COMMON CORE-ALIGNED TASK
WITH INSTRUCTIONAL SUPPORTS

Literacy

GRADE 3 LITERACY IN SCIENCE: ANIMAL ADAPTATIONS

UNIT OVERVIEW

This unit of study directly connected to the New York City Science Scope and Sequence for 3rd grade (Unit 4). This unit of study requires students to read informational texts with a focus on demonstrating understanding of the physical and/or behavioral adaptations of four animals (rabbit, camel, polar bear, and chameleon). The performance task requires students write a narrative with at least three embedded animal adaptation facts that illustrate how the adaptations work to help the animal survive in its environment. Students summarize the relevant information from their texts throughout their narrative to show their understanding of animal adaptation. Additionally, they make use of grade-appropriate, domain-specific language.

TASK DETAILS

Task Name: Animal Adaptations

Grade: 3

Subject: Science

Depth of Knowledge: 3

Task Description: This task asks students to write a narrative using facts about animal adaptation to demonstrate their understanding of how the adaptation works for the animal's survival.

Standards Assessed:

W.3.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

a) Establish a situation and introduce a narrator and/or characters; organize an event sequence that unfolds naturally.
b) Use dialogue and descriptions of actions, thoughts, and feelings to develop experiences and events or show the response of characters to situations.
c) Use temporal words and phrases to signal event order.
d) Provide a sense of closure.

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L.3.6: Acquire and use accurately grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., "After dinner that night we went looking for them").
RI.3.2: Determine the main idea of a text; *recount the key details and explain** how they support the main idea.

**Although the teacher most likely will be teaching to this standard during the duration of this unit, the final performance task is only partially aligned to the italicized portion of RI.3.2. Students much recount key ideas from texts and explain how those key ideas relate to animal adaptation in their creative narratives; however, the final performance task does not require them to determine the main idea of a text, and not all texts provided focus on adaptations.*

Materials Needed:
The following is a list of texts and resources that teachers can choose from to teach the science content in this unit. Teachers will need to ensure that their choice of resources from this list contains all the content students will need to complete the task. For a complete list of suggested resources for this unit, please refer to the Unit Outline section of this document.

Anderson, Sheila. *What Can Live in a Desert?* Minneapolis, MN: Lerner Publishing, 2011.
Blix, Arnoldus. *Arctic Animals and Their Adaptations to Life on the Edge*. Trondheim, Norway: Akademika Publishing, 2005.
Burnie, David. *How Animals Work.* New York: DK Publishing, 2010.
Cusick, Dawn. *Animal Tongues.* Waynesville, NC: EarlyLight Books, 2009.
Davies, Nicola. *Extreme Animals: The Toughest Creatures on Earth*. Somerville, MA: Candlewick Press, 2006.
Jenkins, Steve and Robin Page. *What Do You Do with a Tail Like This?* San Anselmo, CA: Sandpiper Press, 2008.
Kalman, Bobbie. *How Do Animals Adapt?* New York: Crabtree Publishing, 2000.
Minell, Alessandro. *How Animals Adapt to Their Environments*. Richmond Hill, Ontario: Firefly Books, 2009.
Rose, Elizabeth. *Animal Adaptations for Survival.* New York: Powerkids Press, 2006.

TABLE OF CONTENTS

The task and instructional supports in the following pages are designed to help educators understand and implement Common Core–aligned tasks that are embedded in a unit of instruction. We have learned through our pilot work that focusing instruction on units anchored in rigorous Common Core–aligned assessments drives significant shifts in curriculum and pedagogy. Callout boxes and Universal Design for Learning (UDL) supports are included to provide ideas around how to include multiple entry points for diverse learners.

Acknowledgements: This bundle was developed by Niurka Castro, 04M206; Vicki Herrera, 06M028; Beatriz Perez, 06M115; and Lissette Santana, CFN 203. Additionally, Vicki Armas, Director of ELL Support Services, and Laura Cavigliano, Special Education Achievement Coach for CFN 606 provided input during the development of this unit.

GRADE 3 LITERACY IN SCIENCE:

ANIMAL ADAPTATIONS

PERFORMANCE TASK

ANIMAL ADAPTATIONS
FINAL PERFORMANCE TASK

You are going to write a narrative where *you* become at least **one** of the animals we have studied throughout the unit (rabbit, camel, polar bear, or chameleon). In your narrative you will **describe** a day in your life as that animal. You will **include at least 3–5 examples** from text(s) you will read about your animal in order to explain how *you* (the animal) **adapt** to *your* **environment** to **survive**. Be sure to include:

- An introduction to the animal(s)
- Descriptive details about the animal(s) and its environment
- Facts explaining how you adapt to your environment
- An established situation in which you show your animal(s)' reaction
- A clear sequence of events
- Characters (other animals or humans)
- Dialogue to show what your animal and characters are thinking **and** saying
- Temporal words and phrases to signal event order
- A closure to your animal narrative
- Use of grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial and temporal relationships (e.g., "After my tasty meal of worms, I went to go lie down in the shade").

CCLS assessed in the final performance task:

- W.3.3
- RI.3.2 (partial alignment)
- L.3.6

ANIMAL ADAPTATIONS
INSTRUCTIONS FOR ADMINISTERING THE PERFORMANCE TASK

Administration Guidelines
This final performance task will be a two-part procedure: planning for the task **and** completing the task. This process may take up two days to complete, depending on how much time the teacher is able to allocate each day and according to students' stamina.

Part 1: My Planning Process
The teacher will distribute the final performance task if needed. Students should be given an opportunity to ask questions for clarification of the task. The teacher will distribute the planning page, explain each section, and, at minimum, provide one period for completion. The first statement students are required to complete on the planning page is to determine the animal(s) that they want to discuss during the performance task. Based on the teacher's knowledge of the student, the teacher should decide if a student who wants to discuss two animals is ready for the challenge. Students' selection will determine which texts they will need to complete the task.

For example, if a student selects the rabbit as the animal he/she will become, he/she will **ONLY** be provided the texts in the Unit Outline that refer to rabbit adaptations. They will **need** the texts for the final performance task. The teacher will ensure that all students have the materials needed to complete the final performance task.

Part 2: Final Performance Task
Students will **independently** complete the final performance task. Throughout the task completion process, students will be allowed to use their planning page, texts, and notes collected during implementation of the unit. Students should be provided ample time to read the texts for their animal before being asked to begin the timed writing task.

Scoring Process
Teachers will score the final performance task using the Common Core–aligned rubric to assess and provide feedback to students with *specific* next steps.

End of Unit Reflection
Students will **independently** complete the end of unit reflection sheet; teachers will use this information to assess the unit that they build out around this final performance task. The information gathered will be used to make decisions about future development of this unit as well as other Common Core–aligned units of study the teacher may want to use or create. At minimum, students should be given one period to complete the end of unit reflection sheet.

GRADE 3 LITERACY IN SCIENCE:

ANIMAL ADAPTATIONS

RUBRIC

GRADE 3 LITERACY/SCIENCE: ANIMAL ADAPTATIONS PERFORMACE TASK RUBRIC

Student's Name_____ Date: _____

Animal Adaptations Rubric

(This rubric is aligned to W.3.3, L.3.6, and partially aligned to RI.3.2)

	4	3	2	1
Content Analysis	○ The student successfully cites key details from the readings and makes it clear in his/her narrative that he/she has an understanding of how his/her animal is uniquely built to adapt to its environment (i.e., narrates usefulness of evolutionary adaptations as opposed to stimulus/response reactions common across many species).	○ The student may have some difficulty in making clear how the key details he/she selected support the main focus of the writing assignment.	○ The key details the student selected do not clearly support the main focus of the writing assignment, or the student spends majority of time describing stimulus/response reactions common to many species (i.e., "It started to rain so I adapted by getting under a tree"; "It became night outside so I adapted by going to sleep", etc.). ○	○ Key details are missing and/or clearly do not support the main focus of the writing assignment.
Establishing Situation and Character(s)	○ Student establishes a situation and introduces an animal narrator and/or other characters that allow him or her to realistically describe adaptive behavior and/or physical characteristics. ○ Student uses dialogue and descriptions of actions, thoughts, and feelings to develop insight into adaptive experiences or events that show the response of characters to situations that result from adaptive physical characteristics or behavior traits.	○ Student establishes a situation and introduces an animal narrator and/or other characters, but might struggle somewhat to realistically describe adaptive behavior and/or physical characteristics. ○ Student's use of dialogue and descriptions of actions, thoughts, and feelings adequately relates to experiences or events that show the response of character(s) to situations that result	○ Student struggles to establish a situation and/or struggles to introduce an animal narrator and/or other characters that would allow for realistic descriptions of adaptive behavior and/or physical characteristics (i.e., student wants to discuss adaptive trait of cats to see well in the dark, but establishes an unrealistic situation that gives the cat magical powers that allow it to project laser beams from its eyes to catch prey at night). ○ Student's use of dialogue and descriptions of actions, thoughts, and feelings does not directly relate to experiences or events that show the response of	○ Student does not establish a situation and/or struggles to introduce an animal narrator and/or other characters that would allow for realistic descriptions of adaptive behavior and/or physical characteristics. ○ The student's use of dialogue and descriptions of actions, thoughts, and feelings does not directly relate to experiences or events that show the response of character(s) to situations that result

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		from adaptive physical characteristics or behavior traits.	character(s) to situations that result from adaptive physical characteristics or behavior traits (i.e, the cat spends much of the writing piece thinking about which cat food brand it likes, and spends very little time thinking about how much it can get done compared to its human owners due to its ability to see at night).	from adaptive physical characteristics or behavior traits.
Formal Writing Conventions	○ Student correctly uses temporal words and phrases to signal event order. ○ Student accurately uses grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial relationships.	○ Student mostly uses temporal words and phrases correctly to signal event order. ○ Student mostly uses grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial relationships, correctly.	○ Student struggles with the use of temporal words to signal event order. ○ Student struggles with accurate use of grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial relationships.	○ Student does not demonstrate an understanding of how to use temporal words and phrases to signal event order. ○ Student does not use grade-appropriate conversational, general academic, and domain-specific words and phrases, including those that signal spatial relationships.
Conclusion	○ Student provides a clear sense of closure to the writing piece.	○ Student's conclusion does not clearly provide closure to the writing piece.	○ Student has attempted to bring a sense of closure to the piece, but struggles to create transitional cohesion from the proceeding paragraphs.	○ Student's writing ends abruptly and lacks closure.
Student Feedback				

GRADE 3 LITERACY/SCIENCE: ANIMAL ADAPTATIONS PERFORMACE TASK RUBRIC

What is the student able to do as a reader?

Next steps:

What is the student able to do as a writer?

Next steps:

GRADE 3 LITERACY IN SCIENCE:

ANIMAL ADAPTATIONS

INSTRUCTIONAL SUPPORTS

The following pages contain instructional supports that could be useful as a teacher builds out the learning plan for this unit. Students should not be using these instructional supports for the texts they will be reading for the performance task if the teacher wishes to assess the mastery of the Common Core standards listed. However, if students are not ready for independent work for the final performance task, any or all of these supports could be provided to scaffold for the task for the student.

Unit Outline

INTRODUCTION: This unit outline provides an example of how to integrate performance tasks into a unit. *Teachers may (a) use this unit outline as it is described below; (b) integrate parts of it into a currently existing curriculum unit; or (c) use it as a model or checklist for a currently existing unit on a different topic. The length of the unit includes suggested time spent on the classroom instruction of lessons and administration of assessments. Please note that this framework does not include individual lessons.*

Grade 3 Literacy in Science: Animal Adaptations

UNIT TOPIC AND LENGTH:

This is unit of study directly connects to the New York City Science Scope and Sequence for 3rd grade (Unit 4). Students read informational text with a focus on demonstrating understanding of the physical and behavioral adaptations of four animals (rabbit, camel, polar bear, and chameleon). This unit outline has a number of graphic organization tools that a teacher could incorporate into a formal lesson that demonstrates to students how to unpack information about an animal of study and address the format and demands of the performance task. The performance task requires students to write a narrative with at least three embedded animal adaptation facts that illustrate how the adaptations work to help the animal survive in its environment. Students must be able to incorporate factual information from their text(s) throughout their narrative to show their understanding of animal adaptation.

Note: The writing demands for the final performance task require the student to write a narrative. This unit does not explicitly teach students how to create this writing structure, so this unit should be taught after (or simultaneously) with an ELA unit on narrative writing.

COMMON CORE STANDARDS

- W.3.3
- L.3.6
- RI.3.2

NEW YORK STATE ELEMENTARY SCIENCE CORE CURRICULUM PERFORMANCE INDICATORS FOR STANDARD 4: THE LIVING ENVIRONMENT

- 3.1a
- 3.1c
- 3.2a
- 3.2b

BIG IDEAS/ENDURING UNDERSTANDINGS:

- Each animal has different structures that serve different functions in growth, survival, and reproduction.
- Adaptations are the physical and behavioral traits that help animals survive in their environments.

ESSENTIAL QUESTIONS:

- How does an animal's different body structures relate to its ability to adapt to its environment?
- How do animals interact with the environment in order to prolong their survival?
- How does a species' individual variations provide it with an advantage in surviving inside its environment?

➢ Adaptations from a science-content perspective should not be confused with colloquial understanding of "adapting" (i.e., "I adapted to the change in weather by grabbing an umbrella"; "The dog adapted to the change of weather by barking to be let back inside the house"). It is important for students to realize that the adaptations being discussed in this unit refer to the unique physical and behavioral traits that have evolved in an animal over time to make it best suited for its environment (i.e., the shape of a camel's hoof allows for it to have steady footing underneath the shifting sands of the desert climate). ➢ Adaptation interactions are part of this natural system between predator and prey. ➢ Variations within the species (i.e, smaller feet, bigger paws, longer tails) do not necessarily mean some members of the species are better adapted to the environment than others. ➢ Some fiction incorporates facts and understandings that truthfully represent the world.	➢ How can readers improve their understanding about a specific topic? ➢ How can writing be used to provide information about an animal's life inside of a fictional scenario?
CONTENT: **Science** ➢ Behavioral adaptations ➢ Physical adaptations ➢ Environmental contributions to adaptation **Reading (Informational Text)** ➢ Comprehension ➢ Analysis ➢ Main idea	**SKILLS:** ➢ Develop a narrative illustrating an imagined experience ➢ Embed facts gathered from multiple texts into a narrative ➢ Identify the main idea and supporting details ➢ Make inferences to better understand text ➢ Make text-to-text connections to build understanding of content ➢ Select relevant facts that showcase understanding of animal adaptations ➢ Identify different animal adaptations

➢ Key ideas ➢ Supporting details **Writing (Narratives)** ➢ Expression ➢ Organization **Speaking and Listening** ➢ Exchange ideas ➢ Listen respectfully to one another's ideas ➢ Build upon one another's ideas	

FORMATIVE ASSESSMENT:

Many of the instructional supports included in this section could be used as formative tasks to assess students' progress in mastering the content and understandings. A teacher could select one of the animals identified in the performance task and use that animal as an example to teach the content as well as the reading and writing skills necessary to complete the performance task (the teacher directs students to chose a different animal for final performance prompt than the animal used in class learning activities).

The following is a suggested list of the order of use of the practice assessments and graphic organizers found in the instructional supports section of this unit with one of the animals.

1) 3-2-1 After Reading Activity
2) Practice Writing Assessment
3) Semantic Web Activity
4) KWL Chart + Synthesis Questions
5) My Planning Process Graphic Organizer

FINAL PERFORMANCE TASK:

You are going to write a narrative where *you* become at least **one** of the animals we have studied throughout the unit (rabbit, camel, polar bear, or chameleon). In your narrative you will **describe** a day in your life as that animal. You will **include at least 3–5 examples** from text(s) you will read about your animal in order to explain how *you* (the animal) **adapt** to *your* **environment** to **survive**. Be sure to include:

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- Facts explaining how you adapt to your environment
- An established situation in which you show your animal(s)' reaction
- A clear sequence of events
- Characters (other animals or humans)
- Dialogue to show what your animal and characters are thinking **and** saying
- Temporal words and phrases to signal event order
- A closure to your animal narrative

Use of grade-appropriate conversational, general academic, and domain-specific words and phrases,

including those that signal spatial and temporal relationships (e.g., "After my tasty meal of worms, I went to go lie down in the shade").

RESOURCES

Suggested Books

- Anderson, Sheila. *What Can Live in a Desert?* Minneapolis, MN: Lerner Publishing, 2011.
- Blix, Arnoldus*. Arctic Animals and Their Adaptations to Life on the Edge*. Trondheim, Norway: Akademika Publishing, 2005.
- Burnie, David. *How Animals Work.* New York: DK Publishing, 2010.
- Cusick, Dawn. *Animal Tongues.* Waynesville, NC: EarlyLight Books, 2009.
- Davies, Nicola. *Extreme Animals: The Toughest Creatures on Earth*. Somerville, MA: Candlewick Press, 2006.
- Jenkins, Steve and Robin Page. *What Do You Do with a Tail Like This?* San Anselmo, CA: Sandpiper Press, 2008.
- Kalman, Bobbie. *How Do Animals Adapt?* New York: Crabtree Publishing, 2000. Minell, Alessandro. *How Animals Adapt to Their Environments*. Richmond Hill, Ontario: Firefly Books, 2009.Rose, Elizabeth. *Animal Adaptations for Survival.* New York: Powerkids Press, 2006.

Websites

Camels

http://nationalzoo.si.edu/Animals/KidsFarm/InTheBarn/Alpacas/ **(lexile 900)**
http://kids.nationalgeographic.com/kids/animals/creaturefeature/camels/ **(lexile 1020)**
http://www.sciencenewsforkids.org/2004/03/improving-the-camel-2/ **(lexile 1100)**
http://animals.nationalgeographic.com/animals/mammals/dromedary-camel/ **(lexile 1110)**
http://www.sandiegozoo.org/animalbytes/t-camel.html **(lexile 1110)**
http://nationalzoo.si.edu/Publications/Zoogoer/2008/1/Camelids.cfm **(lexile 1110)**
Camel Adaptations (multimedia resource): http://www.bronxzoo.com/files/engage.html

Chameleon

http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Exhibit/Topics/reptile_vision.cfm **(860)**
http://www.nwf.org/Kids/Ranger-Rick/Animals/Amphibians-and-Reptiles/Chameleons.aspx **(1030)**
http://www.sandiegozoo.org/animalbytes/t-chameleon.html **(1090)**
http://nationalzoo.si.edu/Animals/ReptilesAmphibians/Exhibit/Profiles/default.cfm?id=79 **(1390)**
http://animals.nationalgeographic.com/animals/photos/chameleons/#/panther-chameleon_8429_600x450.jpg

(1430)Polar Bears

http://www.sciencenewsforkids.org/2007/07/polar-bears-in-trouble-3/ **(lexile 1000)**
http://nationalzoo.si.edu/Publications/Zoogoer/2009/1/PolarBear.cfm **(1030)**
http://kids.nationalgeographic.com/kids/animals/creaturefeature/polar-bear/ **(lexile 1030)**
http://animals.nationalgeographic.com/animals/mammals/polar-bear/ **(lexile 1240)**
http://www.nwf.org/wildlife/wildlife-library/mammals/polar-bear.aspx **(1330)**
http://www.defenders.org/polar-bear/basic-facts **(1350)**

Rabbits
http://animals.nationalgeographic.com/animals/mammals/cottontail-rabbit/?source=A-to-Z **(1060)**
http://animals.nationalgeographic.com/animals/mammals/snowshoe-hare/ **(1350)**
http://www.nwf.org/Wildlife/Wildlife-Library/Mammals/Snowshoe-Hare.aspx **(1880)**

DVD/Video Links

- *Animal Life for Children: All About Animal Adaptations.* Film. Directed by John Burrud. Wynnewood, PA: Schlessinger Media, 2006.
- *Adaptation Tools for Survival: Land Animals*. Film. Directed by Carlo Ferraro. Derry, NH: Chip Taylor Communications, 2004.
- http://www.bronxzoo.com/files/engage.html
- http://jmsalsich.edublogs.org/2010/10/21/chameleon-adaptations-by-sam-k/
- http://bronxzoo.com/multimedia/videos.aspx

Websites

- http://www.sciencemadesimple.com/animals.html
- http://www.animalport.com/animals/camels-adaptations.html

UDL Resources

- Clark, Richard E., Paul A. Kirschner, and John Sweller. "Putting Students on the Path to Learning," *American Educator,* Spring 2012.
- Rosenshine, Barak. "Principles of Instruction," *American Educator*, Spring 2012.
- www.udlcenter.org
- http://www.cast.org/
- http://udl-irn.org/

3-2-1 After Reading Activity

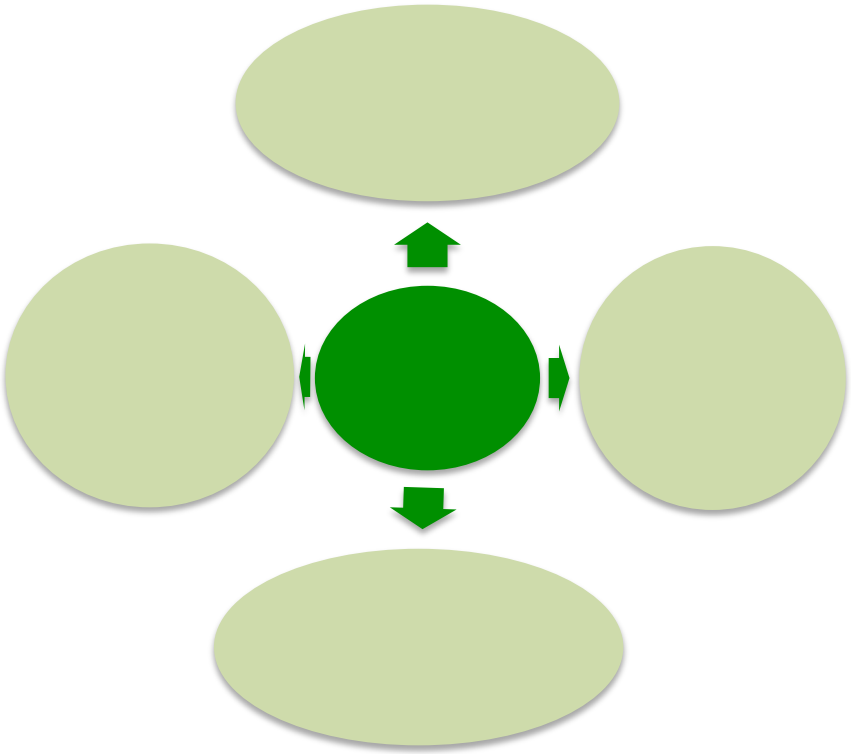
3 things you learned about the animal during your reading	
2 things that amazed you about the animal you read about	
1 question and/or wondering you have about the animal you just read about	

Practice Writing Assessment

Select an animal of your choice and imagine that you are that animal. Begin with an engaging introduction, describe your day, use dialogue to show what you're thinking and/or saying, add vivid language, and end with an interesting conclusion.

Semantic Web Activtiy

Use the semantic web below to list **each** part of the animal you are investigating and **explain** how **each** body part is used to adapt to their environment in an effort to survive. Use text evidence to support your explanation from reading(s) or class discussion(s). Your selected animal should appear in the center of this semantic web.



Explain:

_____

_____

_____

_____

_____

KWL

What do you **THINK** you **KNOW**, **WANT** to **KNOW**, and what did you **LEARN** about an animal's adaptations?

Animal Name _____

THINK you **K**NOW	**W**ANT to KNOW	What did you **L**EARN

Synthesis Questions

What have you learned about adaptation?
Why is adaptation important?
How does an animal's physical and/or behavioral differences make it best suited for its environment?
How do animals interact with each other for survival?

My Planning Process

You will use the information on your planning page to complete your final performance task**.**

The animal I have chosen to become is…
How will you begin/introduce your narrative?
What are the names of the characters in your narrative? Describe your characters.
Explain what is happening in your narrative.
How will you close/end your narrative?

List the titles of the text(s) you will use to get the facts about the animal's adaptations.

List the animal adaptation facts you will use in your narrative.

End of Unit Reflection

What did you like best about this unit of study? Why?
What was most challenging about this unit of study? Why?
Was the final performance task clear? Explain why or why not.

Elements of a Narrative

Plot: The sequence of events that take place in a story.

Setting: The time and place in which the events of a story take place.

Characterization: The methods used to present the personality of a character in a narrative:

> **Direct**: The author describes the character. Example: "She was a large woman with a large purse."
>
> **Indirect**: The reader judges what the character is like based on what they say or do, or what other characters say about them. Example: "We believe the narrator of 'The Tell-Tale Heart' is crazy because he talks nervously and frequently repeats himself."

Atmosphere: The general mood or feeling established in a piece of literature. Atmosphere is created through word choice and pacing.

Word Choice: The author uses words that make the reader feel a certain way. A spooky atmosphere is created in "The Tell-Tale Heart" through the use of words like "hideous", "marrow", "chilled", and "nervous".

Pacing: The author controls the speed at which we read through sentence length, punctuation, repetition of words, and other techniques.

Point of View: Who is narrating the story. There are two main types:

> **First person**: The narrator uses "I" to tell the action, and is involved in the story.
>
> **Third person**: The story is told from a perspective outside the story. The characters are referred to by name or as he, she, or they.

Conflict: The central problem that drives the action of a story. There are two main types of conflict:

> **Internal**: The conflict happens in a character's mind. A character with a guilty conscience is an example of internal conflict.
>
> **External**: The conflict happens between characters, or between a character and some outside force, like nature. Sherlock Holmes pursuing a criminal is an example of external conflict.