gray skin.

Elephants and other **organisms** do not only have to be classified by what they look like. You could classify organisms using another **sense**. You could use your sense of touch, smell, sound, or even taste! Not that you ever want to know what an elephant tastes like!

STOP

Can you describe an elephant using your senses of smell and touch?

_____

_____

_____

Biologists are people that study living things. Part of their job is to classify organisms. They need to organize all things that live on the Earth! They classify organisms into different **categories** or groups. Biologists know that if two organisms look very similar, then they are likely related. Do people ever tell you that you look like your brother or sister? You probably look similar because you are related. You are part of the same family!

After You Read

NAME: _____

What Do We Classify?

1. Put a check mark (✓) next to the answer that best finishes the sentence.

a) You can describe an elephant using the following senses:

- ◯ **A** just sight (your own eyes).
- ◯ **B** all senses (sight, sound, taste, touch, smell).
- ◯ **C** it's hard to describe an elephant because it is so big.
- ◯ **D** a dictionary and a camera.

b) To classify something means to...

- ◯ **A** say whether they are good or bad.
- ◯ **B** divide something based on their age.
- ◯ **C** group or categorize something based on one of their characteristics.
- ◯ **D** study how it survives in its environment.

c) Biologists are people that study...

- ◯ **A** the biosphere.
- ◯ **B** only humans and how they interact with each other.
- ◯ **C** rocks and minerals.
- ◯ **D** living things.

d) Biologists know that if two organisms look very similar, then they...

- ◯ **A** are likely related.
- ◯ **B** must live in the same environment.
- ◯ **C** must eat the exact same food for energy.
- ◯ **D** are part of the same population.

2. Circle the word True if the statement is true. Circle the word False if it is false.

a) We can classify a mouse by saying that it is an animal with gray skin.
True **False**

b) Organisms have to be classified by what they look like.
True **False**

c) Biologists study both living and non-living things.
True **False**

d) When biologists classify, they look for similarities and differences between organisms.
True **False**

NAME: _____

After You Read

What Do We Classify?

Answer the questions in complete sentences.

3. What senses could you use to describe an animal? Give an example for each.

_____

_____

4. What is the most important job that a biologist has?

_____

5. How do biologists classify organisms?

_____

Extension and Application

6. Use your senses to describe an animal of your choice!

Your job is to classify an animal. It can be any animal you like! **Pick one animal** and use the five senses to describe your animal.

On your piece of paper, create a chart that shows the following 5 senses and your descriptions:

• sight • touch • smell • taste • sound

7. You are the World's #1 Biologist!

You have been hired as the country's leading biologist to work on a project. Congratulations! Your job is to classify the following 10 animals. The tricky part is that you have not been told **how** to classify these animals. It is up to you! You will copy the 10 animals down onto your paper and then put on your biologist uniform and start your work! Remember, a biologist uses their senses to classify organisms. You will need to put these animals into groups. Clue: Look for similarities and differences between these animals... You may use research tools for help.

Monkey	**Dog**	**Bear**
Kangaroo	**Tiger**	**Frog**
Giraffe	**Fox**	**Whale**
Fish		

Hands-On Activity #1

Brush up on Your Classifying Skills!

Let's remind ourselves what it means to **classify** something:
It means to divide things into groups based on similarities.
This makes it easier for us to study things.

In this activity, you will brush up on your own classifying skills!

Look through a magazine and cut out **ten** pictures you see of an **animal**. Look for pictures showing many <u>different</u> kinds of animals: big, small, fury, frightening, slimy, etc.

Can you think of any other adjectives to describe animals?

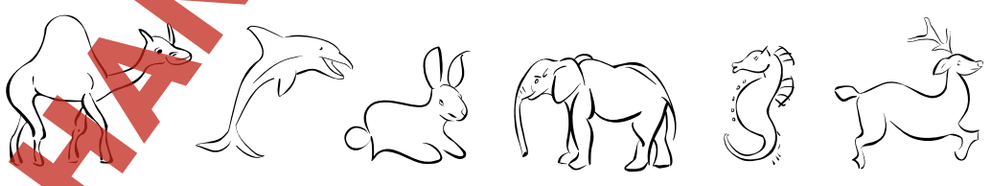
Once you have cut out your ten pictures, arrange the pictures on a piece of paper. You are ready to brainstorm how you are going to classify your animals. You are going to divide your group of animals into small groups.

How are you going to divide up the animals? Look for **similarities** and **differences** between the animals. Here's a clue: you've already read some ideas about how you can classify animals earlier in this question!

Using a large piece of Bristol board, present your classification. Display your classification groups in a creative way.

On your Bristol board, you should include the following:

- **A title**
- **Glued on images of the ten animals (organized in their groups)**
- **Labels showing how you have classified the animals**
- **A half-page write-up explaining how you classified your animals**



After You Read

NAME: _____

Crossword Puzzle!

Across

1 when things are divided into groups based on similarities
5 a person who studies living things
7 describes an animal that is able to stay at the same body temperature
9 a single organism
10 the surroundings where an animal lives
12 a scientist that studies fossils

Down

1 an animal that cannot control their own body temperature
2 describes something where the left side is the mirror image of the right side
3 a living thing such as a plant or animal
4 a physical feature that has been changed for survival purposes
6 the group of invertebrates including snails and slugs
8 the change of populations of living organisms over time
11 an animal that has a backbone
13 energy that comes from the sun
14 the remains of an animal or plant that are preserved

Word List: biologist, classification, coldblooded, environment, evolution, fossil, mollusk, organism, paleontologist, physical adaptation, solar, species, symmetrical, vertebrate, warmblooded

After You Read

NAME: _____

Comprehension Quiz

24

Part A

Circle the word True if the statement is true. Circle the word False if it is false. 8

1. To classify something means to divide things into groups based on similarities.
   True **False**
2. Biologists are scientists who study evolution and fossils.
   True **False**
3. The difference between warm-blooded and cold-blooded animals is their ability to control their own body temperature.
   True **False**
4. There are more invertebrates living on Earth than vertebrates.
   True **False**
5. Invertebrates are organized the same way as vertebrates. They also have a backbone.
   True **False**
6. Animals adapt their physical features over long periods of time so that they survive in their habitat.
   True **False**
7. The koala has two opposable thumbs on each hand which gives it excellent grip for swinging in trees.
   True **False**
8. Scientists study evolution by reading newspaper reports from hundreds of years ago. These reports show how life on Earth has changed over time.
   True **False**

Part B

6

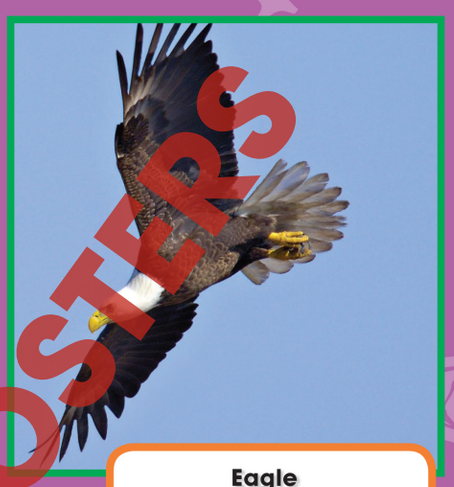
Label each picture below as either a **vertebrate** or an **invertebrate.**

a) _____ b) _____ c) _____

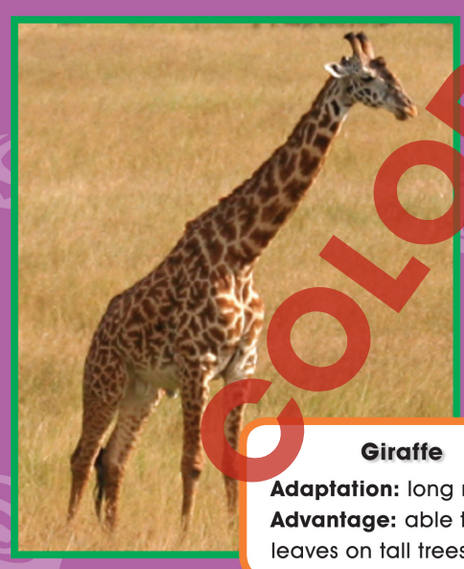
SUBTOTAL: /14

Animal Adaptations

Cheetah
Adaptation: run fast
Advantage: able to catch fast-moving prey

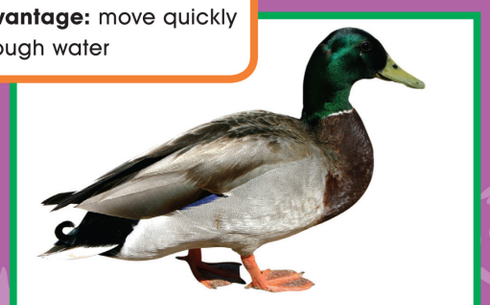


Eagle
Adaptation: good eyesight
Advantage: able to see prey from far away



Giraffe
Adaptation: long neck
Advantage: able to eat leaves on tall trees

Duck
Adaptation: webbed feet
Advantage: move quickly through water



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Giraffe	**Fox**	**Whale**
Fish		

EASY MARKING ANSWER KEY

EZ

3.
Sight, sound, smell, touch, taste
(Answers will vary)

4.
Classify organisms

5.
Classify into different categories or groups

6.
Answers will vary

7.
Answers will vary

1. 37° F (same temperature as its surroundings)
2. 100° F (temperature of most mammals when active)
3. 107° F (temperature of most birds when active)
4. No – can only swim to the surface where there is more sunlight on a sunny day
5. Fairly well – it has fur and layers of fat to insulate it
6. Not well – it has scales rather than fur and very little body fat
7. Body temperature drops as the temperature of its surroundings (water or air) drops