



Launching young readers!

Reading Rockets

Literacy in the Sciences: Activity No. 17

Think Like an Inventor

By: Reading Rockets

Creativity is an important characteristic to foster in your child. Fostering a creative spirit will give your child experience identifying a problem and coming up with new ideas for solving them. Here are four ways to encourage creativity in your young child.

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Inventors, scientists, and mathematicians are all creative problem solvers. Creativity is an important characteristic to foster in your child. Fostering a creative spirit will give your child experience identifying a problem and coming up with new ideas for solving them. Here are four ways to encourage creativity in your young child.

Be curious

Most inventors are creative people with a wide range of interests. Foster your child's interests through books and conversations. Is your child interested in stamps? Coins? Bugs? Rocks? Use your public library to check out books and other resources on the topic. Be aware of community events such as bird walks and hand-on activities that will help your child explore their interest. Encourage your child to become a collector.

Let creativity flow

Help your child develop creative fluency and flexible thinking. One fun way to do that is to think of an ordinary household tool, like a paper clip or a clothes hanger. Have your child think of all the possible things that could be made out of that item. Coming up with lots of ideas gives your child practice with exhausting all ideas. For example, a stick could become:

Make mistakes

Did you know that Silly Putty was discovered accidentally when the General Electric

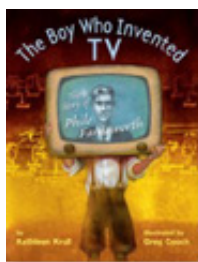
Company attempted to find a substitute for rubber during World War II? Since then, over 200 million plastic eggs, containing 3,000 tons of Silly Putty, have been sold. Many inventions come from what feels like a mistake. Help your child understand that mistakes provide opportunities to learn. It will help if you share mistakes you've made recently too!

Never stop learning

Despite a very busy schedule, try to find a moment to look at an everyday item or event in a new way. Creativity can make common things special and special things more common!

Setting the right tone and atmosphere at home will foster creativity and learning. Ask open-ended questions that have multiple answers. Give your child the freedom to try and to make mistakes, even if things don't work out as planned. Praise your child's effort, or process, rather than praising the outcome or product. And most importantly, have fun with the creative young learner in your life!

Recommended children's books

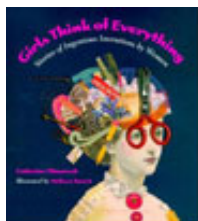


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The Boy Who Invented TV: The Story of Philo Farnsworth
By Kathleen Krull

Two machines captivated young Philo Farnsworth: a telephone and a phonograph. Both had cranks and both connected people with others (one in real time, the other through music). These and other inspirations motivated young Philo to invent what was to become known as the television. (Age level: 6-9)

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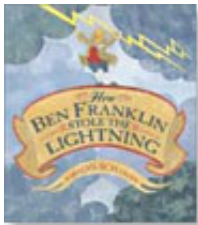
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Girls Think of Everything

By Catherine Thimmesh

In kitchens and living rooms, in garages and labs and basements, even in converted chicken coops, women and girls have made our lives simpler and better with their inventions. In these short biographies, you'll learn about the women who invented the space helmet, the windshield wiper, the chocolate chip cookie, and much more. The book also encourages young women to start inventing themselves and offers a list of organizations to help them get started. (Age level: 8 and up)

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How Ben Franklin Stole the Lightning

By Rosalyn Schanzer

Benjamin Franklin was amazing. He was a statesman, musician, a printer, a cartoonist, a shopkeeper — and an inventor. He figured out how to solve many problems — including how to steal lightning from the sky to prevent it from starting fires in Colonial towns. (Age level: 6-9)

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Marvelous Mattie: How Margaret E. Knight Became an Inventor

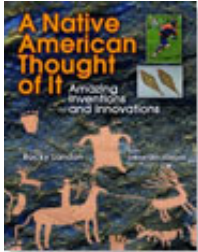
By Emily Arnold McCully

How did a curious girl become one of America's most prolific inventors? Mattie's childhood fascinations with how everyday things worked (a sled, a kite, a foot warmer)

inspired her to figure out ways to improve the way machines functioned. When she was just 12 years old, Mattie designed a safer weaving loom and as an adult she invented the machine that makes the square-bottom paper bags we still use today. She became known as "the Lady Edison." (Age level 5-8)

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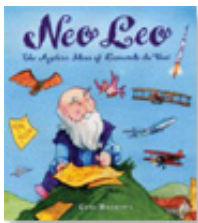
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A Native American Thought of It: Amazing Inventions and Innovations
By Rocky Landon and David MacDonald

Everyone knows that moccasins, canoes, and toboggans were invented by Native Americans, but did you know that they also developed their own sign language, as well as syringe needles, and a secret ingredient in soda pop? Native communities relied on their creative thinking to make full use of their natural resources. (Age level: 9 and up)

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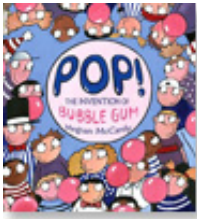
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Neo Leo: The Ageless Ideas of Leonardo da Vinci
By Gene Baretta

Even though Leonardo da Vinci lived a long time ago (born in 15th century Florence), his ideas have intrigued inventors and scientists ever since. In cartoon-like illustrations and brief text, old "Leo" ideas are juxtaposed to newer "Neo" ideas. This playful book is informative and engaging and may inspire further investigation of man and inventions. (Age level: 6-9)

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Pop! The Invention of Bubble Gum

By Meghan McCarthy

Though it's unlikely that anyone has ever heard of Walter Diemer, chances are they've used — or at least heard of — his invention: bubblegum. Diemer's story from accountant to successful inventor is presented in a lively text with cartoon illustrations. (Age level: 6-9)

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So You Want to Be an Inventor?

By Judith St. George

Ever wonder who invented the first dishwasher? How about Ben Franklin's inventions? Need and inspiration seem to be the basis of all inventions, a principle used to organize this fascinating glimpse of myriad inventions and the people who invented them. (Age level: 6-9)

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Reading Rockets is a national multimedia project that offers a wealth of research-based reading strategies, lessons, and activities designed to help young children learn how to read and read better. Our reading resources assist parents, teachers, and other educators in helping struggling readers build fluency, vocabulary, and comprehension skills.

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"You may have tangible wealth untold. Caskets of jewels and coffers of gold. Richer than I you can never be — I had a mother who read to me." — Strickland Gillilan