PICTURE BOOK/STEM
Activity Pairings:
Ideas for Teachers AND Librarians

Presented by:
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WHY DIVERSE BOOKS FOR READ ALOUDS?
"Books are sometimes WINDOWS, offering views of worlds that may be real or imagined, familiar or strange."

"These windows are also SLIDING GLASS DOORS, and readers have only to walk through in imagination to become part of whatever world has been created or recreated by the author."

– Rudine Sims Bishop
"When lighting conditions are just right, however, a window can also be a MIRROR. Literature transforms human experience and reflects it back to us, and in that reflection we can see our own lives and experiences as part of the larger human experience."

– Rudine Sims Bishop
WHY STEM PAIRINGS FOR PICTURE BOOKS?
What skills are we trying to build in literacy and in science?
Common Skills
How can picture books support STEM learning?

- Introduce or illustrate science concepts
- Highlight the process of science
- Provide representation
Why is representation important for STEM learning?

- Builds STEM Identity
- Ability to see themselves as scientists
A picture book biography of Tony Sarg, an immigrant puppeteer who worked at Macy's, and whose life of designing eventually led to his inventing the famous Macy Parade Balloons.
Balloons Over Broadway
By Melissa Sweet

STEM Connections:
Engineering, simple machines

Hands-on Activities:
- Cardboard automata: moving puppets
- “Chicken feeder” Rube Goldberg machine
The Curious Garden
By Peter Brown

Beautifully illustrated story of a boy in a drab city, who finds joy in creating a small garden. Through the years, his work and diligence transform the city to a beautiful, lush world.
The Curious Garden
By Peter Brown

STEM Connections: Ecosystems, urban architecture & design

Hands-on Activities:
- Seed planting experiments
- Green neighborhood design
Jerome is passionate about his collection. It’s not shells, or coins, or bugs. It’s words! Words to savor and enjoy and share with everyone.
The Word Collector
By Peter H. Reynolds

STEM Connections:
Observation, classification

Hands-on Activities:
- Mystery object description
- Sorting systems
- Alien animal taxonomy
What happens when all the lights in the neighborhood go out? No devices, no light – what to do? Go to the roof and see the light display in the stars!!!
Blackout
By John Rocco

STEM Connections:
Electricity, light & shadow

Hands-on Activities:
- Circuits & switches
- Exploring shadows
Emmanuel’s Dream
By Laurie Ann Thomson

True story of Emmanuel Ofosu Yeboah – born with a deformed leg, who, with the support of his mother, follows his dreams and cycles 400 miles across Ghana to bring awareness to disabilities.
Emmanuel's Dream
By Laurie Ann Thomson

STEM Connections: Engineering, assistive technology

Hands-on Activity:
- Design a reaching tool

Alternate Book:
Izzy Gizmo by Pip Jones
Drum Dream Girl
By Margarita Engle

Inspiring story of Millo Castro-Zaldarriaga, who dreamed of becoming a drummer growing up in Cuba, where drummers were only boys!
Drum Dream Girl
By Margarita Engle

STEM Connections: Sound, instrument design

Hands-on Activities:
- Exploring sound vibrations
- Design a drum
Wilma Unlimited
By Kathleen Krull

Inspiring story of Wilma Rudolph, who despite being stricken with Polio as a child, overcame the odds and won three track and field Olympic gold medals.
Wilma Unlimited
By Kathleen Krull

**STEM Connections:** Speed, reaction time

**Hands-on Activities:**
- Human reaction time
- Measuring speed
Kate helps a neighbor in her rural home protect his hilltop house from the howling wind, with the help of some green, growing tree seedlings.
Kate, Who Tamed the Wind
By Liz Garton Scanlon

**STEM Connections:** Speed, reaction time

**Hands-on Activities:**
- Build a wind detector
- Engineer a wind turbine

**Alternate Book:**
The Boy Who Harnessed the Wind by William Kamkwamba
A Galimoto is a toy made of wires. Kondi decides to make one even though his brother laughs at him. He spends the day gathering wire and all the things he needs to make himself a great Galimoto!!!
Galimoto
By Karen Lynn Williams

STEM Connections: Engineering, simple machines

Hands-on Activities:
- Build a wheeled vehicle
- Design a Galimoto toy
After she was diagnosed with autism, Temple Grandin’s family was told she’d never communicate. Instead, she found a way to put her love of animals to use and made differences in farms all over the world.
The Girl Who Thought in Pictures
By Julia Finley Mosca

STEM Connections:
Engineering & design

Hands-on Activities:
• Invention challenge stations
• Design your own invention
Leap into Science is a national program that integrates open-ended science activities with children’s books for young children and their families.

2019 Trainings: Allentown, Williamsport, Edinboro
THANKS!

Any questions?
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