



ROSIE REVERE, ENGINEER

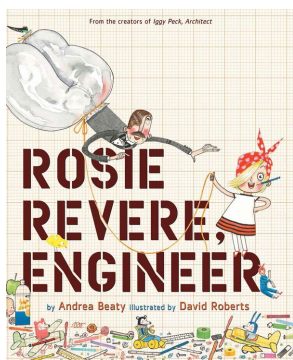
BOOKMARK FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

DID YOU KNOW READING BOOKS IS A GREAT OPPORTUNITY TO SUPPORT STEM LEARNING?

Reading with older toddlers and preschoolers uses **PEER**:

- Use additional Prompts if needed,
- Evaluate and
- Expand your child's answers, and
- Repeat the prompts.

ABOUT THIS BOOK



Rosie Revere, Engineer is a book written by Andrea Beaty and illustrated by David Roberts. Rosie is a brilliant young female inventor who works to **engineer** a flying machine for her aunt, Rosie the Riveter. Will she be successful, or can she **learn from her mistakes** and **try again**?

WHERE CAN I FIND THIS BOOK?

Search [YouTube](#), [BookShare](#), [Archive.org](#), and your local library.

ADAPTATIONS

STEMIE's tips for making adaptations to the storybook reading process

<https://stemie.fpg.unc.edu/resource/a-guide-to-book-adaptations/>

Scan the QR code to download or view online.



Expanding | Engineering

Rosie Revere, Engineer

By Andrea Beaty

Complete a sentence

C

"She worked with her hair swooping over one ____." (eye)

Recall

R

"What did Rosie make for her uncles and aunts?"

Open-ended questions

O

"How did Rosie make the snake-repelling hat for her uncle?"

WH questions

W

"Why did Rosie start hiding her inventions under the bed?"

Distancing questions

D

"When things didn't work out, what did you do?"

STEM Words & Ideas to Explore

- Build
- Plan
- Test
- Evaluate
- Adjust





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ADAPTATIONS FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

Every child is different. Do what works best for encouraging your child's independent exploration during this suggested literacy activity. These are only suggested activity adaptations. Consider consulting your child's care team first.



Follow your child's lead and interests. Enthusiastically ask your child questions about what they are doing and what they like.

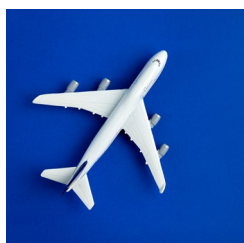


Answer your child's questions. If you do not know the answer, work together with your child to discover the answer.



Encourage your child to participate in the activity as much as possible. Praise your child's efforts and successes.

SUPPORT CHILDREN WITH VISUAL IMPAIRMENT, DEAF-BLINDNESS, OR MULTIPLE DISABILITIES:



Storybox:

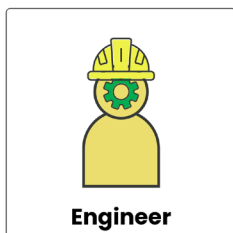
Select corresponding items and place them in a container or a box. Items may include:

- Toy snake
- Toy airplane
- Plastic toy cheese slice

This adaptation can also be used to:

- Increase children's attention and engagement
- Support children with sensory challenges

SUPPORT ALTERNATIVE WAYS OF COMMUNICATION:



Engineer

Pictures, Symbols, Signs, or Icons:

- Select pictures that correspond to items, objects, or animals in the book
- Add signs and icons to the story
- Use pictures along with a communication board to support STEM learning

This adaptation can also be used to:

- Increase children's attention and engagement
- Support children's learning
- Support children who are deaf or have a hearing impairment



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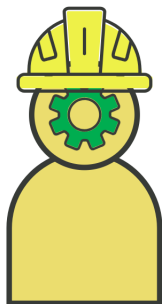
VISUAL CUES FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

How To Use VISUAL CUES:

1. Print and cut out the images.
2. As you read, use tape or Velcro to attach the pictures to the corresponding pages in the book.

Check out STEMIE's tips for creating and using visual supports with

[A Guide to Visual Supports.](#)



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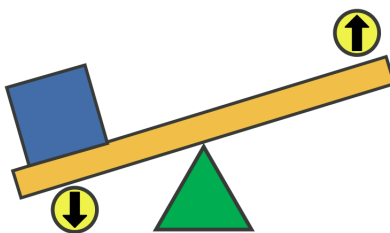
Python



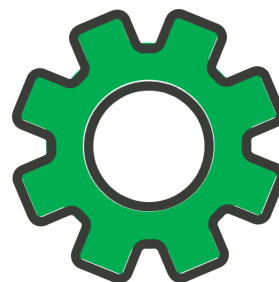
Airplane



Carry



Lever



Gear



Need more visual cues?

Use the empty square to create your own or visit [STEMIE's Visual Cue Library.](#)



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ACTIVITY IDEAS FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

BUILDING WITH BOXES



Description: Help your child **make a plan** to **create** something from their imagination using a box.

Also help your child to **test** and **evaluate** their box **plan** and what they **build**.

What My Child Is Learning!

Early engineering for young children is about exploring, playing, and figuring out how things work by trying ideas, testing them, and learning from what happens.

Encourage your child to **consider** if their box build looks and does what they planned for it to do.

Use drawing utensils (pencils, crayons, markers) and paper to help draw a **plan** for your child's next construction. Decide together which elements are important (walls and roof for a house; wheels and headlights for a car) and work to "carry out" their **plan and build** with the box.

Provide recycled boxes (such as cereal boxes, shipping boxes, or macaroni and cheese boxes) and invite your child to decorate them however they wish as an expression of themselves. Re-using and recycling packing materials or cardboard boxes to build is a wonderful way for children to practice elements of the **engineering design cycle (exploring, planning, testing, evaluating, and adjusting)**.

Compare properties of different materials and objects used to construct (**big/small, hard/soft, flat/bumpy**).

Encourage your child to look at "real" houses, vehicles, and design a box like it. Ask, "Is our box a "real" car? Why not? What would we need to make a real car?"



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ACTIVITY IDEAS FOR STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

TESTING FALLING OBJECTS

Description: Help your child **notice and identify force and motion**. Encourage your child to **test** what objects do when dropped.

What My Child Is Learning!

Children learn best by interacting with people and objects. Introduce STEM words, ask questions, and encourage them to make connections between words and real-life experiences. This helps children develop fundamental critical thinking and problem-solving skills.

Find out why and how different objects can **move** through the **air fast** and why others cannot! Encourage your child to crumple one piece of paper into a ball and keep one flat. Ask "Which one will **drop faster**?"

Take the two pieces to the top of a stair and drop them. Record which one dropped faster. Ask "Why did the crumpled paper drop faster? What might make it float more slowly?"

Find out why and how different objects can move on **different textures**. Encourage your child to **test** moving a car across the floor versus a rug.

ADDITIONAL ACTIVITY IDEAS:

- Use **spatial and positional** language! Use these tips for integrating spatial and positional language into everyday conversation. Ask, "What did you create?" "Can you fit [**inside, outside, under, on top**] of it?" "What is it for?"
- Check out our [Storybook Conversations](#) for *Not a Box*.
- Check out our [Discovery Play Activities](#) for Paper Airplanes
- **Build** a boat! **Plan** with your child how to make something that might **float** in a nearby creek like a boat. Gather materials and **test** it out. Record what happens and **problem-solve** with your child if the boat doesn't float.

