



TEACHER GUIDE

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STUDENT HANDOUTS

- Reading Comprehension

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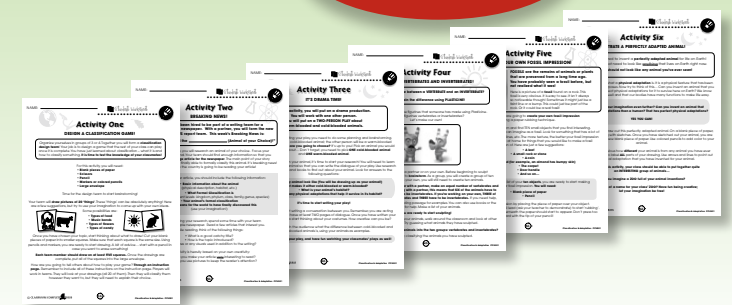
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Invertebrates

1. Match the word on the left to its definition on the right. You may use a dictionary to help.

- | | | | |
|---|--------------|---|---|
| 1 | invertebrate | the group of invertebrates that includes spiders | A |
| 2 | insect | describes something where the left side is the mirror image of the right side | B |
| 3 | mollusk | the group of invertebrates that includes snails and slugs | C |
| 4 | arachnid | an animal that does not have a backbone | D |
| 5 | symmetrical | the group of invertebrates that includes butterflies, flies, and bees | E |

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

invertebrate symmetrical insect mollusk

- a) The human body is _____ because the left side of the body is a mirror image of the right side.
- b) A spider does not have a backbone. It is classified as a(n) _____.
- c) Butterflies are classified into the _____ group of invertebrates.
- d) Snails and slugs are good examples of invertebrates. They are classified into the _____ group of invertebrates.



Invertebrates

We have already looked at **vertebrates**, the first of the two groups of animals. **Invertebrates** are the second group. Invertebrates' bodies are organized differently from vertebrates' bodies. They do not have backbones.

It is probably hard to imagine an animal that does not have a backbone. Can you believe that 98 percent of all animal species in the world are invertebrates?

That means there are at least one million invertebrate species that are living around us! Invertebrates are divided into groups: **insects** (butterflies, flies, bees), **mollusks** (snails, slugs), and **arachnids** (spiders).



Is your body **SYMMETRICAL**? How do you know?

All invertebrates share common **features**. There are some important ones that help us classify animals as invertebrates. Let's look at the following features: Invertebrates do not have a backbone. This is how they got their name! "Invertebrate" means 'no vertebrae', 'no backbone'. Invertebrates are multicellular. Cells in an invertebrate work together to help the organism survive. Each cell has specific duties and responsibilities. Most invertebrates reproduce sexually, not asexually. That means that a new organism is formed from male and female cells. Most invertebrates can move. The bodies of most invertebrates are **symmetrical**. Symmetrical means that if you draw a line down the middle, the left side would be the mirror image of the right side. Invertebrates can't make their own food. They feed off other things to get their energy.



Invertebrates

1. Put a check mark (✓) next to the answer that is most correct.

- a) How do you know if an animal is an **invertebrate**?
- A It gets its energy from eating plants.
- B It does not have a backbone.
- C You can't tell if an animal is an invertebrate by looking at it.
- D It has a backbone.
- b) What are the three groups that all invertebrates are divided into?
- A herbivores, carnivores, and omnivores
- B plants, animals, and fungi
- C reptiles, amphibians, and fish
- D insects, mollusks, and arachnids
- c) What are three examples of insects?
- A butterflies, flies, and bees
- B ants, deer, and mice
- C bees, flies, and snails
- D snails, spiders, and slugs
- d) What does it mean to be **symmetrical**?
- A You eat the same food as other organisms in your population.
- B The left side is a mirror image of the right side.
- C The left side looks the exact same as the right side.
- D The left side looks completely different from the right side.
- e) Can invertebrates produce their own food?
- A Yes, they produce their own food through photosynthesis.
- B Yes, they produce their own food by using energy from the sun.
- C No, they can't make their own food. They feed off things to get their energy.
- D No, they can't make their own food. They do not need food to survive.



Invertebrates

2. Use a dictionary to look up the definitions of **MOLLUSK** and **ARACHNID**. Write down the dictionary's definition, and then write your own definition of each word.

- a) mollusk (dictionary): _____
- b) mollusk (own definition): _____
- c) arachnid (dictionary): _____
- d) arachnid (own definition): _____

Extension and Application

3. Invent your own invertebrate!

Ninety-eight percent of all animal species in the world are invertebrates! There are around one million invertebrate species. Now you have the chance to add one more invertebrate to the list! Reread the section of the reading passage that lists the common features of invertebrates. Using this information, **invent your own invertebrate**. It is important that your animal has the typical invertebrate **features**. In this activity, you have the choice of either drawing a picture of your invertebrate invention or writing a story about it. In your answer, you will need to include the following:

- a name for your invertebrate invention
- a list of the features that classify it as an invertebrate

Use your imagination. Your invertebrate should not look like any animal you have ever seen before. Be creative!

4. Are Butterflies Symmetrical? Let's remind ourselves what it means if something is symmetrical. It means that if you drew a line down the middle of it, the left side would be the mirror image of the right side. Humans are symmetrical! Look at your two hands. They are mirror images of each other!

Butterflies are also symmetrical. In this activity, you will complete the butterfly drawing on the next page. You will see that the one side is already drawn. Knowing that the butterfly is symmetrical, you will be able to complete the other side. By the end, you should have two sides that are mirror images of each other. Use a pencil!



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 different kinds of animals: big, small, furry, frightening, slimy, etc.

Can you think of any other adjectives to describe animals?

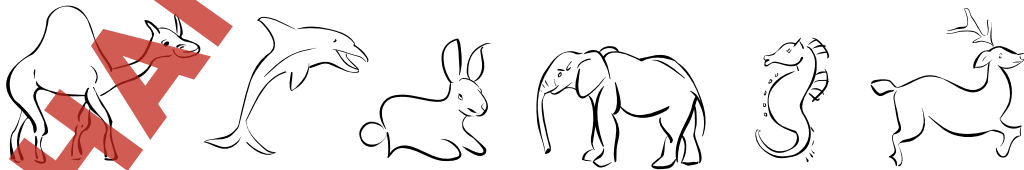
Once you have cut out your ten pictures, arrange the pictures on a piece of paper. You are ready to brainstorm how you are going to **classify** your animals. You are going to divide your group of animals into small groups.

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



Word Search

Find all of the words in the Word Search. Words may be horizontal, vertical, or diagonal. A few may even be backwards! Look carefully!

adaptation	environment	kingdom	phylum
arachnid	evolution	marsupial	sense
biologist	family	mollusk	species
class	fossil	nerve	symmetrical
classification	habitat	opposable	tissue
category	insect	organism	vertebrate
coldblooded	invertebrate	paleontologist	warmblooded

p	c	v	r	f	g	s	e	i	c	e	p	s	w	q	k	o	b
h	w	a	r	m	b	l	o	o	d	e	a	y	s	a	c	p	i
y	e	v	o	l	u	t	i	o	n	n	w	m	d	z	a	p	o
l	w	f	s	w	e	t	l	l	n	v	h	m	n	r	t	o	l
u	d	r	a	u	r	v	x	a	h	v	n	e	e	t	e	s	o
m	v	a	z	m	w	y	u	j	a	r	t	t	r	y	g	a	g
s	e	c	e	g	i	f	h	k	t	o	g	r	v	h	o	b	i
r	r	v	d	f	g	l	m	v	r	n	b	i	e	d	r	l	s
t	t	b	n	m	j	g	y	t	e	m	r	c	w	f	y	e	t
y	e	d	i	n	h	c	a	r	a	e	f	a	d	h	h	f	d
u	b	m	q	s	v	b	m	u	y	n	v	l	x	b	y	r	w
l	r	m	a	z	x	e	v	b	g	t	m	o	d	g	n	i	k
c	a	a	o	i	n	v	e	r	t	e	b	r	a	t	e	d	
l	t	s	l	s	a	s	d	f	g	f	s	h	f	s	n	e	
a	e	d	k	e	l	u	w	e	r	t	o	m	a	y	r	f	d
s	h	f	y	d	f	u	p	r	t	y	s	s	b	k	t	m	o
s	e	n	s	e	g	j	s	i	o	u	s	i	i	y	t	e	o
d	f	g	h	j	h	j	k	k	a	l	i	n	t	w	i	y	l
a	d	a	p	t	a	t	i	o	n	l	l	a	a	h	s	q	b
t	c	e	s	n	i	a	s	d	f	g	m	g	t	f	s	e	d
q	w	e	r	t	y	u	l	o	p	l	n	r	f	d	u	w	l
c	l	a	s	s	i	f	i	c	a	t	i	o	n	z	e	b	o
p	a	l	e	o	n	t	o	l	o	g	i	s	t	w	y	p	c



Comprehension Quiz

Part C

Answer the questions in complete sentences.

1. What is the difference between a **warm-blooded animal** and a **cold-blooded animal**? 2

2. What does it mean to **classify** something? Give an example to support your answer. 2

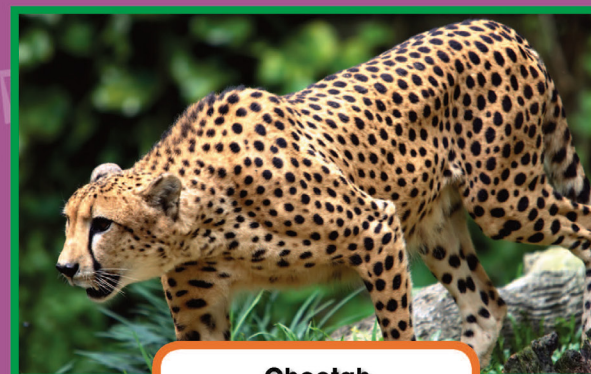
3. Why are **vertebrates** called "the most advanced organism on Earth"? 2

4. What is a **physical adaptation**? Use information you have learned about the **koala** to support your answer. 2

5. What is **evolution**? How do scientists gather information about **evolution**? 2

SUBTOTAL: /10

Animal Adaptations



Cheetah

Adaptation: run fast

Advantage: able to catch fast-moving prey



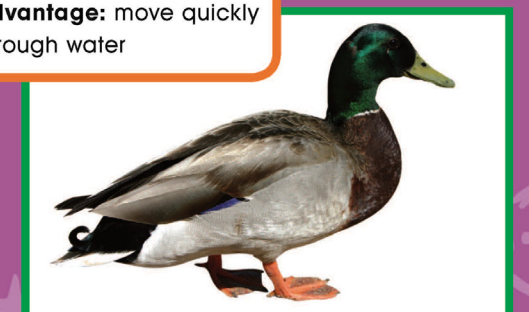
Eagle

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

NAME: _____

After You Read



Invertebrates



2. Use a dictionary to look up the definitions of **MOLLUSK** and **ARACHNID**. Write down the dictionary's definition, and then write your own definition of each word.

- a) mollusk (dictionary): _____
- b) mollusk (own definition): _____
- c) arachnid (dictionary): _____
- d) arachnid (own definition): _____

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- 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

Answers will vary

2.

Answers will vary

3.

Answers will vary

4.

EASY MARKING ANSWER KEY

10

13

Hatchet

- **RSL.5.1** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- **RSL.5.2** Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.
- **RSL.5.3** Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text.
- **RSL.5.4** Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.
- **RSL.5.5** Explain how a series of chapters, scenes, or stanzas fits together to provide the overall structure of a particular story, drama, or poem.
- **RSL.5.6** Describe how a narrator's or speaker's point of view influences how events are described.
- **RSL.5.9** Compare and contrast stories in the same genre on their approaches to similar themes and topics.
- **RSL.5.10** By the end of the year read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently.
- **RSL.6.1** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- **RSL.6.2** Determine a theme or central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- **RSL.6.3** Describe how a particular story's or drama's plot unfolds in a series of episodes as well as how the characters respond or change as the plot moves toward a resolution.
- **RSL.6.4** Determine the meaning of words and phrases as they are used in a text, including figurative and connotative meanings; analyze the impact of a specific word choice on meaning and tone.
- **RSL.6.5** Analyze how a particular sentence, chapter, scene, or stanza fits into the overall structure of a text and contributes to the development of the theme, setting, or plot.
- **RSL.6.6** Explain how an author develops the point of view of the narrator or speaker in a text.
- **RSL.6.10** By the end of the year read and comprehend literature, including stories, dramas, and poems, in the grades 6–8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
- **RSFS.5.3** Know and apply grade-level phonics and word analysis skills in decoding words. **A)** Use combined knowledge of all letter-sound correspondences, syllabication patterns, and morphology to read accurately unfamiliar multisyllabic words in context and out of context.
- **RSFS.5.4** Read with sufficient accuracy and fluency to support comprehension. **A)** Read grade-level text with purpose and understanding. **B)** Read grade-level prose and poetry orally with accuracy, appropriate rate, and expression on successive readings. **C)** Use context to confirm or self-correct word recognition and understanding, rereading as necessary.
- **WS.5.1** Write opinion pieces on topics or texts, supporting a point of view with reasons and information. **A)** Introduce a topic or text clearly, state an opinion, and create an organizational structure in which ideas are logically grouped to support the writer's purpose. **B)** Provide logically ordered reasons that are supported by facts and details. **C)** Link opinion and reasons using words, phrases, and clauses. **D)** Provide a concluding statement or section related to the opinion presented.
- **WS.5.2** Write informative/explanatory texts to examine a topic and convey ideas and information clearly. **A)** Introduce a topic clearly, provide a general observation and focus, and group related information logically; include formatting, illustrations, and multimedia when useful to aiding comprehension. **B)** Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic. **C)** Link ideas within and across categories of information using words, phrases, and clauses. **D)** Use precise language and domain-specific vocabulary to inform about or explain the topic. **E)** Provide a concluding statement or section related to the information or explanation presented.
- **WS.5.3** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. Orient the reader by establishing a situation and introducing a narrator and/or characters; organize an event sequence that unfolds naturally. **B)** Use narrative techniques, such as dialogue, description, and pacing, to develop experiences and events or show the responses of characters to situations. **C)** Use a variety of transitional words, phrases, and clauses to manage the sequence of events. **D)** Use concrete words and phrases and sensory details to convey experiences and events precisely. **E)** Provide a conclusion that follows from the narrated experiences or events.
- **WS.5.4** Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.
- **WS.5.7** Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.
- **WS.5.8** Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
- **WS.5.9** Recall relevant information from experiences or gather relevant information from print and digital sources; summarize or paraphrase information in notes and finished work, and provide a list of sources.
- **WS.6.1** Write arguments to support claims with clear reasons and relevant evidence. **A)** Introduce claim(s) and organize the reasons and evidence clearly. **B)** Support claim(s) with clear reasons and relevant evidence, using credible sources and demonstrating an understanding of the topic or text. **C)** Use words, phrases, and clauses to clarify the relationships among claim(s) and reasons. **D)** Establish and maintain a formal style. **E)** Provide a concluding statement or section that follows from the argument presented.
- **WS.6.2** Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content. **A)** Introduce a topic; organize ideas, concepts, and information, using strategies such as definition, classification, comparison/contrast, and cause/effect; include formatting, graphics, and multimedia when useful to aiding comprehension. **B)** Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples. **C)** Use appropriate transitions to clarify the relationships among ideas and concepts. **D)** Use precise language and domain-specific vocabulary to inform about or explain the topic. **E)** Establish and maintain a formal style. **F)** Provide a concluding statement or section that follows from the information or explanation presented.
- **WS.6.3** Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences. **A)** Engage and orient the reader by establishing a context and introducing a narrator and/or characters; organize an event sequence that unfolds naturally and logically. **B)** Use narrative techniques, such as dialogue, pacing, and description, to develop experiences, events, and/or characters. **C)** Use a variety of transition words, phrases, and clauses to convey sequence and signal shifts from one time frame or setting to another. **D)** Use precise words and phrases, relevant descriptive details, and sensory language to convey experiences and events. **E)** Provide a conclusion that follows from the narrated experiences or events.
- **WS.6.4** Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- **WS.6.7** Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- **WS.6.8** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
- **WS.6.9** Draw evidence from literary or informational texts to support analysis, reflection, and research. **A)** Apply *grade 6 Reading standards* to literature. **B)** Apply *grade 6 Reading standards* to literary nonfiction.