



Invention and the Creative Process

Resource List for Grades K through 4

The Resources in this document can be used with the Invention and the Creative Process Curriculum 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.