A Curriculum Guide to

Inside of a Dog—Young Readers Edition:
What Dogs See, Smell, and Know
By Alexandra Horowitz
Illustrated by Sean Vidal Edgerton

About the Book
Here's your chance to experience the world nose-first, from two feet off the ground. What do dogs know, and how do they think? This book, adapted from the *New York Times* bestseller by dog owner and scientist Alexandra Horowitz, is as close as you can get to knowing about dogs without being a dog yourself.

About the Curriculum Guide
Inside of a Dog is an excellent example of a nonfiction mentor text researched through dozens of primary sources and firsthand research by the author. The Common Core State Standards presented here are English/Language Arts examples from the fifth grade; teachers should visit the Common Core Standards website (corestandards.org) to apply their own grade-level equivalents. The subheadings and numerical references will help users easily locate the coordinating standards for specific grade levels.

Key Ideas and Details
- **(RI.5.1)** Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.
- **(RI.5.2)** Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.
- **(RI.5.3)** Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Craft and Structure
- **(RI.5.4)** Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.
- **(RI.5.5)** Compare and contrast the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in two or more texts.

Integration of Knowledge and Ideas
Explain how an author uses reasons and evidence to support particular points in a text, identifying which reasons and evidence support which point(s).

Discussion Questions

Preface
- Describe the author's childhood with animals; compare and contrast to your own.

- Predict if the way she treats dogs will change based on her work.

Introduction
- How does the author study dogs?
- Why do you think the author opened the introduction with a description of two dogs playing?

Chapter 1
- Explain why it's important to understand why animals are the way they actually are instead of comparing them to ourselves.
- What is an *umwelt*? What is yours?
- List and discuss some things that a dog might notice that a human would not. Which of these capabilities do you wish you had?

Chapter 2
- Describe how the domesticated foxes were different from the wild foxes.
- Analyze at least four differences between wolves and dogs.
- How might a border collie's response to small animals (like a rabbit) be different from a spaniel or hunting dog? How does this help us to understand pets better?
- Compare and contrast how wolf packs are different from human families.

Chapter 3
- Generate a list of reasons why dogs are able to smell so much more than humans.
- Explain how a dog's strong ability to smell can help humans.

Chapter 4
- Describe three ways a dog can communicate with sound.
- Synthesize the four ways a dog's body language shows us what they are trying to communicate.
- How might a dog convey alertness? Submissiveness? Aggression?

Chapter 5
- Summarize the three ways dogs' vision is different from human vision.
- Rank the dog's senses in order of importance. How is their list different from humans? Explain.

Chapter 6
- Explain how researchers know that dogs pay attention to gazes or pointing.
- How and why might a dog get an owner's attention?

Chapter 7
- Explain how dogs "judge character." Are they accurate? Why or why not?
- Why might a dog not recognize an owner? Why is this important to know?

Chapter 8

- Explain the accuracy (or inaccuracy) of dog intelligence tests.
- Explain why dogs couldn't open the box, while wolves could. What is the most important detail to remember about this experiment and understanding dogs?
- Synthesize the differences and similarities between the ways infants and dogs imitate behavior.
- Create a kid-friendly definition for the "theory of mind." Explain how the scientists knew that the dog Phillip had it.
- Define what "play" means, scientifically.
- Describe some ways play is initiated. Why is play important? How important is it to you?
- How does a dog's play show that they have a "theory of mind?"

Chapter 9
- Describe the mirror and red dot test and what these findings show.
- Elaborate on the idea of whether dogs have a moral compass. Do you agree with the findings?
- Support the finding that dogs seem to understand emergencies, citing specific evidence from the text.

Chapter 10
- Explain two reasons why humans and dogs work as a great pair.
- Summarize why dogs enjoy touching and petting when so many other animals do not.

Chapter 11
- What are some ways that a dog can be observed in his "natural" environment?
- Determine at least three of your behaviors toward your dog(s) that you will now change after reading this book.

Vocabulary

Chapter	Vocabulary
Preface	Cognition, intimidating, assumptions, radical
Introduction	Species, glimpsed
1.	Submission, deliberate, authority, dominant, translate, *umwelt*, self-world
2.	Domestication, genes, flexibility, attachment, designing, vulnerable, ancestry
3.	Receptor sites, vomeronasal organ, pheromones, particular, adrenaline, stench
4.	Receiving, communication, pitch, fluorescent, hertz, intention, trespassers
5.	Vacuum (verb), examination, locate, panoramic, duller, adoringly
6.	Considering, forage, gaze, baffled, remarkable, forbidden, advantage, inclined
7.	Marvelously, whirlwind, tense, formerly, off-kilter, unpredictable, sensitive
8.	Anecdotes, IQ tests, sophisticated, rigged, vanished, logical, bizarre, bewildering, flaunts, imitating, demonstration, signaled, jostled, scurrying, enormous
9.	Hesitate, concept, lagging, depending, delivered, underfoot, temptation, resisted, paramecium, venomous, vibrate, awash, exclaim, deceive
10.	Particular, pair-bond, sleep rhythms, maintained, necessary, frantically, furiously, reflex
11.	Preference, association, trot, fierce, darting, anxious

Using the vocabulary chart above, sort the words from each of the chapters into the following graphic organizer:

Brand-new word for me:	Somewhat familiar but I'm still learning it:	I could use this word in a sentence correctly:	I could define and explain what this word means to someone:

Then choose at least ten words and create index cards for them that showcase the following information about each word: a definition in your own words, etymology (word origins), a synonym and antonym, a new sentence using it correctly, and a picture that helps you remember what it means.

Other vocabulary options:
- Create a crossword or acrostic puzzle using your ten words. Provide an answer key.
- Create riddles with the words as answers.
- Pretending to write a journal as a dog, use as many of these words that you can.

Journal Entry

Design an experiment to test a dog's response to different barks/sounds in a variety of settings. How will you set up your experiment? What tools/supplies will you need? Create a hypothesis about how you think the dog will react. Afterward, write a journal entry about what you discovered. Remember that it's okay for a hypothesis to be wrong!

Close Reading Activity

Closely read Chapter Four and fill out the following chart based on the way dogs communicate:

Type of Dog communication:	Purpose:	Why it works:	Text Evidence:
EX: Growl or snarl	To show aggression, intimidate, respond to a threat	Sounds like it comes from a larger animal	"If a dog meets another who might be a threat he wants to appear to be a big powerful creature so he makes a big-dog sound, a low growl." (61)
Howl			
Social panting			
Bark			
Whimper/whine			

Design a chart of your own to summarize the important information about the communication hidden in a dog's tail.

Staring Experiment

Perform the experiment described in Chapter Six several times in a variety of locations: Stare at another person and don't turn away, no matter how uncomfortable it feels (but don't try this with someone you don't have a good relationship with, either). Fill out the following chart as part of your experiment. Use a timer to record how long you were staring before the other person said something.

Subject:	Relationship to subject:	Location:	Duration (time it lasted):	Notes/Result:
Ex: Pauline S.	Mom	Kitchen	:38 seconds	"Why are you staring at me?"

Now fill out the same chart based on three different dogs:

Subject:	Relationship to subject:	Location:	Duration (time it lasted):	Notes/Result:
Gracie	My dog	Living room	:15 seconds	Looked away

Can you draw any conclusions about this experiment? What would you like to find out next? How can you design an experiment to test your theory? What do you think the experiment would reveal if done on a cat instead? Why do you think this?

Cup and Ball Experiment

Reread the experiments that were done to ferret out a dog's intelligence using only a cup and a ball in Chapter Eight. Now design your own experiment (using the organizer below to help) and record your results:

What do you want to learn?	
How will you use the cup and ball to find out?	
How many trials (times) will you try it? Why?	
Where will the experiment be conducted?	

What did you learn?	
What could you do to make the experiment better?	

Guide written by Tracie Vaughn Zimmer, author and English teacher.

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