



TEACHER GUIDE

- Assessment Rubric 4
- How Is Our Resource Organized? 5
- Bloom’s Taxonomy for Reading Comprehension 6
- Vocabulary 6



STUDENT HANDOUTS

- Reading Comprehension

1. <i>What Do We Classify?</i>	
2. <i>Formal Classification</i>	
3. <i>Warm-Blooded Animals vs. Cold-Blooded Animals</i>	
4. <i>Vertebrates</i>	
5. <i>Invertebrates</i>	

6. <i>Animal Adaptations</i>	7
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7. <i>A Case Study: The Koala and Its Adaptations</i>	
8. <i>Evolution and the Fossil Record</i>	

- Hands-on Activities 11
- Crossword 15
- Word Search 16
- Comprehension Quiz 17



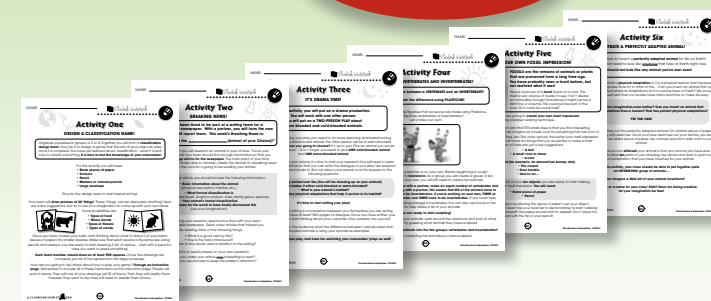
EASY MARKING™ ANSWER KEY	19
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MINI POSTERS	21
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Animal Adaptations

1. A **HABITAT** is the environment in which a plant or animal lives. In the first box, draw a picture of what you think a worm's habitat looks like. In the second box, draw a picture of what you think a fish's habitat looks like. Fill in the whole box for each picture!

A worm's habitat

A fish's habitat

2. Complete each sentence with a term from the list. Use a dictionary to help you.

- habitat physical features adaptation physical adaptation

- a) A(n) _____ is something that has been changed for a specific reason.
b) The environment in which a plant or animal lives is called a _____.
c) _____ are things that describe an animal's body features.
d) A physical feature that has been changed for survival purposes is called a _____.



Animal Adaptations

All animals live in habitats. What is a habitat? A habitat is the environment in which a plant or animal lives. Habitats provide food, water and shelter. These are the things that animals need in order to survive. There is more to survival than just habitat though.



Animals also depend on their physical features for survival. These are things which describe the animal's body features that you can see. Animals need to find food. They need to stay safe. They need to build homes. They need to survive bad weather. They need to attract mating partners. How do they do this? Animals depend on their physical features for these things. They go through a process called physical adaptation. An adaptation is something that has been changed for a specific reason. Animals do not adapt their physical features over one lifetime. They do not develop their physical adaptations in a short period of time. Rather, their physical adaptations develop over many generations.

STOP Do you think the number of FINGERS an animal has affects its survival? Explain how.

Let's look at some examples of physical adaptations which help different animals survive. The color of the fur, how thick or thin the fur is, the number of fingers, the shape of the nose or legs, and the shape of a bird's beak are all examples of physical adaptations. Can you name the animal in the picture above? If you said koala you are correct! The koala has one special physical adaptation that helps it live in a tree. Keep reading to find out what it is!



Animal Adaptations

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

- a) The only two things that animals need to survive are food and water. True False
b) Animals depend on their physical features for survival. True False
c) Animals are able to adapt their physical features over one lifetime. True False
d) The color of fur, and the shape of the nose are two examples of an animal's physical adaptations. True False
e) Animals need to find food. They need to stay safe. They need to build homes. True False

2. Write each word beside its meaning. There is ONE word that does NOT have a matching definition! Use the reading passage or a dictionary to write a definition for the remaining word.

- habitat environment physical feature adaptation physical adaptation

- a) a physical feature that has been changed for survival purposes
b) a feature that describes the animal's body features
c) the environment in which a plant or animal lives
d) something that has been changed for a specific reason
e) _____



Animal Adaptations

Answer the questions in complete sentences.

- 3. What is a habitat? Give two examples to support your answer.
4. How do animals depend on their physical features for survival?
5. Give an example of a physical adaptation. How would it help an animal survive in its habitat?

Extension and Application

6. Get Your Coupons Here... Physical Adaptations for a Low Price!

We have learned that animals do not develop their physical adaptations in a short period of time. Rather, their physical adaptations develop over many generations. For this activity however, we will pretend that animals will be able to buy their own physical adaptation. Yes, you will definitely need to use your imagination for this activity!

Gather information about 1 animal and its possible physical adaptations. You will use this information to design a coupon that you would see in a magazine or a newspaper. What is a coupon? It is a voucher that gives somebody a discount on something. Your coupon will not sell food or clothing. Instead, it will sell physical adaptations to animals. Include the following information on your coupon:

- A picture of the animal.
A slogan (the slogan should "sell" the adaptation, convincing the animal who is going shopping that it should buy this physical adaptation! It should answer the question: How does this adaptation help with survival?)
A price (how much is this physical adaptation going to cost the animal?)
Information about the animal and what purpose this physical adaptation serves

Stretch your imagination and be as creative as possible!



How Important Are Thumbs?

The goal of this activity is to provide you with a chance to understand how important the thumb is for animals. You will discover:

- which activities take longer without the use of a thumb
- what sort of human activities would not be possible to do without your thumbs

Materials: (per group)

masking tape, scissors, paper clips, zip-lock bag, plastic fork and knife, pencil, paper, balloons, book, chalk

Instructions:

1. Tape your thumbs to the sides of your hands.
2. Then, try to complete the tasks that are listed below. Be careful not to use your thumbs! After completing each item, write out the answers to the following questions:

- A. Is the task more difficult with or without a thumb?
- B. How did you have to change your usual technique in order to complete this task?
- C. Do you think organisms without thumbs would carry out this task on a regular basis? Why or why not?

Tasks:

- Pick up a pen or pencil from the table. Use it to write your name on paper.
- Open a book. Turn a few pages, one page at a time.
- Pick up a piece of chalk. Write your name on the board.
- Tear off a small piece of tape.
- Sharpen a pencil.
- Cut a circle out of a piece of paper using scissors.
- Pick up one paper clip. Clip a pile of papers together.
- Tie your shoelaces.
- Blow up a balloon and tie it.
- Close a zip-lock bag.



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



Comprehension Quiz



Part A

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

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

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



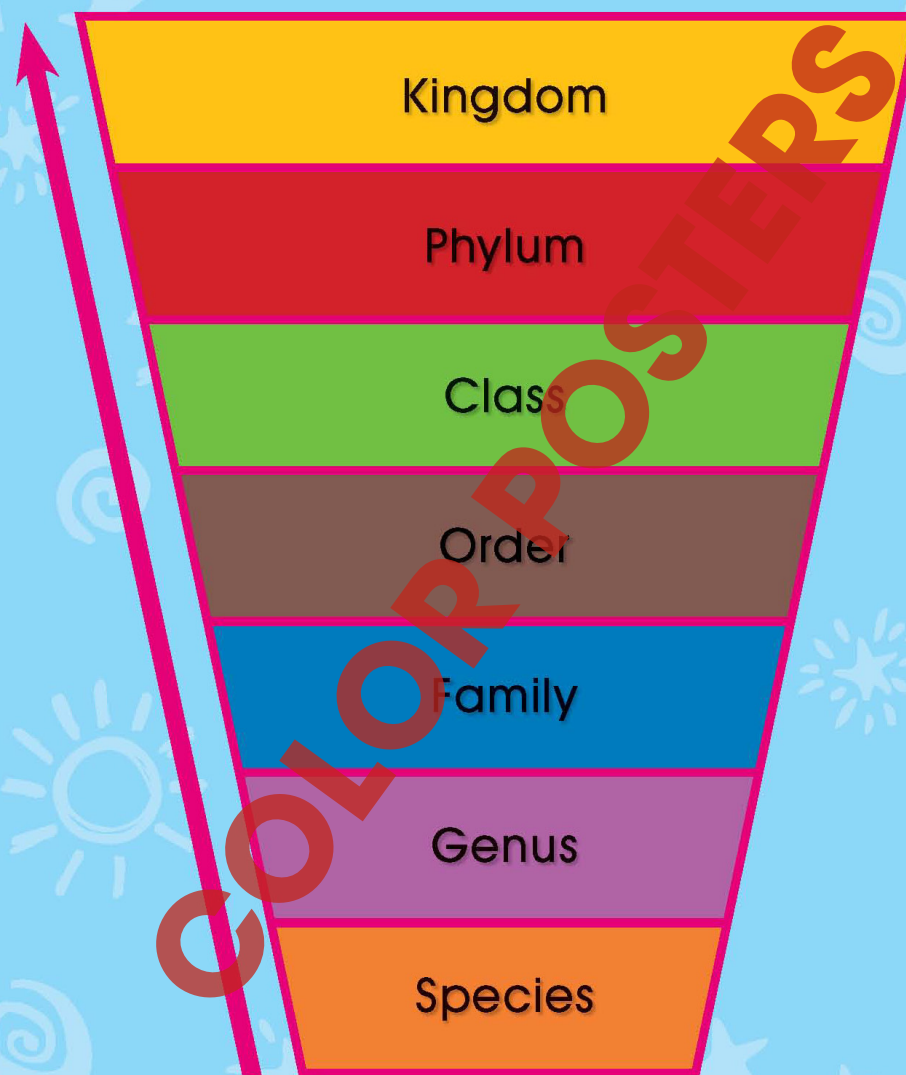
a) _____

b) _____

c) _____

SUBTOTAL: /14

Classifying Animals



NAME: _____

After You Read 



Animal Adaptations

Answer the questions in complete sentences.

3. What is a **habitat**? Give two examples to support your answer.

4. How do animals depend on their physical features for survival?

5. Give an example of a **physical adaptation**. How would it help an animal survive in its habitat?

Extension and Application

6. Get Your Coupons Here... Physical Adaptations for a Low Price!

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- A picture of the animal
- A slogan (the slogan should "sell" the adaptation, convincing the animal who is going shopping that it should buy this physical adaptation! It should answer the question: *How does this adaptation help with survival?*)
- A price (how much is this physical adaptation going to cost the animal?)
- Information about the animal and what purpose this physical adaptation serves

Stretch your imagination and be as creative as possible!

3.
The environment where a plant or animal lives. Answers will vary.

4.
They develop adaptations over time

5.
Answers will vary

6.
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



EASY MARKING

ANSWER KEY