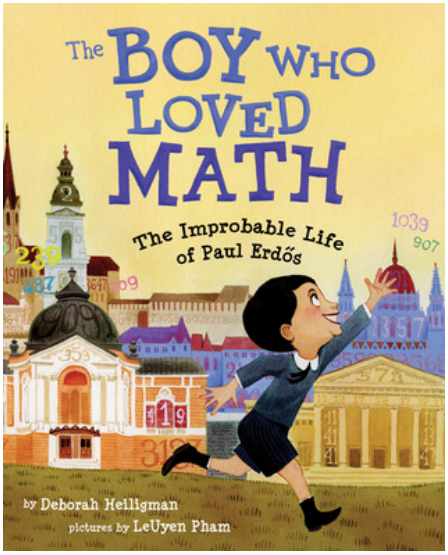

The Boy Who Loved Math: The Improbable Life of Paul Erdos

Deborah Heiligman , LeUyen Pham (Illustrations)

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Most people think of mathematicians as solitary, working away in isolation. And, it's true, many of them do. But Paul Erdos never followed the usual path. At the age of four, he could ask you when you were born and then calculate the number of seconds you had been alive in his head. But he didn't learn to butter his own bread until he turned twenty. Instead, he traveled around the world, from one mathematician to the next, collaborating on an astonishing number of publications. With a simple, lyrical text and richly layered illustrations, this is a beautiful introduction to the world of math and a fascinating look at the unique character traits that made "Uncle Paul" a great man.

The Boy Who Loved Math: The Improbable Life of Paul Erdos Details

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From Reader Review The Boy Who Loved Math: The Improbable Life of Paul Erdos for online ebook

Deborah says

The subtitle of this book is "The Improbable Life of Paul Erdos"; it could as well be "an improbable topic for a picture book". So how does Deborah Heiligman manage to pull it off? This author of the awards-winning "Charles and Emma" has a unique talent for presenting biography, to all ages. She knows how to find a special "way in" to her subjects' lives, to find a story that hasn't been told before, and to give that story just the right structure and voice — creating a story that children or young adults will actually want to hear.

Text and illustrations (delightful, by LeUyen Pham) are spotted with numbers. The book begins, "Paul Erdos lived in Budapest, Hugary, with his Mama. Mama loved Paul to infinity. Paul loved Mama to ∞ too!" And so we enter the mind of a person with a passion for numbers. We learn about Paul's life, we learn about numbers, and we learn about creative obsession, which for me is the biggest take-away from this book. THE BOY WHO LOVED MATH is about "the kind of person" who "didn't like to follow rules. So he invented his own way to live."

"So he invented his own way to live." I like that.

Joan says

I made the mistake of reading Betsy Bird's wonderful review of this book and now I realize I didn't really read this book at all competently. I really should go back and reread it. But for now, here is my review.

Erdos was one strange guy. He was an only child whose immediate associates (Mom and kind of a governess) danced attendance on him. For crying out loud, the guy never tried to butter his own bread until age 20. That is not age two. That is two zero, twenty. He was more or less home schooled until high school. The guy was a genius when it came to math. He taught himself how to add and subtract. He fell in love with prime numbers, you know those things that can only be divided by one and the number. When he was a grownup, apparently, he never really held a job per se. He was a professor or visiting professor (Not sure which) here and there but it doesn't sound as though he ever actually taught and graded papers. He had all his belongings in a suitcase or two and stayed as a house guest with mathematicians everywhere. Apparently, in spite of his peculiarities, he was loved by mathematicians. He was just plain a nice guy who lived math problems. The book points out he was not always right about math. He died in a very appropriate location: a math meeting. Perhaps if I had read the afterwords by both the author and artist, I'd have gotten more out of the book. Somehow I missed them. I do agree with Betsy about one thing. This will fill a gap in the collection: really kids, there are more mathematicians than Einstein in the 20th century! For that matter, I don't think there are many bios of mathematicians, period, for kids, especially about the grade 3-5 range.

So I might go back and change this review but I'll keep it for now so as to keep track of when I read something and how many!

Kris Patrick says

Like Hollywood, history has an A, B, C, and D-list. Trying to talk a kid into studying someone other than Walt Disney or Abe Lincoln for a biography project is the equivalent of talking them into taking the peas and carrots in the lunch line. Picture books about history's D-listers is a huge publishing trend, but they are a hard, hard sell to classroom teachers AND kids. I'm having a difficult time justifying these purchases when I'm given so little to spend.

Donalyn says

An informative and entertaining biography about one of the most influential mathematicians in history, Paul Erdos. Don't miss illustrator, Leuyen Pham's notes explaining how she incorporated math concepts into the illustrations.

Edward Sullivan says

I've never been a fan of math but I do love this delightful biography of a numbers-obsessed real life eccentric genius and so will young readers.

Ashley Boyne says

Super interesting and awesome illustrations!! I like this book a lot.

Dolly says

This is an entertaining and informative book about the life of Paul Erd?s. I had never heard of him before, but I was fascinated by the title and I was excited to read a book about a mathematician with our girls. The narrative is well-crafted; it provides a comprehensive biographical sketch of his life and several interesting incidents that help to show his mind and his character.

The illustrations by LeUyen Pham are terrific. I love the way that she incorporates math problems and numbers throughout the images, and she makes his quirkiness seem charming. We became big fans of her illustrations through books like Big Sister, Little Sister and the Freckleface Strawberry series, so we were excited to see that she is the illustrator for this book, too.

I thought it was interesting that the book never mentions the fact that Paul likely fell somewhere on the autism spectrum, but I love that his friends and colleagues adapted to his strange ways in the name of math and friendship. I discovered at the end of the book that his name is pronounced "air-dish," after I'd butchered it throughout my reading of the story, so my only complaint would be that this information would've been handy to have at the beginning of the book. (Although I suppose I could've looked to the back to search for this information before I began reading.)

I was intrigued enough to find out more about this man and I put the book The Man Who Loved Only Numbers: The Story of Paul Erd?s and the Search for Mathematical Truth by Paul Hoffman on my to-read list. I also checked out his entry on Wikipedia. I thought that the concept of the Erd?s number, a mathematician's way of defining his work through his proximity of contact with Paul Erd?s or his contemporaries to be humorous, since I've played the Six Degrees of Kevin Bacon game a few times and I'm amazed by the interconnectedness of people.

Overall, we found this to be a humorous and enlightening tale. We discussed a few of the mathematical concepts and puzzles that were discussed in the book (like Euler's Seven Bridges of Königsberg, a puzzle I discovered during one of my trips to Königsberg (now called Kaliningrad, Russia). I was amazed at his mathematical ability and the way he lived. We really enjoyed reading this book together.

Bonny says

I love every single thing about this book - that Heiligman thought Erd?s was an important subject, how she portrayed Erd?s as original and thoughtful but not an odd misfit, the descriptive and informative writing, the mathematical and biographical information it conveys in a fun way, the incredibly detailed illustrations by LeUyen Pham, and the extensive author's and illustrator's notes at the end. I read the text in a very short time, but this is a book that I'm going to keep by my reading chair so I can peruse the illustrations in detail and learn even more. I've read adult biographies about Erd?s, and while they were interesting, they were often a collection of rote facts or snippets of his life. *The Boy Who Loved Math* manages to show Erd?s as a real person who loved math and why his life, the way he lived it, his contributions, and math itself are all so important. I'm very proud of my older son's Erd?s number of 4, and even more so after reading this book.

Tiina says

Oeh. Vau. Küll oli tore avastus: kolleeg oli selle lastenäitusele pannud ning see jäi mulle kohe silma. Olen Goodreadsis ja Instagramis stalkides sellest matemaatikust kuulnud, aga ei teadnud, et temast lasteraamat kirjutati. See meeldis nii väga, et tellisin lausa mehest kirjutatud eluloo.

Igatahes soovitan soojalt. Tore viis päevake veeta. 100%-liselt (hehee) tasub lugeda raamatu lõpus olevaid märkuseid, mis paljusid illustratsioone veel paremini avavad. Tõesti üks armas raamat nii suurtele kui ka väikestele.

Olivia Bunemann says

Genre: Historical Fiction
Grade Level: 2-5th grade
When you think of someone who is enamored with mathematics Paul Erdos is not the type of person who you would imagine. The book “The Boy Who Loved Math” by Deborah Heiligman is a creative, adventurous story about the not so normal life of Paul Erdos. This biography follows the life of Paul as he grows up with his mother, a math teacher. Paul and school do not get along very well since he cannot sit for long so he runs around the classroom all day. But, he also does not get along with homeschooling because Fraulein has too many rules and he does not like to follow rules. The only solution to this problem is for his

mother and Fraulein to take care of him together by doing everything for him! As Paul continues to grow up his obsession with mathematics becomes an adventure but he can't travel too far because he relies on his mother so much. The book follows his life telling how he becomes Uncle Paul to so many people!
This book can be used in various ways in a classroom. I think this can be used in a 2-4th grade classroom to help excite children about math and learning. This is a very fun exciting book that can show children how adventurous math can be in the real world. It can be used to introduce a new math topic like prime numbers or if children are curious how math is used in the world or think math is boring, this book will spark their interest. I also think this book can be applicable in 4-6th grade classrooms for social studies projects. Paul Erdos would be a great character for a live museum project. Even though this book is fun and entertaining, in the back there is a note from the author that gives more details of his life. Paul had an extremely harsh life losing his two sisters to Scarlet Fever, living without his dad for four years because he was a POW and ultimately moving to the United States to escape Nazi Germany while many of his family members were less fortunate and were murdered.
This was a WOW Book for me because of the amazing illustrations. This book captured my attention immediately with the incorporation of numbers throughout the text, layers of illustrations on top of one another, and the creative way each and every page was displayed. In the back of the book there are notes from the illustrator. These notes are extremely interesting to me because they give more detail and background ideas to every illustration that was added into the book. This book truly made me say wow as I was reading the pages.

Mike says

What I love most about The Boy Who Loved Math was that it really wasn't about math. It's about the boy. Paul Erdos was something, all right. A real "character." Typically, I've come to think about the mathematically centric as people who are very logically minded, people who love rules. As you learn on the second page, Erdos was anything but.

We don't get a tremendous amount of exposure to those who use math creatively. Most of our experience with math comes from math teachers, who are very often logic and very much rule centric. After reading Paul's story, I've come to rethink the way I see both mathematics and mathematicians. Which is precisely why this book is so important. It can reshape a kid's entire conception of a subject with many preconceptions.

As I flipped through the pages, I became more and more engrossed with Paul's character. Similarly to how Steve Sheinkin made Benedict Arnold and Robert Oppenheimer's character come to life by sharing a series anecdotes chosen with incredible care, Deborah Heiligman paints a brilliant picture of Erdos through poignant snippets of his life beyond math. In fact, a few weeks after I read the book I had a general sense of why we remember Erdos but it's the details of his character that I can vividly recount.

At 21 Erdos was already a world renowned mathematician. Invited to travel to England, Heiligman recounts an experience of looking at the bread, looking at the butter, and finally, grabbing the knife to make the attempt. After zooming in on that little experience, Heiligman takes the reader back out, giving us the bigger picture. Erdos realizes he doesn't quite fit into the world the regular way but being a guy who never liked to follow the rules, he invents his own. Paul never owned his own home, instead he traveled from city to city where a mathematician would take him in. They would cook for him, clean up the messes he made, and do his laundry and Paul would share the one thing he could- his mathematical mind.

Have you ever heard a kid explain what they did at the amusement park? You know how they just go on and on about every little detail- we rode this roller coaster, then we got cotton candy, then we played the ringtoss... That's exactly what I want to do right now. I want to just spill every single one of the anecdotes Heiligman included. But just like a kid talking about a fun park, I'd be telling you because I can't get over how cool they are, not because you even care to hear.

Paul Erdos was the Kanye West of mathematics. So extraordinarily gifted that people all over the world welcomed this very difficult person into their lives and accepted his faults because his talents so vastly outweighed them.

The Boy Who Loved Math has everything I'm looking for in picture book biography. It's distilled down to information and experiences that make me want to google this guy I've never heard of. But while the text is absolutely scintillating, remove the pictures and you'd miss out on soooo much original knowledge. Prime number theory imbedded into the chart the boy's drawing, geometry theory transposed over the landmarks of Budapest, puzzles Erdos and his friend worked on overlay the illustrations of their meetings.

But this story's piece de resistance: LeUyen Pham illustrator's note. The reader is taken through the book for a page by page explanation of all the details related to Erdos' life that have been inserted. While it's not totally uncommon to find a note about the artistic process the illustrator undertook, I've never seen anything as detailed. I sure hope this groundbreaking look into the complexity of creating high-quality illustrations for children's non-fiction picture books quickly becomes as common as an author's inclusion of their source notes.

My friends, we have a very special book on our hands here. A fascinating true story about an obscure character, superbly illustrated, with an artist's note that could very well advance the entire genre. Yeah. The Boy Who Loved is definitely a gem.

Betsy says

Make a beeline for your local library's children's biography section and learn firsthand the shocking truth about picture book bios of mathematical geniuses. Apparently there was only one and his name was Einstein. End of story. The world as we know it is not overflowing with picture book encapsulations of the lives of Sir Isaac Newton or Archimedes (though admittedly you could probably drum up a Leonardo da Vinci book or two if you were keen to try). But when it comes to folks alive in the 20th century, Einstein is the beginning and the end of the story. You might be so foolish as to think there was a good reason for that fact. Maybe all the other mathematicians were dull. I mean, Einstein was a pretty interesting fella, what with his world-shattering theories and crazed mane. And true, the wild-haired physicist was fascinating in his own right, but if we're talking out-and-out interesting people, few can compare with the patron saint of contemporary mathematics, Paul Erd?s. Prior to reading this book I would have doubted a person could conceivably make an engaging biography chock full to overflowing with mathematical concepts. Now I can only stare in amazement at a story that could conceivably make a kid wonder about how neat everything from Euler's map of Konigsburg to the Szekeres Snark is. This is one bio you do NOT want to miss. A stunner from start to finish.

For you see, there once was a boy who loved math. His name was Paul and he lived in Budapest, Hungary in 1913. As a child, Paul adored numbers, and theorems, and patterns, and tricky ideas like prime numbers. As

he got older he grew to be the kind of guy who wanted to do math all the time! Paul was a great guy and a genius and folks loved having him over, but he was utterly incapable of taking care of himself. Fortunately, he didn't have to. Folks would take care of Paul and in exchange he would bring mathematicians together. The result of these meetings was great strides in number theory, combinatorics, the probabilistic method, set theory, and more! Until the end of this days (when he died in a math meeting) Paul loved what he did and he loved the people he worked with. "Numbers and people were his best friends. Paul Erd?s had no problem with that."

There are two kinds of picture book biographies in this world. The first attempts to select just a single moment or personality quirk from a person's life, letting it stand in as an example of the whole. Good examples of this kind of book might include Me...Jane by Patrick McDonnell about the childhood of Jane Goodall or Lincoln Tells a Joke How Laughter Saved the President And the Country by Kathleen Krull. It's hard to pinpoint the perfect way to convey any subject, but it can sometimes be even harder to tell an entire life in the span of a mere 40 pages or so. Still, that tends to be the second and more common kind of picture book biography out there. Generally speaking they don't tend to be terribly interesting. Just a series of rote facts, incapable of making it clear to a kind why a person mattered aside from the standard "because I said so" defense. *The Boy Who Loved Math* is different because it really takes the nature of biography seriously. If the purpose of a bio is to make it clear that a person was important, how important was a guy who loved math puzzles? Well, consider what the story can do. In a scant number of pages author Deborah Heiligman gives us an entire life synthesized down to just a couple key moments, giving the man's life form and function and purpose, all while remaining lighthearted and fun to read. Who does that?

Did you know that there are kids out there who like math? I mean, reeeeeeally like math? The kinds that beg their parents for math problems to solve? They exist (heck, Ms. Heiligman gave birth to one) and for those kids this book will come like a present from on high. Because not only does the author highlight a fellow who took his passion for numbers and turned it into a fulfilling and fun life, but thanks to illustrator LeUyen Pham the illustrations are overflowing with math equations and puzzles and problems, just waiting to be interpreted and dissected. I have followed the career of Ms. Pham for many years. There is no book that she touches that she does not improve with her unique style. Whether it's zeroing in on a child's neuroses in Alvin Ho or bringing lush life to a work of poetry as in A Stick Is an Excellent Thing, Pham's art can run the gamut from perfect interstitial pen-and-inks to lush watercolor paints. I say that, but I have never, but ever, seen anything like what she's done in *The Boy Who Loved Math*.

It would not be overstating the matter to call this book Pham's masterpiece. The common story behind its creation is that there was some difficulty finding the perfect artist for it because whosoever put pen to paper here would have to be comfortable on some level with incorporating math into the art. Many is the artist who would shy away from that demand. Not Ms. Pham. She takes to the medium like a duck to water, seemingly effortlessly weaving equations, charts, diagrams, numbers, and theorems into pictures that also have to complement the story, feature the faces of real people, capture a sense of time (often through clothing) and place (often through architecture), and hardest of all, be fun to look at.

But that's just for starters. The final product is MUCH more complex. I'm not entirely certain what the medium is at work here but if I had to guess I'd go with watercolors. Whatever it is, Pham's design on each page layout is extraordinary. Sometimes she'll do a full page, border to border, chock full of illustrations of a single moment. That might pair with a page of interstitial scenes, giving a feel to Paul's life. Or consider the page where you see a group of diners at a restaurant, their worlds carefully separated into dotted squares (a hat tip to one of Paul's puzzles) while Paul sits in his very own dotted pentagon. It's these little touches that make it clear that Paul isn't like other folks. All this culminates in Pham's remarkable Erd?s number graph, where she outdoes herself showing how Paul intersected with the great mathematicians of the day.

Absolutely stunning.

Both Heiligman and Pham take a great deal of care to tell this tale as honestly as possible. The extensive “Note From the Author” and “Note From the Illustrator” sections in the back are an eye-opening glimpse into what it takes to present a person honestly to a child audience. In Pham’s notes she concedes when she had to illustrate without a guide at hand. For example, Paul’s babysitter (“the dreaded Faulein”) had to be conjured from scratch. She is the rare exception, however. Almost every face in this book is a real person, and it’s remarkable to look and see Pham’s page by page notes on who each one is.

Heiligman’s author’s note speaks less to what she included and more to what she had to leave out. She doesn’t mention the fact that Paul was addicted to amphetamines and honestly that sort of detail wouldn’t have served the story much at all. Similarly I had no problem with Paul’s father’s absence. Heiligman mentions in her note what the man went through and why his absences would make Paul’s mother the “central person in his life emotionally”. The book never denies his existence, it just focuses on Paul’s mother as a guiding force that was perhaps in some way responsible for the man’s more quirky qualities. The only part of the book that I would have changed wasn’t what Heiligman left out but what she put in. At one point the story is in the midst of telling some of Paul’s more peculiar acts as a guest (stabbing tomato juice cartons with knives, waking friends up at 4 a.m. to talk math, etc.). Then, out of the blue, we see a very brief mention of Paul getting caught by the police when he tried to look at a radio tower. That section is almost immediately forgotten when the text jumps back to Paul and his hosts, asking why they put up with his oddities. I can see why placing Paul in the midst of the Red Scare puts the tale into context, but I might argue that there’s no real reason to include it. Though the Note for the Author at the end mentions that because of this act he wasn’t allowed back in the States for a decade, it doesn’t have a real bearing on the thrust of the book. As they say in the biz, it comes right out.

I have mentioned that this book is a boon for the math-lovers of the world, but what about the kids who couldn’t care diddly over squat about mathy malarkey? Well, as far as I’m concerned the whole reason this book works is because it’s fun. A little bit silly too, come to that. Even if a kid couldn’t care less about prime numbers, there’s interest to be had in watching someone else get excited about them. We don’t read biographies of people exactly like ourselves all the time, because what would be the point of that? Part of the reason biographies even exist is to grant us glimpses into the lives of the folks we would otherwise never have the chance to meet. Your kid may never become a mathematician, but with the book they can at least hang out with one.

One problem teachers have when they teach math is that they cannot come up with a way to make it clear that for some people mathematics is a game. A wonderful game full of surprises and puzzles and queries. What *The Boy Who Loved Math* does so well is to not only show how much fun math can be on your own, it makes it clear that the contribution Paul Erd?s gave to the world above and beyond his own genius was that he encouraged people to work together to solve their problems. Heiligman’s biography isn’t simply the rote facts about a man’s life. It places that life in context, gives meaning to what he did, and makes it clear that above and beyond his eccentricities (which admittedly make for wonderful picture book bio fare) this was a guy who made the world a better place through mathematics. What’s more, he lived his life exactly the way he wanted to. How many of us can say as much? So applause for Heiligman and Pham for not only presenting a little known life for all the world to see, but for giving that life such a magnificent package as this book. A must purchase.

For ages 5-9

Gloria says

Who knew there were so many types of prime numbers? Not me! Fascinating and beautifully rendered account of the unusual life and mind of math genius Paul Erdös.

Richie Partington says

Richie's Picks: THE BOY WHO LOVED MATH: THE IMPROBABE LIFE OF PAUL ERD?S by Deborah Heiligman and LeUyen Pham, ill, Roaring Brook, June 2013, 48p., ISBN: 978-1-5964-3307-6

"I'm gonna be your number one"
-- Blondie, "The Tide is High"

"So Paul kept counting...
And thinking about numbers. One day when he was 4, Paul asked a visitor when her birthday was. She told him.
"What year were you born? he asked.
"She told him.
"What time?
"She told him.
"Paul thought for a moment.
"Then he told her how many seconds she had been alive.
"Paul liked that trick. He did it often."

Read that again. HE WAS FOUR!!!

When I was a kid, I loved math, too. My mom was a bookkeeper who loved talking math with me. I can imagine now how my fourth and fifth grade teachers must have conferred about us before the beginning of our fifth grade year. A couple of weeks into that school year, my teacher met with me and my classmate David. He'd obviously learned and saw for himself that we were not being challenged by the math curriculum (or, to put it another way, that we were serious math geeks). He offered us the opportunity to independently study all the math we wanted on our own. Just go for it. We immediately agreed.

What a fun year! Several days a week after school, David and I would go over to one of our houses, eat snacks and do math until it was time to go home for dinner. By the end of fifth grade, we'd completed the fifth grade math book and the sixth grade math book. Boy, were we grooving on math!

Of course, Paul Erd?s was probably to that same point before he lost half his baby teeth.

THE BOY WHO LOVED MATH is a really fun and interesting read because Paul Erd?s, the son of math teachers, was one of those kids for whom school didn't work so well. He ended up studying independently -- home schooling -- for much of his childhood with Frälein, who'd been his caregiver when he was a preschooler. She had lots of rules but it was, maybe, "500 times better" than being at school.

Paul Erd?s grew up to be an eccentric adult who lacked many practical living skills, but, as I just learned on Wikipedia, he was a genius who published more papers in his lifetime than any mathematician in history. He

wandered the world hanging out doing math with other mathematicians. (Just like me and David, only several trillion times more complicated math.)

Through text and illustrations, THE BOY WHO LOVED MATH does such a great job of capturing young Paul's delight with prime numbers and other math concepts. We really see how one can discover and follow one's passion.

This is one more of those stellar picture book biographies that conveys an amazing true story in a few dozen perfectly-crafted pages.

Richie Partington, MLIS
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Pink STREAM says

The book is about a not very known mathematician, Paul Erdös, but after you read the book you realize that you missed an amazing brain. The book includes the mistakes he made, his mother's behaviors, things he found and much more. But there is also a message; Paul is an awesome mathematician but he can't do some basic life skills himself. Because his mother did everything for him and that's why he couldn't practice and learn those basic things. When he got older he had troubles because of them. So the message parents should learn from this book is, parents shouldn't do everything for their children even if it is hard or boring for their children. They should give some responsibilities and let them do even if they mess for a few times. Illustrations are cute and interesting. The text style is also an important factor for this book. The author used numbers instead of words and that made the book more mathematical. On the last page of the book, there is a graph which shows lots of popular mathematicians and scientists and their relation to Paul Erdös. You can understand how great he was from that graph too. You should absolutely read this book if you are researching Paul Erdös or mathematicians. It would be very helpful.
