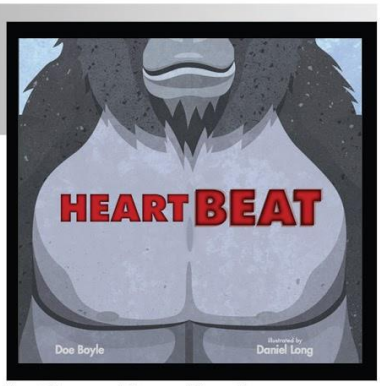
Teacher's Instructional Guide



Author: Doe Boyle
Illustrator: Daniel Long

College and Career Readiness Anchor Standards for Reading:

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.

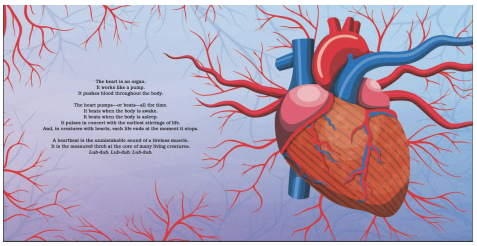
Before you Read:

Predict:

Have students look closely at the title page and read the title and definitions that follow. Students should make predictions as to what the book may be about. Students should also discuss the three definitions given for the term "heartbeat." Help students make connections between the three definitions of the term, and discuss how it could apply to their predictions.

Assess Prior Knowledge-

Prompt students to discuss what they know about the heart and its importance to all living things. Accept all reasonable answers and then read the first page together. Reflect on how the term "heartbeat" was defined.



Introduce Onomatopoeia (When words describe a sound, and mimic that sound or action):

You can do this prior to reading or as you read. Make a chart for words associated with each creature's movements.
Terms such as: lub-dub, flick-dash, twitch-snatch, flit-flit
This can be used as you read to introduce and explain new vocabulary in context.
Include **content vocabulary** such as pulsation, impulse, nectar, pollen, thickets, gnats, midges, aphids, troops, jet propulsion, oases, bazaars.
Also include **academic vocabulary** such as hesitation, unmistakeable, migrate, distance, hibernate.

Make a chart of the information given about each of the creatures introduced in this text. Include their attributes and how their heartbeat is related to their movements and behaviors. Example:

Animal	Heart rate: Heartbeats per minute	How does the animal move? (Look for text evidence)	Connect: How does this animal's heart rate connect to how it moves?
Pygmy shrew	1,500 times	"Fleet footed" "Fast as a flash"	Example: The pygmy shrew moves quickly and that keeps its heart rate up.

As You Read:

Have students add to the chart they created for each animal they read about. This will connect well to mathematics as some animals' heart rates are compared to ones previously introduced. For example, the straw-colored fruit bat has a heart rate that is one-half the rate of the pygmy shrew.

Text Dependent Questions:

Asking text dependent questions enables students to draw on specific examples from the text to provide evidence and verify the rationale for their answers. Here are some suggestions:

Which animal has the fastest heart rate? Which animal has the slowest heart rate?

Which animal's heart rate is most similar to the heart rate of a human?

What happens to the heart of a python when prey is nearby? Why do you think this happens?

What are some things that would cause a human's heart rate to speed up or slow down?

The wood frog does something that no other animal does, what is it?

Additional Questions to discuss:

What was the author's purpose for writing this book? Was it to inform, entertain or persuade the audience?

What did you enjoy most about this text?

Create your own question: What questions would you ask the author, Doe Boyle, if you could?

Connection to Writing:

College and Career Readiness Anchor Standards for Writing:

Research to Build and Present Knowledge:

- Conduct short, as well as more sustained research projects based on focused questions, demonstrating understanding of the subject under investigation.
- Gather relevant information from multiple print and digital sources, assess the credibility and accuracy of each source, and integrate the information while avoiding plagiarism.
- Draw evidence from literary or informational texts to support analysis, reflection, and research.

Writing Project Ideas:

Pick one of the animals from the book, or a different one to research.

Research Question:

How does the heart rate of a _____ affect its movements and behaviors?

Suggested websites: www.kids.nationalgeographic.com, https://animalfactguide.com/animal-facts/