



Reading Lists for Invention and the Creative Process Resource Package

Grades K through 4

The resources in this section can be used with the Invention and the Creative Process Resource Packet for grades K through 4.

Books

Non-fiction and Biography

- Ada Byron Lovelace and the Thinking Machine, 2015 by Laurie Wallmark (Author), April Chu (Illustrator).
Ada Lovelace, the daughter of the famous romantic poet, Lord Byron, develops her creativity through science and math. When she meets Charles Babbage, the inventor of the first mechanical computer, Ada understands the machine better than anyone else and writes the world's first computer program in order to demonstrate its capabilities.
- Get Inventing! (Dream It, Do It!), 2014 by Mary Colson (Author).
This title teaches readers how to stop dreaming about becoming an inventor--and take steps to make their dreams come true! Helpful tips for finding inspiration, keeping an ideas journal and always thinking about how to improve things will help your reader get inventing in no time! An activity at the end of the book encourages readers to invent their own board game and test it out.
- The Fantastic Ferris Wheel: The Story of Inventor George Ferris, 2015 by Betsy Harvey Kraft (Author), Steven Salerno (Illustrator).
The story of engineer George Ferris (1859-1896) and his invention of the Ferris wheel in 1893 for the Chicago World's Fair.
- Keith Haring: The Boy Who Just Kept Drawing, 2017 by Kay Haring (Author), Robert Neubecker (Illustrator).
This one-of-a-kind book explores the life and art of Keith Haring from his childhood through his meteoric rise to fame. It sheds light on this important artist's great humanity, his concern for children, and his disregard for the establishment art world.
- Marvelous Mattie, 2006 by Emily Arnold McCully (Author).
With her sketchbook labeled My Inventions and her father's toolbox, Mattie could make almost anything. When she was just twelve years old, Mattie designed a metal guard to prevent shuttles from shooting off textile looms and injuring workers. As an adult, Mattie invented the machine that makes the square-bottom paper bags we still use today.
- The Marvelous Thing That Came from a Spring: The Accidental Invention of the Toy That Swept the Nation, 2016 by Gilbert Ford (Author, Illustrator).
In 1943, naval engineer Richard James brought home a walking torsion spring. With some entrepreneurial risk-taking and clever marketing, he and his wife, Betty, transformed his discovery into a toy sensation, the Slinky.
- On a Beam of Light: A Story of Albert Einstein, 2016 by Jennifer Berne (Author), Vladimir Radunsky (Illustrator).

Travel along with Einstein on a journey full of curiosity, laughter, and scientific discovery. Parents and children alike will appreciate this moving story of the powerful difference imagination can make in any life.

- Timeless Thomas: How Thomas Edison Changed Our Lives, 2017 by Gene Barretta (Author, Illustrator).
Edison is most famous for inventing the incandescent lightbulb, but at his landmark laboratories in Menlo Park & West Orange, New Jersey, he also developed many other staples of modern technology. Despite many failures, Edison persevered. And good for that, because it would be very difficult to go through a day without using one of his life-changing inventions
- Whoosh!: Lonnie Johnson's Super-Soaking Stream of Inventions, 2016 by Chris Barton (Author), Don Tate (Illustrator).
Learn about African American inventor Johnson, from his childhood tinkering through winning first place at a 1968 science fair, attending Tuskegee Institute, engineering for NASA, and developing a super-blast water gun.

Fiction

- Anna, Kid Engineer, 2018 by Dr. Shenek Alston (Author).
It was once again time for the annual Science Fair and Anna wasn't excited about the upcoming event because of the embarrassing projects she'd come up with during her 3rd and 4th grade years. This was her last year of elementary school, and she wanted this year to be different.
- Art & Max, 2010 by David Wiesner (Author).
Max and Arthur are friends who share an interest in painting. Arthur is an accomplished painter; Max is a beginner. Max's first attempt at using a paintbrush sends the two friends on a whirlwind trip through various artistic media, which turn out to have unexpected pitfalls.
- Cleonardo, The Little Inventor, 2016 by Mary Grandpre (Author), Mary GrandPré (Author).
Geonardo the inventor loves his little daughter, Cleonardo Wren, very much. He is used to working with her by his side as he crafts fascinating new pieces. This year, for the town's annual Grand Festival of Inventions, Cleo is determined to help her dad achieve greatness, but everything she suggests he gently dismisses. Dismayed, Cleo heads off to create her own invention to impress her dad.
- The Dot Hard, 2003 by Peter H. Reynolds (Author, Illustrator).
"Just make a mark and see where it takes you." This sage advice, offered by her intuitive, intelligent teacher, sets our young heroine on a journey of self-expression, artistic experimentation, and success.
- Iggy Peck, Architect, 2007 by Andrea Beaty (Author), David Roberts (Illustrator).
Some kids sculpt sand castles. Some make mud pies. Some construct great block towers. But none are better at building than Iggy Peck, who once erected a life-size replica of the Great Sphinx on his front lawn! It's too bad that few people appreciate Iggy's talent, certainly not his second-grade teacher, Miss Lila Greer.
- Marveltown, 2008 by Bruce McCall (Author).
What's it like growing up in a town founded by inventors? On Saturdays, the adults open the doors of the Invent-o-Drome and give local children free rein to create whatever gadgets they can think up. Hypno-Goggles, a Rocket Chair, a homeworkeaking robo-dog, the can-do kids of Marveltown are never at a loss for ideas.

- Min Makes a Machine (I Like to Read), 2018 by Emily Arnold McCully (Author).
Min wants to play, but Ann and Bess say it's too hot. Using a pipe, a tube, and some glue, Min makes an Archimedes screw, a device that draws water, to get water from a well into a swimming pool.
- The Numberlys, 2014 by William Joyce (Author, Illustrator), Christina Ellis (Illustrator).
Imaginative tale of inventing alphabet fosters creativity. Once upon a time there was no alphabet, only numbers...
- Perfect Square, 2011 by Michael Hall (Author, Illustrator).
A perfect square is transformed in this adventure story that will transport you far beyond the four equal sides of this square book.
- Press Here, 2011 by Herve Tullet (Author).
Press the yellow dot on the cover of this book, follow the instructions within, and embark upon a magical journey! Each page of this surprising book instructs the reader to press the dots, shake the pages, tilt the book, and who knows what will happen next!
- What If..., 2018 by Samantha Berger (Author), Mike Curato (Illustrator).
This girl is determined to express herself! If she can't draw her dreams, she'll sculpt or build, carve or collage. If she can't do that, she'll turn her world into a canvas. And if everything around her is taken away, she'll sing, dance, and dream...
- What To Do With a Box, 2016 by Jane Yolen (Author), Chris Sheban (Illustrator).
If you give a child a box, who can tell what will happen next? It may become a library or a boat. It could set the scene for a fairy tale or a wild expedition. The most wonderful thing is its seemingly endless capacity for magical adventure,
- What Do You Do With an Idea?, 2014 by Kobi Yamada (Author), Mae Besom (Illustrator).
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.

Magazines, Journals, Miscellaneous

- Artsonia Kids Online Art Museum: Empowers students to display, and explain, their own creations. (Download from your app store)
- Ask Magazine: Explores the world with inventors, artists, thinkers, and scientists of the past and present.
<https://shop.cricketmedia.com/magazines-6-9-years/ASK-Magazine-for-Kids.html>
- Pixlr - Photo Collages, Effects: Easy photo-editing tool sparks creativity, teaches basic art techniques. Download from your app store

Online Links

- Exploritorium: Activities from the San Francisco Museum
<https://www.exploritorium.edu/explore/activities>
- Math Science Music: Thoughtful tools teach STEM skills through music and creativity
<https://mathsciencemusic.org/>
- The Metropolitan Museum of Art, #metkids: Made for, with, and by kids, this site offers exploration and artistic fun.
<https://www.metmuseum.org/art/online-features/metkids/>

- Tinkercad: Amazingly simple yet powerful online CAD tool turns kids into makers.
<https://www.tinkercad.com/#>

Background information for the Educator

- Creative Educator: Integrate Technology into the Curriculum
<https://creativeeducator.tech4learning.com/lessons/>
- Teaching Creative Thinking: Developing Learners Who Generate Ideas And Can Think Critically (Pedagogy for a Changing World), 2017 by Bill Lucas (Author), Ellen Spencer (Author).

Successful students value knowledge and skills at the same time as understanding the importance of developing their capabilities as learners in every lesson they experience. Teaching Creative Thinking is action-oriented and research-led and is packed with examples and case studies of successful practice, and pitfalls to avoid.

Invention and the Creative Process Reading Lists

Grades 5-8

The resources in this section can be used with the Invention and the Creative Process Resource Packet for grades 5 through 8.

Books

Non-fiction and Biography

- The Boy Who Harnessed the Wind: Young Readers Edition, 2015 by William Kamkwamba (Author), Bryan Mealer (Author), Anna Hymas (Illustrator).
When a terrible drought struck William Kamkwamba's tiny village in Malawi, his family lost all of the season's crops, leaving them with nothing to eat and nothing to sell. William began to explore science books in his village library, looking for a solution. There, he came up with the idea that would change his family's life forever: he could build a windmill.
- Feynman, 2013 by Jim Ottaviani (Author), Leland Myrick (Illustrator).
In this graphic novel biography, the author presents the larger-than-life exploits of Nobel-winning quantum physicist, adventurer, musician, world-class raconteur, and one of the greatest minds of the twentieth century: Richard Feynman.
- Genius!: The Most Astonishing Inventions Of All Time, 2015 by Deborah Kespert (Author).
This solid overview of technological milestones features over twenty inventors and their creations. At least two spreads about each give basic facts, about, say, Stephanie Kwolek and Kevlar, followed by expansions and updates to the technology, with numerous photos and other illustrations throughout.
- Girls Think of Everything: Stories of Ingenious Inventions by Women, 2002 by Catherine Thimmesh (Author), Melissa Sweet (Illustrator).
In kitchens and living rooms, in garages and labs and basements, even in converted chicken coops, women and girls have invented ingenious innovations that have made our lives simpler and better. Their creations are some of the most enduring (the windshield wiper) and best loved (the chocolate chip cookie). What inspired these women, and just how did they turn their ideas into realities?
- Invent It!, 2017 by Rob Beattie (Author).
What should kids do when they have an idea? Put it into action! This fun and informative book takes budding inventors through the entire creative process—from brainstorming, designing, and prototyping, to patenting, manufacturing, and marketing. It is packed with all the tools and tips needed to turn a concept into reality!
- Inventor, Engineer, and Physicist Nikola Tesla, 2017 by Katie Marsico (Author).
As a child, Nikola Tesla saw a picture of a waterfall and imagined an invention that would turn the water's energy into electricity. Later, he invented the water wheel, which turned water power into usable energy. As a young adult, Tesla spent his spare time experimenting with electrical equipment. He worked for inventor Thomas Edison, improving power plants and machines that ran on direct current electricity.
- Mistakes That Worked: 40 Familiar Inventions & How They Came to Be, 1994 by Charlotte Foltz Jones (Author), John O'Brien (Illustrator).
Popsicles, potato chips, Silly Putty, Velcro, and many other familiar things have fascinating stories behind them. In fact, dozens of products and everyday items had surprisingly haphazard

beginnings.

- The Next Wave: The Quest to Harness the Power of the Oceans (Scientists in the Field Series), 2018 by Elizabeth Rusch (Author).
Transferring ocean wave action into electricity (without damaging collection equipment or harming marine life) is a significant engineering challenge with a potentially big financial payoff. Rusch captures the determined, entrepreneurial spirit of the profiled engineers as well as the need for creative problem-solving and ingenuity.
- Shoes for Everyone: A Story about Jan Matzeliger, 1986 by Barbara Mitchell (Author).
A biography of the half-Dutch/half-black Surinamese man who, despite hardships and prejudice, invented a shoe-lasting machine that revolutionized the shoe industry.
- So You Want to Be an Inventor?, 2005 by Judith St. George (Author), David Small (Illustrator).
Features some of the world's best-known inventors-Thomas Edison, Benjamin Franklin, Eli Whitney-as well as lesser-known geniuses like Georges de Mestral (inventor of Velcro), Wilhelm Roentgen (inventor of X rays), and Hedy Lamarr (inventor of a system that became the basis for satellite communication-who knew?). Whether you're a dreamer or a loner, a copycat or a daredevil, this book might just inspire readers to invent something that could change the world!
- The World's Oddest Inventions (Library of Weird), 2015 by Nadia Higgins (Author).
From the "Nose Stylus" (so you can use your smartphone in the bathtub) to the "Brush and Shine" (for the grooming of bald-headed men) to "Anti-Theft Lunch Bags" (which make sandwiches appear to be moldy and unpalatable), this book is filled with truly odd and intriguing inventions.

Fiction

- Fires of Invention (Mysteries of Cove), 2015 by J. Scott Savage (Author).
Trenton Colman is a creative thirteen-year-old boy with a knack for all things mechanical. But his talents are viewed with suspicion in Cove, a steam-powered city built inside a mountain. In Cove, creativity is a crime and invention is a curse word.
- Frindle, 1998 by Andrew Clements (Author), Brian Selznick (Illustrator).
A quirky, imaginative tale about creative thought and the power of words that will have readers inventing their own words.
- Ghostbusters: Ectomobile, 2017 by Troy Benjamin (Author), Marc Sumerak (Author), Ian Moores (Illustrator).
Discover the secrets of the Ghostbusters' iconic specter-smashing automobile, Ecto-1, with this comprehensive owner's workshop manual. Along with a detailed breakdown of Ecto-1's capabilities and exclusive cutaway images that show the car's souped-up engine and onboard ghost-tracking equipment, the book also focuses on the Ghostbusters' portable tools of the trade, including proton packs, ghost traps, and PKE meters.
- The Invention of Hugo Cabret, 2007 by Brian Selznick (Author).
Orphan, clock keeper, and thief, Hugo lives in the walls of a busy Paris train station, where his survival depends on secrets and anonymity. But when his world suddenly interlocks with an eccentric, bookish girl and a bitter old man who runs a toy booth in the station, Hugo's undercover life, and his most precious secret, are put in jeopardy. A cryptic drawing, a treasured notebook, a stolen key, a mechanical man, and a hidden message from Hugo's dead father form the backbone of this intricate, tender, and spellbinding mystery.
- Rebel Genius (Rebel Geniuses Book 1), 2016 by Michael Dante DiMartino (Author).
Creative fantasy blends art, mysticism, math, and magic. In twelve-year-old Giacomo's world, art

is powerful, dangerous, and outlawed. A few artists possess Geniuses, birdlike creatures that are the living embodiment of an artist's creative spirit. Those caught with one face a punishment akin to death.

- Surviving the Applewhites , 2012 by Stephanie S. Tolan (Author).
Jake is notorious. Rumor has it he managed to get kicked out of every school in Rhode Island, and actually burned the last one down to the ground. Only one place will take him now, and that's a home school run by the Applewhites, a chaotic and hilarious family of artists: poet Lucille, theater director Randolph, dancer Cordelia, and dreamy Destiny.

Magazines, Journals, Miscellaneous

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<https://www.metmuseum.org/art/online-features/metkids/>
- Tinkercad: Amazingly simple yet powerful online CAD tool turns kids into makers.
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Invention and the Creative Process Reading Lists

Grades 9-12

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Books

Non-fiction and Biography

- Black Stars: African American Women Scientists and Inventors, 2012 by Otha Richard Sullivan (Author).
Meet African American women of science and invention from the early years to modern times.
- Creative Like da Vinci: Practical Everyday Creativity for Idea Generation, New Perspectives, and Innovative Thinking, 2018 by Peter Hollins (Author).
How to systematically engineer creativity from nothing and unleash your inner ingenuity. Creative thinking is surrounded by so much mystique and myth. It's time to cut through the static and learn how to become an idea-generating machine. Spark your imagination, improve your thinking, and solve problems
- The Creative Habit: Learn It and Use It for Life, 2006 by Twyla Tharp (Author), Mark Reiter (Contributor).
All it takes to make creativity a part of your life is the willingness to make it a habit. It is the product of preparation and effort, and is within reach of everyone. Whether you are a painter, musician, businessperson, or simply an individual yearning to put your creativity to use, this book provides you with thirty-two practical exercises based on the lessons Twyla Tharp has learned in her remarkable thirty-five-year career.
- Elon Musk and the Quest for a Fantastic Future Young Readers' Edition, 2017 by Ashlee Vance (Author).
There are few people in history that could match Elon Musk's relentless drive and vision. A modern combination of famous inventors and industrialists like Thomas Edison, Henry Ford, and Steve Jobs, Elon is the man behind companies such as SpaceX, Tesla Motors, SolarCity, and PayPal that are transforming the way we live.
- I.M. Pei: Architect of Time, Place and Purpose, 2011 by Jill Rubalcaba (Author).
This handsome volume, extensively illustrated with clear photographs and some architectural drawings, gives a personalized account of the career of the Chinese-born superstar architect.
- Rhett & Link's Book of Mythicality: A Field Guide to Curiosity, Creativity, and Tomfoolery, 2018 by Rhett McLaughlin (Author).
From the YouTube superstars and creators of Good Mythical Morning comes the ultimate guide to living a "Mythical" life, featuring stories and photos from their lifelong friendship, as well as awesomely illustrated guides, charts, and activities aimed at laughing more, learning more, and never taking yourself too seriously.
- Steal Like an Artist: 10 Things Nobody Told You About Being Creative, 2012 by Austin Kleon (Author).
Nothing is original, so embrace influence, collect ideas, and remix and re-imagine to discover your own path. Follow your interests wherever they take you. Stay smart, stay out of debt, and risk being boring—the creative you will need to make room to be wild and daring in your imagination.

- Think Like Sherlock: Creatively Solve Problems, Think with Clarity, Make Insightful Observations & Deductions, and Develop Quick & Accurate Instincts, 2018 by Peter Hollins (Author).
Sherlock Holmes, famous detective of 221 Baker Street, is one of literature's most beloved figures. Why? Because he is able to unravel a complex story from simple observation, perception, creative thinking, and problem-solving. No book can make you Sherlock. But this book can teach you his most practical tactics and introduce you to the building blocks of what it takes to be a famous detective. Sharpen your judgment and instincts for better decisions.
- A Whole New Mind: Why Right-Brainers Will Rule the Future, 2006 by Daniel H. Pink (Author).
The future belongs to a different kind of person with a different kind of mind: artists, inventors, storytellers-creative and holistic "right-brain" thinkers whose abilities mark the fault line between who gets ahead and who doesn't.
- Wild Ideas: Creativity from the Inside Out, 2016 by Cathy Wild (Author).
This book is about tackling anything in life with confidence: an art project, a business, relationship or lifestyle. It's about living more authentically and not fighting the sacrifices required to do so.

Fiction

- Adventurers Wanted, Book One: Slathbog's Gold, 2011 by M. L. Forman (Author).
The sign is small, tucked into the corner of Mr. Clutter's bookshop window: Adventurers Wanted. Apply Within. No one but fifteen-year-old Alex Taylor even seems to notice it is there. And for Alex, who has wished for a change in his life, it is an irresistible invitation.
- Between Shades of Gray, 2012 by Ruta Sepetys (Author).
Fifteen-year-old Lina is a Lithuanian girl living an ordinary life, until Soviet officers invade her home and tear her family apart. Separated from her father and forced onto a crowded train, Lina, her mother, and her young brother make their way to a Siberian work camp, where they are forced to fight for their lives. Lina finds solace in her art, documenting these events by drawing.
- Graffiti Moon, 2012 by Cath Crowley (Author).
Senior year is over, and Lucy has the perfect way to celebrate: tonight, she's going to find Shadow, the mysterious graffiti artist whose work appears all over the city. He's out there somewhere spraying color, spraying birds and blue sky on the night, and Lucy knows a guy who paints like Shadow is someone she could fall for.
- Happyface, 2011 by Stephen Emond (Author).
This unique combination of text and fully integrated art follows the journey of a dorky, quiet, artsy kid as he reinvents himself after moving to a new town, where he's nicknamed Happyface. Peek in his journal and see the world through his hilariously self-deprecating eyes as he learns to shed his comic-book-loving, computer-game playing ways.
- The Sky Is Everywhere, 2011 by Jandy Nelson (Author).
Adrift after her sister Bailey's sudden death, Lennie finds herself torn between quiet, seductive Toby, Bailey's boyfriend who shares her grief, and Joe, the new boy in town who bursts with life and musical genius. Each offers Lennie something she desperately needs... though she knows if the two of them collide her whole world will explode.
- Speak, 2011 by Laurie Halse Anderson (Author).
As time passes, Melinda becomes increasingly isolated and practically stops talking altogether. Only her art class offers any solace, and it is through her work on an art project that she is finally

able to face what really happened at that terrible party: she was raped by an upperclassman, a guy who still attends Merryweather and is still a threat to her. Her healing process has just begun when she has another violent encounter with him. But this time Melinda fights back, refuses to be silent, and thereby achieves a measure of vindication.

Magazines, Journals, Miscellaneous

- Adobe Capture CC: Magical design tool extracts colors, patterns, and more from images. Download from your app store.
- Artsonia Kids Online Art Museum: Empowers students to display, and explain, their own creations. (Download from your app store)
- Make: Fuel creative makers with project ideas, reviews, and community. <https://makezine.com/>
- Pixlr - Photo Collages, Effects: Easy photo-editing tool sparks creativity, teaches basic art techniques. Download from your app store.

Online Links

- Adobe Spark: This free, one-stop shop for creating sleek graphics, web stories, and animated videos is incredibly easy to use and challenges students to think critically about visual presentation. Available at <https://spark.adobe.com/edu/>
- Exploritorium: Activities from the San Francisco Museum <https://www.exploritorium.edu/explore/activitiesd>
- The Metropolitan Museum of Art, #metkids: Made for, with, and by kids, this site offers exploration and artistic fun. <https://www.metmuseum.org/art/online-features/metkids/>

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