

Nature Did It First

Engineering Through Biomimicry

A RIF GUIDE FOR EDUCATORS

Themes: Inventions, Nature, Problem Solving

Book Brief: Got a problem? More than likely, nature has already solved it! Look outside and you will see a world full of amazing engineering designs.

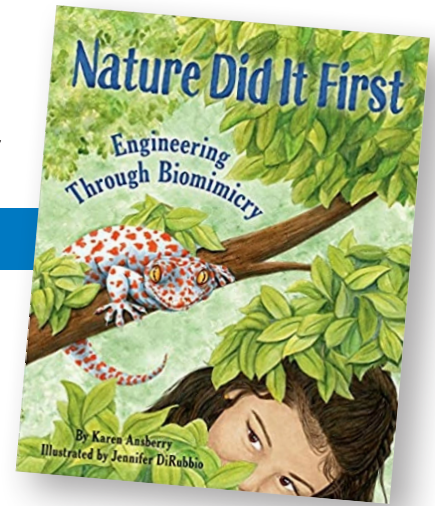
Content Connections: Engineering, Science, Social Studies

Author:

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Illustrator:

Jennifer DiRubio



TIME TO READ!



BEFORE WE READ LET'S LOOK AT...

The Cover: Have students make predictions about the book based on the title and cover illustration. What animal do you see on the cover? What do you think “Nature did it first” means? Look at the subtitle, what is “engineering”?

The Pictures: Flip through the pictures and explain the book’s unique format. Each section starts with a poem about an animal adaptation that inspired an engineering design. The following page called “nature did it first” explains the animal’s adaptation and how engineers mimic the animal to solve a human problem.

Prior Knowledge: Revisit the subtitle.

What is engineering? Have you ever heard of biomimicry? Can you find any smaller words that you know inside the word biomimicry?

Vocabulary: Biomimicry, Engineer, Technology

Purpose for Reading: This book will work best if students access it directly. Read each of the poems aloud and identify specific “Nature Did It First” sections to focus on. Then put the book on the shelf for free reading or to integrate into other class projects.

WHILE WE READ

MONITORING FOR COMPREHENSION

- For each poem ask: what facts about the animal did you learn from this poem?
- For each “Nature Did It First” section ask: What part of the animal was mimicked? What was the invention? How was a human problem solved?

LET'S THINK ABOUT

Our Purpose: “What is biomimicry? How do engineers learn from nature to solve human problems?”

Extending Our Thinking: There are many other ways that humans can design solutions to human problems by mimicking nature. With a partner, select a plant or animal from the book. Then make a list of 3 other problems that could be solved by mimicking

the plant or animal. Share your answers with the class.

NOTE TO EDUCATORS

- Extension Activities for Educators are also available.
- Vocabulary Scaffolding sheet also available.