The books listed do not focus on the separate STEM disciplines or on content related to the disciplines. Rather, the books focus on STEM practices or ‘habits of mind’ that are common across the four disciplines. These habits or practices include problem solving, working together; persistence, imagination, experimenting, predicting, designing and making.

This list is not exhaustive, but does include a comprehensive range of books that will engage young children aged between four and eight in STEM.


THE MOST MAGNIFICENT THING
Ashley Spires

The girl has a wonderful idea. She is going to make the most MAGNIFICENT thing! She knows just how it will look. She knows just how it will work. All she has to do is make it, and she makes things all the time. Easy-peasy? But making her magnificent thing is anything but easy, and the girl tries and fails, repeatedly.

WHAT DO YOU DO WITH AN IDEA?
Kobi Yamada  Illustrated by Mae Besom
Compendium Inc  ISBN: 9781938298073

This is the story of one brilliant idea and the child who helps to bring it into the world. As the child’s confidence grows, so does the idea itself. And then, one day, something amazing happens. This is a story for anyone, at any age, who’s ever had an idea that seemed a little too big, too odd, too difficult.

CAO CHONG WEIGHS AN ELEPHANT
Songju Ma Daemicke  Arbordale Publishing
ISBN: 9781554537044

How much does an elephant weigh? How do you know? How would you know if you didn’t have a modern scale? Six-year-old Cao Chong, the most famous child prodigy in Chinese history, faced just this problem!

PAPA’S MECHANICAL FISH
Candace Fleming  Illustrated by Boris Kulik
Farrar, Straus & Giroux  ISBN: 9780374399085

Clink! Clankety-bang! Thump-whirr! That’s the sound of Papa at work. Although he is an inventor, he has never made anything that works perfectly, and that’s because he hasn’t yet found a truly fantastic idea. But when he takes his family fishing on Lake Michigan, his daughter Virena asks, ‘Have you ever wondered what it’s like to be a fish?’ — and Papa is off to his workshop.
Eugenie Clark fell in love with sharks from the first moment she saw them at the aquarium. She couldn't imagine anything more exciting than studying these graceful creatures. But Eugenie quickly discovered that many people believed sharks to be ugly and scary—and they didn't think women should be scientists.

The story of a young Jane Goodall and her special childhood toy chimpanzee named Jubilee. As the young Jane observes the natural world around her with wonder, she dreams of ‘a life living with and helping all animals,’ until one day she finds that her dream has come true.

Henry is a very particular sort of pig. ‘A place for everything and everything in its place,’ he always says. But when he looks out his window he is troubled. The farm is a mess! Henry is worried that nobody will be able to find anything in this mess. So he draws a map showing all the animals exactly where they belong.

One night, Lucy the raccoon follows her family out of their den, headed for the best garbage bins in town. Distracted by a jar of peanut butter, she gets separated from her family. How will she ever find her way back to her family and her cozy den? With the help of a friendly owl and his bird's-eye view, Lucy tunes into the world around her and navigates herself home.
Min is a microbe. She is small. Very small. In fact so small that you’d need to look through a microscope to see her. Or you can simply open this book and take Min on an adventure to amazing places she’s never seen before—like the icy glaciers of your tooth or the twisted, tangled jungle that is your shirt.

The cat walked through the world, with its whiskers, ears, and paws... In this glorious celebration of observation, curiosity, and imagination, Brendan Wenzel shows us the many lives of one cat, and how perspective shapes what we see. When you see a cat, what do you see?
ONE IS NOT A PAIR
Britta Teckentrup
Templar Publishing ISBN: 9781783704637

In One is Not a Pair, each patterned page contains a set of pairs... but one thing does not match any of the others. Can you find it?

WHICH ONE DOESN’T BELONG?
Christopher Danielson

Which One Doesn’t Belong? contains a thoughtfully designed set of four shapes. Each of the shapes can be a correct answer to the question, 'Which one doesn’t belong?' Because all their answers are right answers, students naturally shift their focus to justifications and arguments based on the shapes’ geometric properties.

HOW BIG IS A MILLION?
Anna Milbourne
Usborne Publishing
ISBN: 9781783704637

Pipkin the smallest penguin is always asking questions, but what he wants to know most of all is how big is a million? So he sets off to find out, and along the way meets a hundred penguins, sees a thousand snowflakes and meets one new friend before being amazed to finally find out how big a million really is.

YOU ARE (NOT) SMALL
Anna Kang
Hachette Children’s Group
Illustrated by Christopher Weyant
ISBN: 9781477847725

Two fuzzy creatures can’t agree on who is small and who is big, until a couple of surprise guests show up, settling it once and for all!
What are you able to build with your blocks? Renowned illustrator Daniel Kirk has joined his 'blocks'—in this case, bright colours, bold shapes, and retro style—with Robert Louis Stevenson’s classic poem to construct a nostalgic yet exuberant celebration of fun and imagination.

Gus’s workshop is chockful of useless odds and ends. But when his friend Rico comes over with a problem (his scooter seat is way too small for a rhino), Gus finds just the thing to solve it. He creates a fabulous new vehicular contraption with an old lounge chair! One by one Gus’s friends bring him their vehicles and Gus solves their troubles with ingenious solutions.

A collection of illustrations, concrete poetry, and photographs that shows how young children’s constructions, created as they play, are reflected in notable works of architecture from around the world.

A boy loves collecting things, especially cardboard boxes. He makes more and more amazing things from boxes, until his work is noticed by an art gallery director who gives him a big exhibition.
GOING PLACES
Peter and Paul Reynolds
Simon & Schuster ISBN: 9781442466081

It’s time for this year’s Going Places contest! Finally, time to build a go-cart, race it—and win. Each kid grabs an identical kit, and scrambles to build. Everyone but Maya. She sure doesn’t seem to be in a hurry... and that sure doesn’t look like anybody else’s go-cart! But who said it had to be a go-cart? And who said there’s only one way to cross the finish line?

11 EXPERIMENTS THAT FAILED
Jenny Offill

Is it possible to eat snowballs doused in ketchup and nothing else all winter? Can a washing machine wash dishes? By reading the step-by-step instructions, kids can discover the answers to such all-important questions along with the book’s curious narrator.

IGGY PECK, ARCHITECT
ADA TWIST, SCIENTIST
ROSIE REVERE, ENGINEER
Andrea Beaty Illustrated by David Roberts

These books all have an underlying theme: Dream Big. The fun part is each story is told from a different child in Ms. Lila Greer’s classroom.

CHARLOTTE THE SCIENTIST IS SQUISHED
Camille Andros
Houghton Mifflin ISBN: 9780544785830

Charlotte is a serious scientist. She solves important problems by following the scientific method. She has all the right equipment: protective glasses, a lab coat, a clipboard, and a magnifying glass. What she doesn’t have is space. She has so many brothers and sisters (she is a rabbit, after all) that she is too squished to work on her experiments!
THE ART OF CLEAN UP
Ursus Wehrli

Tapping into the desire for organisation and the insanity of uber-order, Wehrli humorously categorises everyday objects and situations by colour, size, and shape. He arranges alphabet soup into alphabetical order, sorts the night sky by star size, and aligns sunbathers’ accoutrements—all captured in bright photographs sure to astonish even the pickiest of neat freaks.

DIFFERENT? SAME!
Heather Tekavec

This clever picture book introduces the concept of animal characteristics by highlighting how there can be both differences and similarities within a group. For example, the zebra gallops, the bumblebee flies, the lemur leaps and the tiger prowls? But look closer now... We all have STRIPES!? And so it goes.

ROBYN BOID: ARCHITECT
Maree Coote
Melbournestyle ISBN: 9780992491741

Meet Robyn Boid—a small, dedicated bird who loves to build nests and dreams of becoming an architect. She lives at the University, where she listens to the architecture class through the window each day. Eager to learn, Robyn practises building all the important architectural shapes, but all the while, she seeks the perfect design for her very own nest.

IF I BUILT A CAR
Chris Van Dusen
Dutton E P ISBN: 9780525474005

Young Jack is giving an eye-opening tour of the car he’d like to build. There’s a snack bar, a pool, and even a robot named Robert to act as chauffeur. With Jack’s soaring imagination in the driver’s seat, we’re deep-sea diving one minute and flying high above traffic the next in this whimsical, tantalising take on the car of the future.