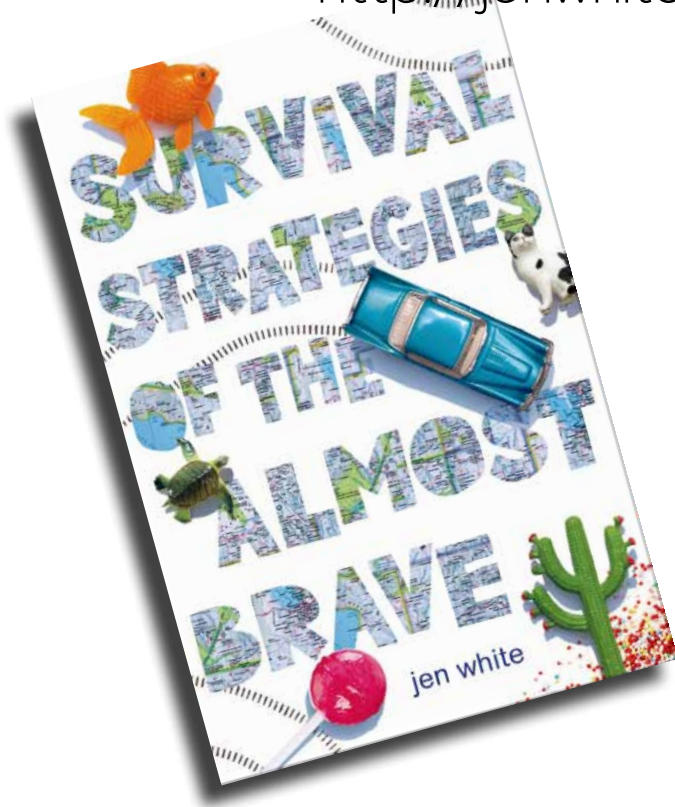


A Common Core State Standards
and Next Generation Science Standards
Aligned
Presentation Packet for



Author Jen White's School Visit
Programming

<http://jenwhitebooks.com>



Document Prepared by
Debbie Gonzales
www.debbiegonzales.com



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Habitat Survival Strategies

Objective: To demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

Materials:

- *Survival Strategies of the Almost Brave*
- White board or flip chart
- Text Selection (Guide, pg. 8)
- Habitat Survival Strategies Graphic Organizer (Guide, pg. 9)
- Pencil

Procedure:

- Using white board or flip chart, brainstorm definitions for the following terms:
 - ~Survival
 - ~Adaptation
 - ~Instincts
 - ~Habitat
 - ~Predator
 - ~Camouflage
 - ~Shelter
- Watch Video #1 and discuss the following questions afterwards:
 - ~Describe the habitat in which the animal lives.
 - ~How large is the animal? State how its size aides in survival.
 - ~What does it eat?
 - ~How does it catch/find food?
 - ~How does it keep warm/cool?
 - ~Where does it find shelter? Describe its shelter.
 - ~List its predators. How does it defend itself from predators?
 - ~Could this animal survive in another completely different habitat? Explain your answer.
- Watch Video #2 and discuss the same list of questions.
- Set up story background before reading Text Selection.
- Read Text Selection aloud and discuss the following questions:
 - ~Describe Liberty's habitat.
 - ~Tell how Liberty's reaction to the old man with the ponytail mirrors the survival behaviors of a bearded dragon.
 - ~How does she use her size to aide in survival in this scene?
 - ~How will she catch/find food?
 - ~How will she keep warm/cool?



- ~Where will she find shelter?
- ~List her predators. How will she defend herself and her sister from predators?
- ~Will she be able to survive alone, in a completely different habitat? Explain your answer.

Writing Exercise – *Imagine that, like Liberty, you must find ways to survive in a completely different habitat. Tell what sort of animal adaptation techniques you would use to survive. Use the Habitat Survival Strategies Graphic Organizer to list your survival strategies. Use this information to write a brief narrative comparing your survival strategies to that of a chosen animal. Put yourself in a dangerous situation. Describe your animal instincts for survival.*



Designer Animal - Animal Adaptations

Objective: To explore an animal's physical features and behavior patterns and how they aide in habitat adaptation.

Materials:

- *Survival Strategies of the Almost Brave*
- White board or flip chart
- List of Animals Featured in *Survival Strategies of the Almost Brave* (Guide, pg. 10-11)
- Animal Adaptation Graphic Organizer (Guide, pg. 9)
- Environment Cards (Guide, pg. 12)
- Markers
- Pencil

Procedure:

- Using white board or flip chart, brainstorm definitions for the following terms:
 - ~Survival
 - ~Adaptation
 - ~Instincts
 - ~Habitat
 - ~Predator
 - ~Camouflage
 - ~Shelter
- Discuss the list of animals featured in *Survival Strategies of the Almost Brave*.
 - ~Describe the habitat in which the animal lives.
 - ~How large is the animal? State how its size aides in survival.
 - ~What does it eat?
 - ~How does it catch/find food?
 - ~How does it keep warm/cool?
 - ~Where does it find shelter? Describe its shelter.
 - ~List its predators. How does it defend itself from predators?
 - ~Could this animal survive in another completely different habitat? Explain your answer.

Project Description: Choose an Environment Card and design an animal that is strong and resilient enough to survive in that environment.

- **Review and discuss Environment Cards.**
- **Your animal must meet the criteria listed on the Animal Adaptation Graphic Organizer. State how your animal will adapt in all areas.**
- **Your animal must fit into a food chain. It cannot be the ultimate predator.**
- **Use markers to illustrate your animal.**
- **Write a brief explanatory essay describing a day in the life of your designer animal**
- **Present your designer animal to your class.**



Personal Survival Strategies

Objective: To write explanatory essay exploring scientific and personal survival strategies.

Materials:

- *Survival Strategies of the Almost Brave*
- Darwin's Quote (Guide, pg. 13)
- Notable Quotables (Guide, pg. 14)
- Environment Cards (Guide, pg. 12)
- Personal Survival Strategies Graphic Organizer (Guide, pg. 15)
- Pencil

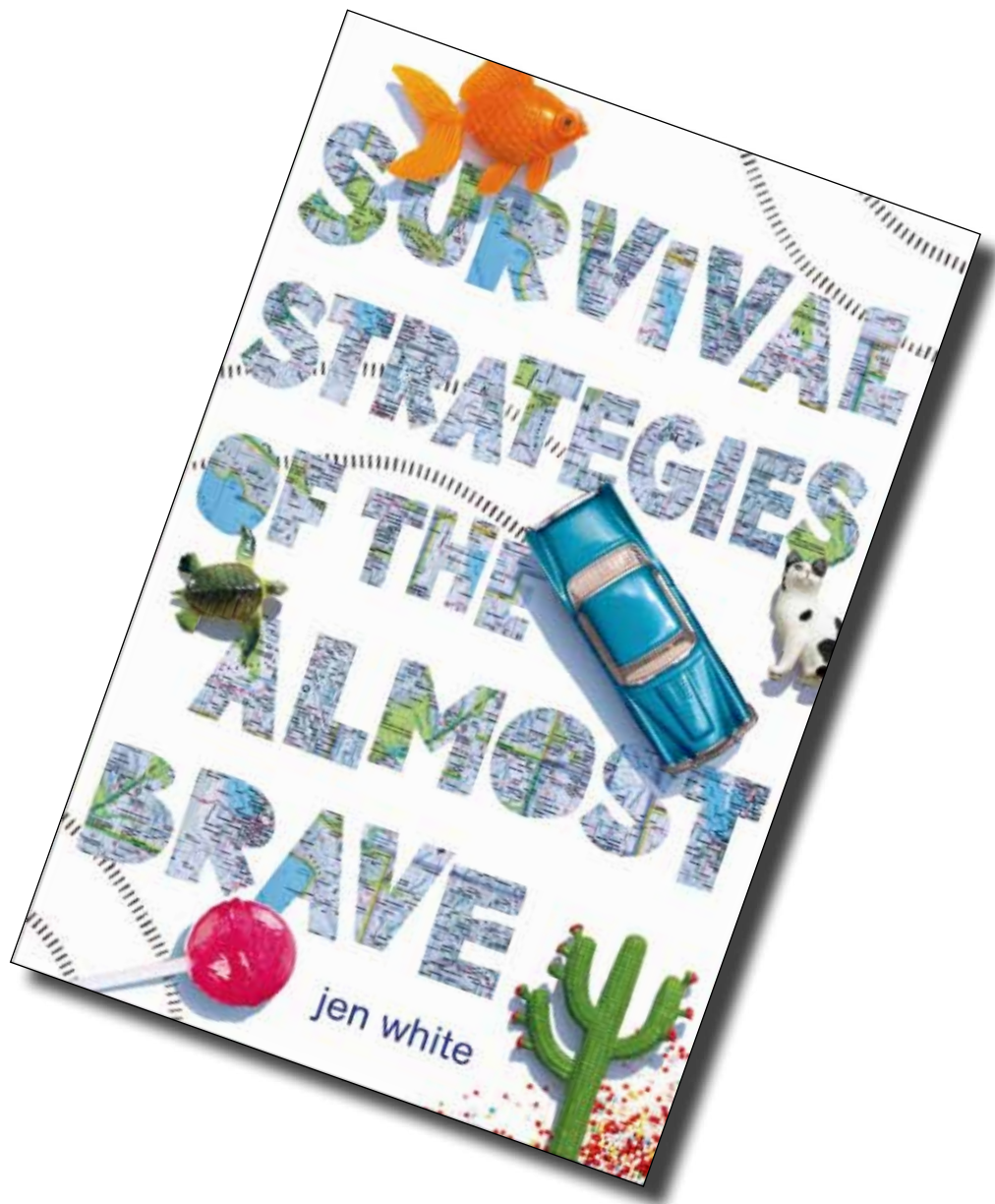
Procedure:

- Read and discuss the following quote by Charles Darwin: "It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change."
- Define survival.
- Explain adaptation.
- Tell why Darwin states that being the strongest species does not assure survival.
- Explain why intelligence does not assure survival.
- Express your opinion regarding Darwin's claim.
- Read and discuss Notable Quotables from *Survival Strategies of the Almost Brave*. Consider how each quote addresses one or all of the following aspects of Darwin's Theory of Natural Selection.
 - ~Survival
 - ~Strength
 - ~Intelligence
 - ~Adaptation

Project Description: Chose an Environmental Card. Imagine that you are part of a group of people that have been stranded in a place similar to one described in the card. Use the Personal Survival Strategies Graphic Organizer to develop a plan to adapt to living there. Write a personal narrative describing your experience.



School Visit Programming Printouts



White, Jen. *Survival Strategies of the Almost Brave*. New York: Farrar, Straus and Giroux. 2015.
ISBN: 9780374300845 <http://jenwhitebooks.com> www.debbiegonzales.com



Habitat Survival Strategies: Text Selection

I shut my book. I didn't want to think about sharks, either. So I watched the ants. Hundreds of little skinny ant arms grabbed the chip and dragged it toward the gash in the asphalt parking lot, just as the sun reached its highest point in the sky.

A truck (the fourth one we'd seen) pulled into the gas station with a low, squeaky whine. Blue, dusty, ancient. An old man with a ponytail and a huge belt buckle got out and stared at us. Billie ran over and crouched behind me. My heart vibrated. But then I remembered, I was faking it. I was supposed to scare off potential predators.

Go away.

A bearded dragon has a chin full of spiky armor it uses to intimidate. It inflates its body, opens its mouth, and puffs out its lethal throat. Then the attacker thinks twice about messing with that lizard.

I took a deep breath, stood as tall as I could, and stared right back at the man— without blinking. He turned, opened the door, and went inside.

That's right. Go inside and buy your gas. Me? I haven't a problem in the world. I stood tall in front of Billie and shaded my eyes from the hot desert sun (*Survival Strategies of the Almost Brave*, pgs. 7-8).



Habitat Survival Strategies Graphic Organizer

<p>Name of animal? Describe animal.</p>	
<p>Size? How does size aide in survival?</p>	
<p>How does it catch/bring food & water? Eats?</p>	
<p>Habitat? Describe shelter.</p>	
<p>How does it keep warm/cool?</p>	
<p>List predators.</p>	
<p>Protection against predators?</p>	



Animals Featured in *Survival Strategies of the Almost Brave*

Groundhog: Groundhogs (or prairie dogs) dig a huge amount of holes that are connected to tunnels underground. They use these many entrances like an escape hatch to quickly disappear at the first sign of a threat.

Bubble Eye Goldfish: Bubble Eye Goldfish are some of the more delicate species of fish. Their air filled eye sacs make it difficult for the fish to see and can also make it difficult for them to swim. Great trouble needs to be taken when caring for these kinds of goldfish.

Green Sea Turtle: Green sea turtles migrate long distances between feeding and nesting sites. Some swim more than 1,600 miles to reach their offspring grounds. Family is important to turtles, a mature turtle will often return to the exact beach from where they were hatched.

Killer Whales: Killer whales (or Orca's), reside in what is called a pod, their family. Most killer whales live with their mothers for their entire lives. Many times a pod will have four generations living and hunting together.

King Cobra: A king cobra's primary diet is to eat other snakes. You could call him the 'bully' of the snake world.

Red Fire Ants: The fire ant colony has many different responsibilities. There is the Queen who is in charge of the colony and lays all of the ant eggs. There are males whose sole responsibility is to mate with the queen (then they die). There are soldier ants that protect and can be recognized for their larger body. There are also worker ants that take care of regular colony tasks like cleaning the nest, foraging for food, and caring for baby ants. All of these roles are important and needed to create a happy ant colony.

Wobbegong Shark: This shark is sometimes called a carpet shark, because of its unusual pattern and because it blends in with rocks on the ocean floor creating a perfect camouflage. It also has what looks like a long, shaggy beard to help blend in. It is an ambush predator and sneaks up on small fish and crabs.

Domestic Cat: Did you know the house cat has amazing senses? You could even say they have bionic senses. A cat can see in almost near darkness. They only need 1/6 the light level a human needs to see. They have an olfactory bulb two times the size as a human's, making their smell excellent. Cats can endure high temperatures. They don't start to hot until 122 degrees F. Cats have ultrasound hearing, which registers above the upper level of human hearing. They also have whiskers on their face and around their body which help them navigate by touch and wind currents. Cats truly have amazing survival abilities.



Animals Featured in *Survival Strategies of the Almost Brave* continued...

White Flower Spider: The white flower spider (also called a crab spider) loves a good flower. Why? Because, for this spider, it's like going through a fast food drive through. Although, the spider does have to do a small amount of work. The spider hides and waits for a bug, butterfly, or bee to pollinate the flower. Then the spider jumps on the insect and sucks it dry.

Alligator Snapping Turtle: The alligator snapping turtle has a sneaky way of catching its prey. It has a long, worm like, piece of flesh on its tongue. It sits very still and waits for a curious frog or fish to investigate and then, slurp, the turtle gets a delicious meal. This turtle looks like the dinosaur of the turtle world. It has large pointed spikes on its back, its jaws can snap through bone, and it never stops growing!



Photo credits: Wikipedia

Wobbegong Shark



Environment Cards

Cards may be printed on cardstock and laminated, if so desired.



Dry & Hot Habitat

Water is found in underground streams. There is very little water on the sandy, dry surface of land. A few patches of dry grass can be found in remote places. Though small and dry, these plants are edible. Animals in this habitat include insects, a species of birds which roost in high trees, a sand-colored lizard and a sand rat.



A Dark & Cold Habitat

The weather is dark and cold almost all of the time. Because of the wet, dark conditions, the only plants that grow well are small mosses and fungi. Animals in this habitat include a type of mouse, a large nocturnal hunting cat, fish, and a variety of insects.



Tropical Habitat - Wet & Hot.

Covered by rainforests. Very flat. Water collects in large pools and lakes. Water is available all year round. A species of a poisonous plant grows thickly on the ground. Any animal that steps on this plant is sure to die. The vegetation is plentiful - lush leaves, fruits and vegetables. Animals include carnivorous snakes, a variety of insects, monkeys, fish, and birds.



Moderate Climate Habitat

It rains for part of the year. Water forms pools and lakes which dry up towards the latter part of the year. The climate becomes very dry then. The terrain is partly mountainous and partly flat. Vegetation includes tall trees with high leaves that bear fruit. Smaller trees bear nuts. Animals include rats and mice that live underground, insects, birds that nest in the tall trees, slow moving mammals, and a species of carnivorous nocturnal wolf.



“It is not the strongest of the species that survives, nor the most intelligent that survives. It is the one that is most adaptable to change.”

Charles Darwin (1809-1882)

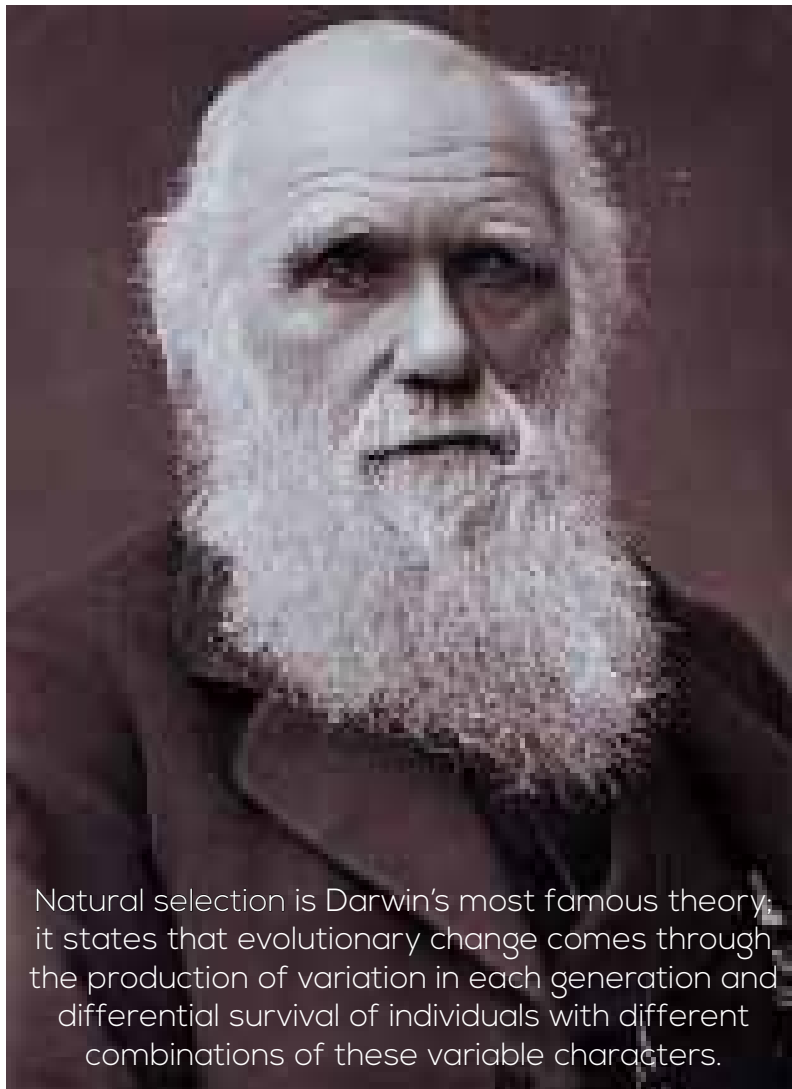


Photo credits: Wikipedia

Natural selection is Darwin's most famous theory; it states that evolutionary change comes through the production of variation in each generation and differential survival of individuals with different combinations of these variable characters.



Notable Quotables

"After living in a camper for the past two months, San Diego felt light-years away. Like we had slipped through a crack in the atmosphere and dipped ourselves into this strange summer, sticky with newness. And still after everything we were alone. Just the two of us roasting in clay on this quiet, dusty road." (pg. 8)

"So I stopped watching the waves roll up and down and instead I looked at the sky. The sun glowed bright against the blue with little white sheep clouds floating everywhere. Little lost sheep clouds. It was a perfect beach day. Mom's funeral on the best beach day ever." (pg. 14)

"Animals are important, like, essential to the human life cycle and the environment; at least that's what my sixth grade teacher, Mrs. Mortensen, told me. She said the world would be nothing without the animal kingdom. So that really made sense to me about Dad and why he was gone. Because why would he leave us unless he was doing something really important?" (pg. 20)

"Dad nodded. "Cobra venom is lethal. But in my experience, cobras aren't as scary as they seem. You just have to know how to behave around them." I thought maybe that was true about missing dads, too. That was my best day with Dad, by far. Maybe it was the adventure of it. Or the summer days stretched out before us. Or maybe I finally realized how much I missed having a dad. That day, bumping down the desert road with him beside me talking about cobras and smelling like campfire, I realized I missed him a whole lot more than I had ever imagined. But that was a trap, and the worst part was, I didn't even know it." (pg. 68)

"And I stopped, right there, next to the twisted, gnarled tree that stretched over our path. I stopped because I remembered that whistle. I didn't even know I knew it before. But standing there, listening to my dad, my gone-forever-but-now-he's-back-dad, whistle "Skip to My Lou," I knew I had heard it before. I wondered what else was buried deep inside my brain. What else was going to come up when I didn't even know? What would happen if it all came rushing out?" (pg. 85)

"We just ran like we had the wings of a desert hawk, or special Jedi powers, or adrenaline boosts to our bloodstreams. But whatever it was, we ran like we would never have to stop. Star Wars Kid led the way, limping and running. "To the bushes!" he yelled. And for a second I was really glad that I had met that weird kid, because he was a survivor just like us. And maybe we needed one another." (pg. 172)

"Sharlee still sat. She stared at the rat in her lap like it was the only thing that mattered in the whole wide world. Like she was going to hold tight and never let go. I understood that wanting." (pg. 217)

"I nodded and smiled. At least I hope I smiled, because I was really happy. And you should always smile when you're happy. Smiling is one of the things animals can't do. Well, except for monkeys. But if you didn't count monkeys, and I'm not saying you shouldn't, that's one trait only we humans have. When you feel something, you should show it. None of that faking stuff, because really it didn't get you anywhere good. I was through with faking it. I was happy." (pg. 228)

"All of those faces bumped around inside my cranium, smiling at me, wishing me well. And instead of pushing my feelings away, I let them come. Happiness from the ends of my hair, all the way down to my toenails. I had people watching out for me, my own mixed-up pod, wanting good things for us." (pg. 289)



Personal Survival Strategies Graphic Organizer

Survey the environment. Prepare for a way to get out of a dangerous situation. Describe an escape route.	
Describe ways that you'll meet your basic needs, as well as anyone else's who might be with you.	
Where and how are you finding food and water? Describe your tools and techniques in doing so.	
List the roles of the individuals who are there with you. Explain the ways you all work together to survive.	
What characteristics from the animal kingdom have you adopted to help with survival?	
Describe some sort of camouflage technique that you have developed.	
What is the most important lesson for survival that you have learned? Explain your answer.	



Common Core State Standards Alignment

English Language Arts Standards » Reading: Literature

		Habitat Survival Strategies	Designer Animal	Personal Survival Strategies
CCSS.FIA-Literacy.RL.3.3	Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.	✓		✓
CCSS.FIA-Literacy.RL.3.4	Determine the meaning of words and phrases as they are used in a text, distinguishing literal from nonliteral language.	✓	✓	
CCSS.ELA-Literacy.RL.3.10	By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 2-3 text complexity band independently and proficiently.	✓	✓	✓
CCSS.ELA-Literacy.RL.4.1	Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.	✓		✓
CCSS.ELA-Literacy.RL.4.3	Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).	✓	✓	✓
CCSS.ELA-Literacy.RL.5.1	Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.	✓		✓
CCSS.FIA-Literacy.RL.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.	✓		✓
CCSS.ELA-Literacy.RL.5.4	Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.	✓	✓	✓
CCSS.ELA-Literacy.RL.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.	✓	✓	✓

English Language Arts Standards » Writing

CCSS.ELA-Literacy.W.3.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	✓	✓	✓
CCSS.ELA-Literacy.W.3.2.b	Develop the topic with facts, definitions, and details.	✓	✓	✓
CCSS.ELA-Literacy.W.4.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	✓	✓	✓
CCSS.ELA-Literacy.W.4.2.b	Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.	✓	✓	✓
CCSS.ELA-Literacy.W.5.2	Write informative/explanatory texts to examine a topic and convey ideas and information clearly.	✓	✓	✓
CCSS.ELA-Literacy.W.5.2.b	Develop the topic with facts, definitions, concrete details, quotations, or other information and examples related to the topic.	✓	✓	✓
CCSS.ELA-Literacy.W.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.	✓	✓	✓
CCSS.ELA-Literacy.W.6.2.b	Develop the topic with relevant facts, definitions, concrete details, quotations, or other information and examples.	✓	✓	



Next Generation Science Alignment

		Habitat Survival Strategies	Designer Animal	Personal Survival Strategies
3-LS4-2.	Use evidence to construct an explanation for how the variations in characteristics among individuals of the same species may provide advantages in surviving, finding mates, and reproducing.	✓	✓	✓
3-LS1-3	Construct an argument with evidence that in a particular habitat some organisms can survive well, some survive less well, and some cannot survive at all.	✓	✓	✓
3-LS4-4.	Make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change.	✓	✓	✓
LS4.C	Adaptation: For any particular environment, some kinds of organisms survive well, some survive less well, and some cannot survive at all. (3-LS4-3)	✓	✓	✓

References

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