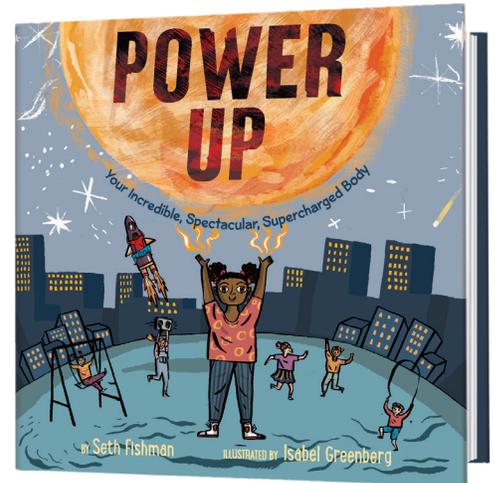


# POWER UP

YOUR INCREDIBLE, SPECTACULAR,  
SUPERCHARGED BODY

WRITTEN BY Seth Fishman ILLUSTRATED BY Isabel Greenberg



## EDUCATORS' GUIDE

### About the Book

Everything the human body does—from blinking, to jumping, to doing your homework—requires energy. In *Power Up*, author Seth Fishman and illustrator Isabel Greenberg reveal that this energy is locked away inside each person, just waiting to be harnessed in amazing ways. Readers learn how to recharge their body with sleep, exercise, and proper nutrition, and how a “recharged body means a well-fed brain.” Full of practical examples and whimsical illustrations, *Power Up* will help readers discover that energy is the key to accomplishing everything from the simplest of tasks to the most life-changing inventions.

### Before Reading

Write the word ENERGY on the board. Ask students to offer definitions for the word. Create a list of responses. Next, have students share their favorite physical activity, such as dancing, playing on the school playground, or riding a bicycle. Explain that the story they are about to hear describes the ways humans use energy to do everything from kicking a soccer ball to solving a math problem! As you read the book aloud, ask students to listen for one surprising fact that they learned while listening to the text.

### Questions for Group Discussion

1. The title of this book is *Power Up*. What do you think it means to “power up?” Have you ever heard this phrase used for turning on an electronic device, such as a computer or cell phone? What happens when an electronic device gets “powered up?” What happens if an electronic device doesn’t have power? What do you need to do when your body needs to recharge?
2. The author writes, “Everything you do—even if you don’t know you’re doing it—takes energy.” Examples from the text include reading, smiling, and even blinking! Challenge students to offer other ways in which they use energy in their everyday lives.
3. The author asks, “Why can’t you just power your toys or night-lights or games as if you were a battery?” Extend the text by introducing students to the science of batteries. Ask students to explain how human energy is like a battery that lives inside a person’s body.

## Classroom Activities

**Lights! Camera! Action Words!** The illustrations in *Power Up* show children engaged in all sorts of activities, such as jumping rope, walking a dog, reading a book, and playing guitar. Make a class list of all the action words shown in the illustrations. Have students choose one of the illustrations on which to base a short story, focusing on using relevant action words.

**Energy Inventory.** Challenge students to experience how much energy is required to do everyday household tasks by hand rather than with the help of electricity. Help students create a list of home tasks such as dishwashing, doing laundry, and sweeping. Ask students to predict how much energy each task requires: low, medium, or high. Enlist parents/caregivers to help students accomplish at least one of these household tasks. Give students time to share their experience with the class.

**Just the (Amazing) Facts, Please.** *Power Up* is full of awe-inspiring facts about the human body. Have students choose a body part or system to research. Lead students through the process of finding reference materials to discover facts about their chosen subject. Students can use their findings to create a poster, diorama, or other creative product to demonstrate their understanding. Allow time for student presentations.

The activities in this guide can be correlated to the following Common Core State Standards: CCSS.ELA-LITERACY.SL.2.1.A | CCSS.ELA-LITERACY.SL.2.1.B | CCSS.ELA-LITERACY.SL.2.2 | CCSS.ELA-LITERACY.RI.3.10

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**Get Your Zzzzzzs.** The author writes, "A well rested body means a well-fed brain." Discuss what the author means by "well-fed." Take a survey of students' bedtimes. Challenge students to keep a sleep log for one week.

Consider having students rate their energy level each morning with a 1-5 superstar system, 1 being very low energy; 5 being very high energy. Encourage students to look for patterns between hours of total sleep and energy level.

**Exercise for Life.** In addition to eating healthy foods and getting a good night's sleep, the human body needs exercise to function at its energized best. Partner with the physical education teacher to show students a variety of movements and exercises that they can practice. Teach students how to calculate their heart rate before and after exercise.

**Brains of Discovery.** The author writes, ". . . your brain is expanding and growing and putting two and two together. And whatever you did (or will do) today will help you discover or invent the next great thing." Plan and conduct a class or school-wide "invention convention." Working in pairs or small groups, students will think of, plan, draft, and create a simple invention. Showcase all inventions in a classroom gallery or public space in the school.

## About the Author

SETH FISHMAN is the author of the picture books *A Hundred Billion Trillion Stars*, a *Boston Globe-Horn Book Award* Honor book and *Mathical Prize* winner, and *Power Up*. He is a graduate of Princeton University and the University of East Anglia in Norwich, England. He lives in Los Angeles, California. He is also the author of two young adult novels and is a literary agent. [www.sethasfishman.com](http://www.sethasfishman.com)

## About the Illustrator

ISABEL GREENBERG is a London-based illustrator and writer. She studied illustration at the University of Brighton and has done work for *The Guardian*, *The National Trust*, and *The New York Times*. Greenberg is the author and illustrator of two adult graphic novels, *The Encyclopedia of Early Earth*, which won the Best Book category at the British Comic Awards, and *The One Hundred Nights of Hero*. [www.isabelnecessary.com](http://www.isabelnecessary.com)