

## **Expert Pack: Animal Adaptations**

Lexile Range: 180-790

**Topic/Subject:** Animal Adaptations

### **Essential Question:**

- **How do adaptations help animals to survive?**

### **Texts/Resources**

#### Books

1. *Animal Adaptations* by Julie K. Lundgren
2. *How Do They Move?* by Kira Freed
3. *Animal Eyes* by Pam Bull

#### Articles

1. "Adaptation"

#### Videos

1. "Animal Adaptations for Kids"
2. "Animal Body Coverings"

### **Rationale and Suggested Sequence for Reading**

The text set begins with *Animal Adaptations*, a non-fiction book that will be explored as a read-aloud (620L). Students will then view "Animal Body Coverings," an informational video about body coverings and why animals have them. The next two texts are leveled readers, titled "How Do They Move?" and "Animal Eyes", that will be read by students. Discussions and illustrations on how animals have different adaptations to help with movement are in the book "How Do They Move?". "Animal Eyes", a very engaging text with pictures, furthers students' study of animal adaptations. The next source is a video, titled "Animal Adaptations for Kids"; students will deepen their understanding of why animals have body coverings and how this relates to the way humans use clothing to adapt to their environment. Finally, a World Book article "Adaptation" is read aloud to students. This reading reinforces learning from the set and adds to the set by including examples of plant and insect adaptations.

**The Common Core Shifts for ELA/Literacy**

1. Regular practice with complex text and its academic language
2. Reading, writing and speaking grounded in evidence from text, both literary and informational
3. Building knowledge through content-rich nonfiction

**College and Career Readiness Anchor Standards for Reading Literary and/or Informational Texts**

1. *Read closely to determine what the text says explicitly and to make logical inferences from it; cite specific textual evidence when writing or speaking to support conclusions drawn from the text.*
2. *Determine central ideas or themes of a text and analyze their development; summarize the key supporting details and ideas.*
10. *Read and comprehend complex literary and informational texts independently and proficiently.*

## Annotated Bibliography

**620L *Animal Adaptations***

Author: Julie K. Lundgren

Genre: Informational text

Length: 136 words, 24 pages

Synopsis: This text shows and explains different animal adaptations used for survival. The text has a table of contents, photographs, section headings, bolded words, labels, glossary and captions. Looks at animal adaptations and how these changes to the way the different species look and act, help them to survive in their environment.

Citation: Lundgren, J. K. (2012). *Animal Adaptations*. Florida. Rourke Educational Media.

Recommended Student Activities: Wonderings

**N/A “Animal Body Coverings”**

Author: Suzan Yassin

Genre: Informational video

Length: 3:22

Synopsis: The video begins by answering questions about what is a body covering and why animals have it. Definitions and examples of each of the major coverings are given. Graphics and labels as well as headings with a focus on vocabulary are included.

Citation: “Animal Body Coverings” [video file] (n.d) Retrieved July 20<sup>th</sup>, 2015, from

<http://www.teachertube.com/video/animal-body-coverings-84051>

Recommended Student Activities: A Picture of Knowledge

**180L *How Do They Move?***

Author: Kira Freed

Genre: Informational text

Length: 179 words

Synopsis: The book illustrates that animals have specific adaptations that help them move, including flying, jumping, running, etc. The book has drawings and simple repetitive sentences as well as a question/answer format.

Citation: Freed, K. (2002). *How Do They Move?* Tuscon, AZ: The Learning Page

Retrieved from <https://www.readinga-z.com/book.php?id=91>

Recommended Student Activities: Quiz Maker

**370L *Animal Eyes***

Author: Pam Bull

Genre: Informational text

Length: 172 words

Synopsis: *Animal Eyes* gives the reader an up-close look at the eyes of some familiar animals. Readers are encouraged to guess what kind of animal has the type of eyes presented before turning the page to find out. Photographs provide clues that help readers decode unfamiliar words.

Citation: Bull, P. *Animal Eyes*. <https://www.raz-plus.com/books/leveled-books/book/?id=86&lang=English>

Recommended Student Activities: Quiz Maker

**N/A “Animal Adaptations for Kids”**

Author: Unknown

Genre: Informational video

Length: 7:15

Synopsis: The video begins with children discussing how humans wear clothes to adapt to their environment and then explores how animal adaptations help with survival. The video is accompanied by narration, includes graphics, as well as labels and headings with a focus on vocabulary.

Citation: “Animal Adaptations for Kids” [video file] www. Makemegenius.com, October 2013

Retrieved from [http://www.youtube.com/watch?v=yY4NNxka\\_to](http://www.youtube.com/watch?v=yY4NNxka_to)

Recommended Student Activities: A Picture of Knowledge

**790L “Adaptation”**

Author: World Book Kids

Genre: Informational text

Length: 293 words

Synopsis: This brief article from World Book Kids extends “adaptation” to examples including plants and insects. This information builds on the topic and may inspire student curiosity about adaptations.

Citation: "Adaptation." *World Book Kids*. World Book, 2016. Web. 19 Dec. 2016.

Recommended Student Activities: Wonderings

## Supports for Struggling Students

By design, the **gradation of complexity** within each Expert Pack is a technique that provides struggling readers the opportunity to read more complex texts. Listed below are other measures of support that can be used when necessary.

- Provide a brief **student-friendly glossary** of some of the academic vocabulary (tier 2) and domain vocabulary (tier 3) essential to understanding the text
- Download the Wordsmyth widget to classroom computers/tablets for students to access student-friendly definitions for unknown words: <http://www.wordsmyth.net/?mode=widget>
- Provide brief **student-friendly explanations** of essential background knowledge not easily learned from the text
- Include **pictures or videos** related to the topic within and in addition to the set of resources in the pack
- Select a small number of texts to **read aloud** with some discussion about vocabulary work and background knowledge
- Provide **audio recordings** of the texts being read by a strong reader (teacher, parent, etc.)
- **Chunk the text** and provide brief questions for each chunk of text to be answered before students go on to the next chunk of text
- Pre-reading activities that focus on the **structure and graphic elements** of the text
- Provide **volunteer helpers** from the school community during independent reading time
- Use Expert Packs as the **resources for Guided Reading** with a small group of students

## Expert Pack: Animal Adaptations

### Learning Worth Remembering

**Cumulative Activities** – The following activities should be completed and updated after reading each resource in the set. The purpose of these activities is to capture knowledge building from one resource to the next, and to provide a holistic snapshot of central ideas of the content covered in the expert pack. *It is recommended that students are **required** to complete one of the Cumulative Activities (Rolling Knowledge Journal or Rolling Vocabulary) for this Expert Pack.*

#### 1. Rolling Knowledge Journal

- Read each selection, one at a time.
- After you read *each* resource, stop and think what the big learning was. What did you learn that was new *and important* about the topic from *this* resource? Write, draw, or list what you learned from the text about (topic).
- Then write, draw, or list how this new resource added to what you learned from the last resource(s).

#### Sample Student Response:

Title	Write, Draw, or List	
	New and important learning about the topic	How does this resource add to what I learned already?
1. <i>Animal Adaptations</i>	Adaptations affect animals' appearance and behavior.	
2. "Animal Body Coverings"	Animals can be grouped by their different body coverings. It helps us to understand what animals go with each covering and why.	Animals have different body coverings that help them survive.
3. <i>How Do They Move?</i>	Animals' body parts are adaptations to help them move.	Animals move on land, water, and in the air and they have body parts to help them do so.
4. <i>Animal Eyes</i>	Animal eyes are adapted in different ways.	Animals' eyes also have adaptations, like one kind of lizard has eyes that move independently, so the lizard can see different things out of each eye.
5. "Animal Adaptations for Kids"	Adapting is changing selves to a new condition. Animals adapt to their habitats.	Different adaptations are needed for different habitats and different animals. Animals adapt to their habitats.

6. "Adaptation"	An adaptation is a feature that helps a living thing survive, like their environment and how to get their food; but not just animals have adaptations.	Plants and insects also have adaptations. All living things, not just animals, have adaptations.
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## 2. Rolling Vocabulary: "Sensational Six"

- Read each resource then determine the 6 words from each text that most exemplify the central idea of the text.
- Next use your 6 words to write about the most important idea of the text. You should have as many sentences as you do words.
- Continue this activity with EACH selection in the Expert Pack.
- After reading all the selections in the Expert Pack, go back and review your words.
- Now select the "Sensational Six" words from ALL the word lists.
- Use the "Sensational Six" words to summarize the most important learning from this Expert Pack.

Title	Six Vocabulary Words & Sentences
<i>Animal Adaptations</i>	<p>Words: enemies, actions, balance, gather, warn, shoo</p> <ol style="list-style-type: none"> <li>1. Animals need adaptations to protect themselves from <u>enemies</u>.</li> <li>2. In addition to body features, adaptations can be <u>actions</u>.</li> <li>3. Some animals use their tails to help with <u>balance</u>.</li> <li>4. Many animals must <u>gather</u> food to survive.</li> <li>5. Animals can use adaptations to <u>warn</u> enemies before they attack.</li> <li>6. Animals use features like tails and eyelashes to <u>shoo</u> away pesky insects.</li> </ol>
"Animal Body Coverings"	<p>Words: outer, classified, hair, smooth skin, smooth, plates</p> <ol style="list-style-type: none"> <li>1. Coverings are on the <u>outer</u> part of an animal's body.</li> <li>2. Animals can be <u>classified</u> by the type of body coverings they have.</li> <li>3. Some animals, like elephants, have <u>hair</u>.</li> <li>4. Some animals, like frogs, have <u>smooth skin</u>.</li> <li>5. When skin is <u>smooth</u> it protects certain animals like armor.</li> <li>6. Some animals, like lizards, have scales or <u>plates</u> grouped together.</li> </ol>

<p><i>How Do They Move?</i></p>	<p>Words: land, wings, flippers, fins, hop, swinging</p> <ol style="list-style-type: none"> <li>1. Animals have different body parts to help them move in the air, the water, and on <u>land</u>, or the ground.</li> <li>2. <u>Wings</u> help birds fly.</li> <li>3. <u>Flippers</u> help water animals, like seals, swim fast.</li> <li>4. <u>Fins</u> help fish swim and move in the water.</li> <li>5. Frogs <u>hop</u> on land with their legs.</li> <li>6. Some animals, like monkeys, move by <u>swinging</u> between trees using their arms and tails.</li> </ol>
<p><i>Animal Eyes</i></p>	<p>Words: strange, dots, clearly, well, kind, tiny</p> <ol style="list-style-type: none"> <li>1. Some animal eyes can look very <u>strange</u>.</li> <li>2. It has eight eyes that look like little <u>dots</u>.</li> <li>3. Most spiders can't see <u>clearly</u>.</li> <li>4. The owl's eyes help it to see <u>well</u> at night.</li> <li>5. This <u>kind</u> of lizard does.</li> <li>6. The dragonfly has eyes that are made up of many <u>tiny</u> eyes.</li> </ol>
<p><i>"Animal Adaptations for Kids"</i></p>	<p>Words: adaptation, habitats, aquatic, desert, terrestrial, arboreal</p> <ol style="list-style-type: none"> <li>1. Adaptations are necessary for animals to survive in their habitats.</li> <li>2. Animals have different adaptations that are suited to their specific habitats.</li> <li>3. Aquatic animals live in the water.</li> <li>4. Animals can live in the desert with little water.</li> <li>5. Terrestrial animals live only on land.</li> <li>6. Arboreal animals live mostly in trees.</li> </ol>
<p><i>"Adaptation"</i></p>	<p>Words: variety, features, particular, enable, trait, reproduction</p> <ol style="list-style-type: none"> <li>1. Living things have a <u>variety</u> of adaptations.</li> <li>2. Adaptations can include size, color, shape, behavior, and other <u>features</u>.</li> <li>3. Many adaptations help living things survive in a <u>particular</u> type of place.</li> <li>4. This adaptation <u>enables</u> them to make more food.</li> <li>5. Different animals have a similar <u>trait</u>, but use it differently.</li> <li>6. Both flowers and fruits have adaptations that help in <u>reproduction</u>.</li> </ol>
<p><b>Sensational Six</b></p>	<p>Words: coverings, survive, habitats, adaptations, protect, environment</p> <p>All animals have body <b>coverings</b> that help them <b>survive</b> in their natural <b>habitats</b>.  Animals have <b>adaptations</b> that help <b>protect</b> them, care for their young, and find food in their <b>environments</b>.</p>



**2. Rolling Vocabulary: “Sensational Six”**

- Read each resource then determine the 6 words from each text that most exemplify the central idea of the text.
- Next use your 6 words to write about the most important idea of the text. You should have as many sentences as you do words.
- Continue this activity with EACH selection in the Expert Pack.
- After reading all the selections in the Expert Pack, go back and review your words.
- Now select the “Sensational Six” words from ALL the word lists.
- Use the “Sensational Six” words to summarize the most important learning from this Expert Pack.

**Sample Response**

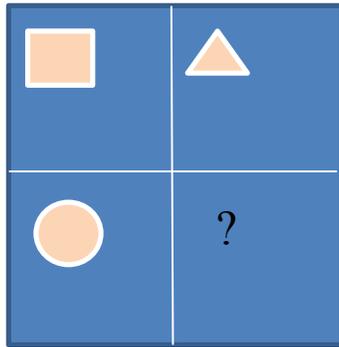
<b>Title:</b>	<b>Six Vocabulary Words &amp; Sentences</b>
<b>Sensational Six</b>	Words:

### Learning Worth Remembering

**Singular Activities** – the following activities can be assigned for each resource in the set. The purpose of these activities is to check for understanding, capture knowledge gained, and provide variety of ways for students to interact with each individual resource. Students may complete some or none of the suggested singular activities for each text. Singular activities are assigned at the discretion of the teacher.

#### 1. A Picture of Knowledge (Recommended for videos “Animal Body Coverings” and “Animal Adaptations for Kids”)

- Take a piece of paper and fold it two times: once across and once top to bottom so that it is divided into 4 quadrants.
- Draw these shapes in the corner of each quadrant.



1. Square
2. Triangle
3. Circle
4. Question Mark

- Write!

Square:	What one thing did you read that was interesting to you?
Triangle:	What one thing did you read that taught you something new?
Circle:	What did you read that made you want to learn more?
Question Mark:	What is still confusing to you? What do you still wonder about?

- Find at least one classmate who has watched the video and talk to each other about what you put in each quadrant.

#### 2. Quiz Maker (Recommended for *How Animals Move* and *Animal Eyes*)

- Make a list of three or more questions that would make sure another student understood the information.

- Your classmates should be able to find the answer to the question from the resource.
- Include answers for each question.
- Include the where you can find the answer in the resource.

Question	Answer

**3. Wonderings** (Recommended for *Animal Adaptions* and the Word Book article “Adaptation”)

I’m a little confused about:	This made me wonder:
<p>On the left, track things you don’t understand from the video and the article.</p> <p><b>I am confused about or do not understand....</b></p>	<p>On the right side, list some things you still wonder (or wonder now) about this topic.</p> <p><b>I wonder or would like to learn more about....</b></p>

## Expert Pack: Animal Adaptations

### Expert Pack Glossary

#### **Animal Adaptations**

<i>Word</i>	<i>Student-Friendly Definition</i>
enemies	Someone or something that wants to do bad things to you <i>The mouse has many enemies and must always be aware of its surroundings.</i>
actions	Things that animals do <i>The cheetah made quick actions when hunting.</i>
balance	To stay up straight, like on a bicycle, without wobbling or falling over <i>The spider balanced on the thread that made up its web.</i>
gather	To collect <i>The bird gathers sticks to build her nest.</i>
warn	To let someone know there is danger <i>The bird made a loud noise to warn other birds of a predator.</i>
shoo	To use part of your body to get someone or something to leave <i>The mother elephant used its trunk to shoo the flies away.</i>

#### **“Animal Body Coverings”**

<i>Word</i>	<i>Student-Friendly Definition</i>
hair	Threadlike fur that grows on people and some animals <i>The horse had long, black hair growing from its tail.</i>
smooth skin	Skin that is not bumpy or scaly and doesn't have hair <i>The shark has a very smooth skin for an outer covering.</i>
classify	To put into groups <i>The scientist sorts objects to classify them by color.</i>
outer	On the outside <i>The crab has an outer shell for protection.</i>
plates	Thin, flat pieces of horn or bone that covers and protects an animal <i>The armadillo has a protective shell made of bony plates.</i>
smooth	Not bumpy or wrinkled; you can easily run your hand across it <i>The shark has a very smooth skin for an outer covering.</i>

### How Do They Move?

Word	Student-Friendly Definition
wings	A part of an animal's body that is used for flying or gliding <i>The penguin's wings are too small to use for flying, but they help them to swim.</i>
flippers	One of two flat body parts that stick out from the side of a seal, whale, etc., and are used by the animal for swimming <i>The seal's flippers help them to swim.</i>
fins	A thin flat part that sticks out from the body of a fish and is used in moving or guiding the fish through water <i>Fish use their fins to help them swim.</i>
land	The solid part of the surface of the Earth or an area of ground. <i>An elephant lives most of its life on land.</i>
swinging	Moving backward and forward or from side to side while hanging from something <i>The monkey moves from tree to tree by swinging.</i>

### Animal Eyes

Word	Student-Friendly Definition
strange	Not usual; odd <i>Some animal eyes can look very strange.</i>
dots	A small, round mark or spot <i>It has eight eyes that look like little dots.</i>
clearly	Able to be seen or understood <i>Most spiders can't see clearly.</i>
well	It is good <i>The owl's eyes help it to see well at night.</i>
tiny	Very, very small <i>The dragonfly has eyes that are made up of many tiny eyes.</i>

## “Animal Adaptations for Kids”

Word	Student-Friendly Definition
adapt	A change to be able to live in your environment The bear hibernates in order to adapt to the winter.
adaptation	A change in the body that helps you to live <i>The polar bear has a large layer of blubber as an adaptation to help it stay warm.</i>
natural	Happens without making it happen, like growing <i>Learning how to walk for a baby deer is natural, no one has to teach it.</i>
habitats	The places where animals live <i>The ocean is the habitat for many salt water animals and plants.</i>
aquatic	From the water <i>A fish is an aquatic animal.</i>
desert	A dry, sandy place with very little water <i>It does not rain a lot in the desert.</i>
terrestrial	Lives on the land only <i>Giraffes live on land; they are terrestrial animals.</i>
polar	An animal that is from the North or South Pole <i>A polar bear is a polar animal that lives in the North Pole.</i>
arboreal	Animals that live in trees <i>Monkeys are arboreal animals; they spend a lot of time in trees.</i>
features	Words that describe how something looks <i>The cat has long fur and whiskers as features.</i>
hump	A large bump on an animal’s back <i>The camel has a hump that they use to store water.</i>
oxygen	Air <i>The frog breathes oxygen using its lungs.</i>
gills	Lines on the side of the head of a fish <i>Fish breathe through gills under water.</i>
blubber	Thick fat that some sea animals have, like whales and seals, to keep them warm in the cold water <i>Whales have a thick layer of blubber that helps them stay warm.</i>

survive	To stay alive <i>Adaptations are changes to animals' bodies that help them to survive.</i>
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**“Adaptation”**

<i>Word</i>	<i>Student-Friendly Definition</i>
variety	A number of different things in a group or class <i>Living things have a variety of adaptations.</i>
feature	A part or quality of something <i>Adaptations can include size, color, shape, behavior, and other features.</i>
particular	Being the only one in mind or referred to out of many possibilities; specific; special <i>Many adaptations help living things survive in a particular type of place.</i>
enable	To give means or power to; make able; allow <i>This adaptation enables them to make more food.</i>
trait	A characteristic or quality that makes a person or animal different from others <i>Different animals have a similar trait but use it differently.</i>
reproduction	The process by which living things create young or offspring. <i>Both flowers and fruits have adaptations that help in reproduction.</i>