

Expert Pack: Animal Adaptations

Submitted by: Providence Public Schools, Rhode Island

Grade: 1

Date: April 2015

| Topic/Subject How do animals' bodies help them survive? |
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| <p style="text-align: center;">Texts/Resources</p> <p>Book(s)</p> <ol style="list-style-type: none">1. <i>Animal Adaptations</i>2. <i>Fur and Feathers</i>3. <i>How Do They Move?</i>4. <i>Weird Bird Beaks</i> <p>Article(s)</p> <ol style="list-style-type: none">5. "An Elephants Excellent Trunk"6. "Animal Coverings"7. "An Owl is a Bird"8. "How an Animal Stays Safe" <p>Infographic</p> <ol style="list-style-type: none">9. "Polar Bears" <p>Videos</p> <ol style="list-style-type: none">10. "Animal Adaptations for Kids"11. "Animal Body Coverings" <p>Each expert pack contains a variety of selections grouped to create as coherent and gradual a learning process for students as possible, generally beginning with lower levels as measured by quantitative and qualitative measures, and moving to more complex levels in the latter selections. This gradated approach helps support students' ability to read the next selection and to become 'experts' on the topic they are reading about.</p> <p>Refer to annotated bibliography on the following pages for the suggested sequence of readings.</p> |
| <p style="text-align: center;">Rationale and suggested sequence for reading:</p> <p>The unit begins with an in depth study of animal coverings, a topic covered in the first grade science curriculum. In the first book, <i>Fur and Feathers</i>, students are introduced, through an engaging narrative, to different animal coverings and their purposes. The next source is a powerpoint, "Animal Coverings," that explains the five major body coverings. As readers continue through the pack, "Animal Body Coverings," is a simple is a video that answers the questions, "What are body coverings and why do animals have them?" The next source is a video titled "Animal Adaptations for Kids" that helps children deepen their understanding of why animals have body coverings and how this relates to the way humans use clothing to adapt to their environment. Next is a leveled reader titled <i>How Do They Move?</i> This book has a very low Lexile score, and is therefore the first text that the students will read independently. It discusses and illustrates how animals have different adaptations to help them move. The next source, an info-graphic, titled "Polar Bears", has captions that clarify what features and adaptations a polar bear has and how it helps them. The next four sources are books or articles that discuss specific animals or groups of animals and how their adaptations help them. Finally, <i>Animal Adaptation</i>, is a non-fiction book that will be explored as a read-aloud. The Lexile is 620 and it captures the learning from the entire unit as it discusses physical features and behaviors related to animal adaptations.</p> <p>Each branch of the unit includes independent reading opportunities for students that build in complexity.</p> |

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

Though use of these expert packs will enhance student proficiency with most or all of the Common Core Standards, they focus primarily on Shift 3, and the highlighted portions of the standards below.

College and Career Readiness Anchor Standards for Reading Literary and/or Informational Texts (the darkened sections of the standards are the focus of the Expert Pack learning for students):

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**

Content Standard(s):

<http://bit.ly/StateScienceStandardsK-5>

Annotated Bibliography and suggested sequence for reading

AD750 *Fur and Feathers*

Author: Janet Halfmann

Genre: Narrative

Length: 32 pages

Synopsis: During a storm, a young girl dreams that the strong wind blows off all of the animals' coverings. She makes them new coverings while learning which type each animal needs in order to best survive in its habitat. This text provides information about animal classification, animal coverings and activities in the back

Citation: Halfmann, J. (2010). *Fur and Feathers*. South Carolina. Sylvan Dell Publishing.

Cost/Access: \$0.00 Providence Public Library; \$8.46 Amazon.com

Recommended Student Activities: Wonderings

670 “Animal Coverings”

Author: Semhar Ghebreselasie

Genre: Informational; Powerpoint

Length: 197 words

Synopsis: The powerpoint explains the five major animal coverings, and gives examples and explanations of each covering. The text has headings, photographs, bolded words, as well as a structured question/answer format.

Citation: Animal Coverings [powerpoint] Semhar Ghebreselasie. Retrieved July 20th, 2015, from <http://www.slideshare.net/semharghebre/animal-covering-ppt>

Cost/Access: \$0.00 <http://www.slideshare.net/semharghebre/animal-covering-ppt>

Recommended Student Activities: Quiz Maker

N/A “Animal Body Coverings”

Author: Suzan Yassin

Genre: Informational video

Length: 3:22

Synopsis: Video begins by answering the questions what is a body covering and why do animals have it? The video also defines and give examples of each of the major coverings and is accompanied by narration. The video includes graphics, and labels as well as headings with a focus on vocabulary.

Citation: Animal Body Coverings [video file] (n.d) Retrieved July 20th, 2015, from <http://www.teachertube.com/video/animal-body-coverings-84051>

Cost/Access: \$0.00 <http://www.teachertube.com/video/animal-body-coverings-84051>

Recommended Student Activities: A Picture of Knowledge

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 them survive. 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

Cost/Access: \$0.00 http://www.youtube.com/watch?v=yY4NNxka_to

Recommended Student Activities: A Picture of Knowledge

180L *How Do They Move?*

Author: Kira Freed

Genre: Informational text

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 Animals Move? Tuscon, AZ: The Learning Page

Retrieved from www.readinga-z.com

Cost/Access: \$0.00 with membership (Membership for a year is \$99.99 or free trial for 14 days)

Recommended Student Activities: Quiz Maker

N/A “Polar Bears”

Author: Mr. Salsich

Genre: Infographic

Length: 1 page

Synopsis: The infographic is a photo of polar bears with captions that explain their adaptations.

Citation: Polar Bears (n.d.). Retrieved April 17th, 2015, from <http://jmsalsich.edublogs.org/2012/09/30/polar-bears-and-blubber-mitts/>

Cost/Access: \$0.00 <http://jmsalsich.edublogs.org/2012/09/30/polar-bears-and-blubber-mitts/>

Recommended Activities: A Picture of Knowledge

380L “An Owl Is A Bird”

Author: Unknown Photo Credit: Shah Jahan

Genre: Informational article; includes photograph of an owl

Length: 71 words

Synopsis: Students will learn how owl body features (eyes, wings, head, claws and beak) help it hunt for food.

Citation: An Owl Is A Bird. Readworks.org Retrieved April 2nd, 2015, from

<https://www.readworks.org/passages/an-owl-is-a-bird>

Cost/Access: \$0.00 Readworks.org <https://www.readworks.org/passages/an-owl-is-a-bird>

Recommended Activities: Quiz Maker

470 *Weird Bird Beaks*

Author: Joe Slade

Genre: Informational

Length: 269 words

Synopsis: *Weird Bird Beaks* is a book that describes the adaptation of flight for owls in an accessible way for young students. It integrates many photographs and text features to support student learning .

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

Retrieved June 2nd, 2015, from www.readinga-z.com

Cost/Access: \$0.00 with membership to Reading A-Z (Membership for a year is \$99.99 or a free trial for 14 days is available)

Recommended Activities: A Picture of Knowledge

500L “An Elephant’s Excellent Trunk”

Author: Unknown Photo Credit: T. Tomer

Genre: Informational article

Length: 89 words

Synopsis: This text provides the many ways an elephant can use its trunk as well as other body features to help it survive on a daily basis. This article provides a photograph of elephant's trunk and simple paragraph structure

Citation: An Elephant's Excellent Trunk. Readworks.org. Retrieved July 20th, 2015, from <https://www.readworks.org/passages/elephants-excellent-trunk>

Cost/Access: \$0.00 <https://www.readworks.org/passages/elephants-excellent-trunk>

Recommended Student Activities: Wonderings

510L "How Animals Stay Safe"

Author: Kate Paixão

Genre: Informational article

Length: 95 words

Synopsis: Students will learn that all animals protect themselves with body features through the use of graphics and simple paragraphs: Turtles have shells, walking sticks look like sticks.... and so on.

Citation: How Animals Stay Safe. (n.d) Retrieved July 20, 2015, from <http://www.readworks.org/passages/how-animals-stay-safe>

Cost/Access: \$0.00 <http://www.readworks.org/passages/how-animals-stay-safe>

Recommended Student Activities: Wonderings

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.

Cost/Access: \$6.99

Recommended Student Activities: Quiz Maker

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 necessary background knowledge
- 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.

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|------|----------------------------|------------|--------------|------------|
| Text | <div><div>620L</div></div> | 2-3 band | 420 -820L | Complexity |
| | | 4-5 band | 740 -1010L | |
| | | 6-8 band | 925 - 1185L | |
| | | 9 -10 band | 1050 – 1335L | |
| | | 11 – CCR | 1185 - 1385 | |
| | | Guide | | |

Animal Adaptations by Julie K. Lundgren

1. Quantitative Measure

Go to <http://www.lexile.com/> and enter the title of the text in the Quick Book Search in the upper right of home page. Most texts will have a Lexile measure in this database. You can also copy and paste a selection of text using the Lexile analyzer.

2. Qualitative Features

Consider the four dimensions of text complexity below. For each dimension*, note specific examples from the text that make it more or less complex.

| Meaning/Purpose | Structure |
|---|---|
| <p>The big idea from this book is that animals have adaptations to help them survive. Adaptations include: physical appearance including special body parts; special features like a skunks spray; and actions like using tails for shooing flies, and tails for balance.</p> | <p>The structure is very supportive in that is clearly organized by grouping the animal adaptations by habitat, physical features and actions. This book has a Table of Contents, large photographs, section headings, bolded words, labels, captions and a glossary.</p> |
| Language | Knowledge Demands |
| <p>The text is short and only has one or two</p> | <p>The subject matter will be familiar to students</p> |

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| sentences per page. The longest sentence contains eight words. Although it is a high Lexile for grade 1, most of the vocabulary words and concepts have been taught in the previous texts. | reading the expert packs in order. This is the last item in the expert pack, and adaptations about actions is the only new concept. |
|--|---|

What will challenge students most in this text? What supports can be provided?

- Multisyllabic vocabulary words pose the biggest challenge. This text is short enough to have multiple reads by the teacher. This book, in conjunction with an Elmo (document camera) can provide multiple exposures to these words.
- Capitalizing on the picture clues and prior knowledge from the other sources in this pack will help add new information to the students' schema.
- Encouraging students to make connections to other texts in the set could support and deepen the students' understanding.

Expert Pack: Animal Adaptations

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Grade: 1 Date: April 2015

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.

12. Rolling Knowledge Journal

4. Read each selection in the set, one at a time.
5. 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).
6. 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? |
| <i>Fur and Feathers</i> | Each animal has a unique coat or covering. Their coverings help them live. | |
| "Animal Coverings" | Their coverings protect them. The coverings are fur, feathers, smooth skin, scales and shells. | What each animal covering looks like in real life. Animals have different outer coverings that help the animals. |
| "Animal Body Coverings" | Animals can be grouped by their different body coverings. | It helps us to understand what animals goes with each covering and why. |

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| <i>"Animal Adaptations for Kids"</i> | 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. |
| <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. |
| <i>"Polar Bears"</i> | Polar bears have many adaptations to help them live in their habitat | We have been reading about many animals, this text is all about polar bears only. It shows us about polar bears' sense of smell, legs, paws, ears and fur help them live in the arctic. |
| <i>"An Owl is a Bird"</i> | Owls have different adaptations to help them hunt. | This text is all about owls and their adaptations. It teaches about how owls' eyes, feathers, and head help them hunt successfully. |
| <i>Weird Bird Beaks</i> | The different shapes of birds' beaks help them survive in their specific habitats. | One of the adaptations that help birds like the owl to survive is their beaks. Birds' beak shapes are adapted for their specific diets to help them break things, suck, cut, and search for food. |
| <i>"An Elephant's Excellent Trunk"</i> | Elephants' trunks help them survive. | Similar to birds' beaks the elephants trunk helps them in many ways. Elephants' trunks help them breathe, smell, find food, drink, and wash themselves. |
| <i>"How Animals Stay Safe"</i> | Adaptations help animals protect themselves in different ways. | This text is about a few animals who have special adaptations. Turtles, walking sticks, and puffer fish all have specific body features and behaviors that protect them. |
| <i>Animal Adaptations</i> | Adaptations affect animals' appearance and behavior. | This text teaches us about more animal adaptations. Owls' eyes help them see at night. Skunks' scent helps them fend off predators. Chimpanzees use sticks to find and eat termites. Horses use their tails to help shoo off flies. |

13. 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>Fur and Feathers</i> | <p>Words: coats, fur, scales, slither, quills, slime</p> <p>Sentences:</p> <p>11. Animals have <u>coats</u> on their bodies to protect them.</p> <p>12. Some animals, like polar bears, have <u>fur</u>.</p> <p>13. Some animals have <u>scales</u>. Snakes <u>slither</u> along the ground.</p> <p>14. Some animals, like porcupines, have pointy <u>quill</u>.</p> <p>15. Some animals, like frogs, have <u>slime</u> on their skin.</p> |
| “Animal Coverings” | <p>Words: coverings, protection, environment, camouflage feathers, shells</p> <p>Sentences:</p> <p>• All animals have <u>coverings</u>.</p> <p>• Coverings provide animals with <u>protection</u></p> <p>• Animals need protection in their unique <u>environments</u>.</p> <p>• <u>Animals use their camouflage</u> to blend in.</p> <p>• <u>Feathers</u> are a birds’ covering..</p> <p>• <u>Shells</u> are the hard covering of animals like turtles and snails.</p> |

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| <p>"Animal Body Coverings"</p> | <p>Words: outer, classified, hair, smooth skin, smooth, plates</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Coverings are on the outer part of an animal's body. 2. Animals can be classified by the type of body coverings they have. 3. Some animals, like elephants, have hair. 4. Some animals, like frogs, have smooth skin. 5. When skin is smooth it protects certain animals like armor. 6. Some animals, like lizards, have scales or plates grouped together. |
| <p>"Animal Adaptations for Kids"</p> | <p>Words: adaptation, habitats, aquatic, desert, terrestrial, arboreal</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Adaptations are necessary for animals to survive in their habitats. 2. Animals' have different adaptations that are suited to their specific habitats. 3. Aquatic animals live in the water. 4. Animals can live in the desert with little water. 5. Terrestrial animals live only on land. 6. Arboreal animals live mostly in trees. |
| <p>How Do They Move?</p> | <p>Words: land, wings, flippers, fins, hop, swinging</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Animals have different body parts to help them move in the air, the water, and on land, or the ground. 2. Wings help birds fly. 3. Flippers help water animals, like seals, swim fast. 4. Fins help fish swim and move in the water. 5. Frogs hop on land with their legs. 6. Some animals, like monkeys, move by swinging between trees using their arms and tails. |
| <p>"Polar Bear"</p> | <p>Words: sense, blend, slippery, paws, grip, traction</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. A polar bear has a great sense of smell so they can find food. 2. The color of a polar bear makes it easy to blend in to the white snow to stay out of sight. 3. Polar bears live in cold, icy and slippery places. 4. Their paws are very large. 5. Their large paws grip things easily. 6. Their large gripping paws give them traction when walking and running quickly on the ice. |

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| <p>"An Owl Is A Bird"</p> | <p>Words: bird, hunts, feathers, claws, beak, help</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. An owl is a kind of bird with big eyes, soft feathers, a strong beak and sharp claws. 2. An owl hunts for its food at night. 3. The owl's soft feathers help it fly quietly to hunt for its prey. 4. The owl's sharp claws help it to catch its prey. 5. The owl's strong beak makes it easy to carry the food back to its nest. 6. All of the owl's features help it find food and survive. |
| <p><i>Weird Bird Beaks</i></p> | <p>Words: beaks, crossed, horn, nectar, hooks, pouches</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Birds use their special beaks to survive and get food. 2. Some birds have a beak that is crossed like an x to get seeds from pinecones. 3. Some birds have a horn on their beaks that they use to crack open nuts. 4. Some birds have beaks shaped like tubes to suck nectar from flowers. 5. Some birds have hooks at the end of their beak to cut up their food. 6. Some birds have pouches so they can find and carry fish from rivers and lakes. |
| <p>"An Elephant's Excellent Trunk"</p> | <p>Words: tusks, breathe, feed, trunk, shower, sprays</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. An elephant has big ears, big eyes, big tusks and a big trunk. 2. An elephant uses its trunk to breathe. 3. An elephant uses its trunk to feed her and her baby leaves and fruits. 4. An elephant uses her trunk to hold her baby. 5. An elephant can use her trunk to give her and her baby a shower. 6. She sucks up water and sprays it back out her trunk. |
| <p>"How Animals Stay Safe"</p> | <p>Words: protect, predators, notice, shells, spines, swallow</p> <p>Sentences:</p> <ol style="list-style-type: none"> 1. Animals protect themselves in different ways. 2. Their bodies hide them from predators. 3. They do things or look like other things so that it is hard for their predators to notice them. 4. Turtles have shells that they can hide in. 5. Some animals have spines on them that can hurt their predators. 6. Some animals can swallow water to help them survive. |

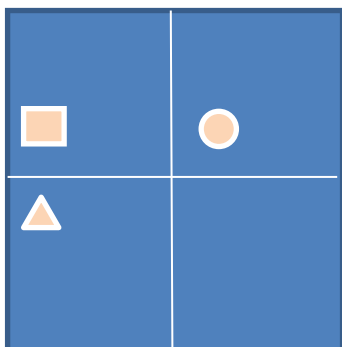
| | |
|--|--|
| <i>Animal Adaptations</i> | Words: enemies, actions, balance, gather, warn, shoo Sentences: <ol style="list-style-type: none"> 1. Animals need adaptations to protect themselves from enemies. 2. In addition to body features adaptations can be actions. 3. Some animals use their tails to help with balance. 4. Many animals must gather food to survive. 5. Animals can use adaptations to warn enemies before they attack. 6. Animals use features like tails and eyelashes to shoo away pesky insects. |
| Sensational Six | Words: coverings, survive, habitats, adaptations, protect, environment |
| Summary: All animals have body coverings that help them survive in their natural habitats . Animals have adaptations that help protect them, care for their young, and find food in their environments . | |

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 should be assigned at the discretion of the teacher.

A Picture of Knowledge (Recommended for “Animal Body Coverings,” “Animal Adaptations for Kids,” “Polar Bears,” “Weird Bird Beaks”)

- 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 read [selection] and talk to each other about what you put in each quadrant.

Wonderings (Recommended for *Fur and Feathers*, “An Elephant’s Trunk,” “How Animals Stay Safe”)

| I’m a little confused about: | This made me wonder: |
|------------------------------|----------------------|
| | |

On the left, track things you don’t understand from the article as you read.

On the right side, list some things you still wonder (or wonder now) about this topic.

Quiz Maker (Recommended for “Animal Coverings,” *How Do They Move?*, “An Owl is a Bird,” *Animal Adaptations*)

- 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 |
|----------|--------|
| 1. | |
| 1. | |
| 1. | |
| 1. | |

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Submitted by: Providence Public Schools, Rhode Island
Grade: 1 Date: April 2015

Expert Pack Glossary

Fur and Feathers

| Word | Student-Friendly Definition |
|---------|--|
| Coats | What animals have on the outside of their bodies. The dogs coat was soft and wet from the rain. |
| Fur | The thick hair on animals' bodies. The fur on the bear kept it warm during the cold winter months. |
| Scales | Bumpy skin on animals that often looks like triangles. The scales on the snake help to protect them. |
| Slime | A gooey liquid. Many fish produce slime. |
| Quills | Long, sharp, pointy, spiky things coming out of some animals' skin. Looks like hair but is not soft. The porcupine used its quills as protection from predators. |
| Slither | To move side to side without legs or arms. The snake slithers through the grass. |

"Animal Covering"

| Word | Student-Friendly Definition |
|-------------|--|
| Coverings | What animals have all over their bodies. The polar bear's coverings are fur and skin. |
| Protection | Something that keeps you safe. Animals have many adaptations that they use as protection from predators. |
| Camouflage | Something on an animal's body that helps it blend in to its surroundings so it can hide. The chameleon's skin color changes to camouflage with its surroundings. |
| Environment | The area around you. The camel has adaptations that help it to survive in the desert environment. |
| Feathers | What birds are covered in, soft and long. They help them fly. The bird had colorful feathers on its wings that helped it to fly. |
| Shells | Hard covering, like on a turtle's back. The turtle hid in it's hard shell to protect itself. |

“Animal Body Coverings”

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

“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. The polar bear has a large layer of blubber as an adaptation to help it stay warm. |
| Natural | Happens without making it happen, like growing. Learning how to walk for a baby deer is natural, no one has to teach it. |
| Habitats | The places where animals live. The ocean is the habitat for many salt water animals and plants. |
| Aquatic | From the water. A fish is an aquatic animal. |
| Desert | A dry, sandy place with very little water. It does not rain a lot in the desert. |

| | |
|-------------|---|
| Terrestrial | Lives on the land only. Giraffes live on land, they are a terrestrial animal. |
| Polar | An animal that is from the North or South Pole. A polar bear is a polar animal that lives in the North Pole. |
| Arboreal | Animals that live in trees. Monkeys are arboreal animals; they spend a lot of time in trees. |
| Features | Words that describe how something looks. The cat has long fur and whiskers as features. |
| Hump | A large bump on an animal's back. The camel has a hump that they use to store water. |
| Oxygen | Air. The frog breathes oxygen using its lungs. |
| Gills | Lines on the side of the head of a fish. Fish breathe through gills under water. |
| Blubber | Thick fat that some sea animals have, like whales and seals, to keep them warm in the cold water. Whales have a thick layer of blubber that helps them stay warm. |
| Survive | To stay alive. Adaptations are changes to animals' bodies that help them to survive. |

How Do They Move?

| Word | Student-Friendly Definition |
|----------|---|
| Wings | A part of an animal's body that is used for flying or gliding. The penguin's wings are too small to use for flying, but they help them to swim. |
| 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. The seal's flippers help them to swim. |
| 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. Fish use there fins to help them swim. |

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| Land | The solid part of the surface of the Earth or an area of ground. An elephant lives most of its life on land. |
| Swinging | Moving backward and forward or from side to side while hanging from something. The monkey moves from tree to tree by swinging. |

“Polar Bears”

| Word | Student-Friendly Definition |
|----------|---|
| Sense | To feel something. The bat can sense their prey at night. |
| Blend | To mix in with what’s around you so that it is hard to see you. The turtle’s color helps it to blend in with its surrounding. |
| Traction | Something that helps you grab on to something slippery as you walk so you don’t slip or fall. The cat has rough paws that help provide traction on slippery ground. |
| Slippery | Smooth, wet, or slimy so that it is hard to hold or walk on. The rocks were slippery when wet. |
| Grip | To grab on to or to hold on to strongly. The monkey grips food with its hand. |

“An Owl is a Bird”

| Word | Student-Friendly Definition |
|-------|---|
| Hunts | To find and kill animals for food. The lion hunts for prey. |
| Help | To do part of the work. The mother bird helps protect her babies. |
| Beak | The hard outside part of a bird’s mouth. The toucan’s beak was long and colorful. |
| Claws | A thin, sharp, curved nail on the foot of an animal. The cat used his claws to catch the mouse. |

Weird Bird Beaks

| Word | Student-Friendly Definition |
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| Ridged | A raised part or area on the surface of something. The horse had ridged backbone. |
| Insects | A small animal that has six legs and a body formed of three parts and that may have wings. A bug. The insect flew into the spider's web. |
| Jungle | A tropical forest where plants and trees grow very thickly. There are a lot of trees and plants growing in the jungle. |
| Coast | The land along or near a sea or ocean. The seals take naps on the rocks at the coast. |
| Extinct | No longer alive in the world. Dinosaurs are extinct and do not live on Earth anymore. |
| Rain forest | A tropical forest that receives a lot of rain and that has very tall trees. There are many different animals that live in the rain forest. |

“An Elephant’s Excellent Trunk”

| Word | Student-Friendly Definition |
|---------|--|
| Tusks | Large teeth that grow outside the elephant's mouth. Elephant tusks grow larger as they age. |
| Trunk | The elephant's nose that they use to drink and to pick up things such as food. The elephants picked up grass with its trunk. |
| Breathe | How animals take in air. Whales come to the surface of the water to breathe air. |
| Sprays | Squirts; blows water into the air. When the whale comes up to the surface it sprays water through its blow hole. |

“How Animals Stay Safe”

| Word | Student-Friendly Definition |
|----------|---|
| Predator | An animal or person that is hunting you to kill you. The lion is a predator of the zebra. |
| Notice | To see something. When a predator notices its prey it moves very slowly. |

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| Spines | Long, sharp, pointy, spiky things coming out of some animals' skin. Looks like hair but is not soft. The iguana has spines that protect them from predators. |
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Animal Adaptations

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