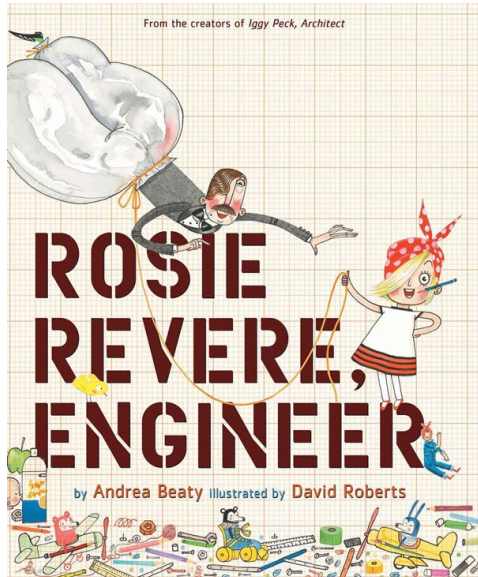




ROSIE REVERE, ENGINEER

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

Every child is different, and these are only suggested adaptations and activities. Do what works best for encouraging your child's exploration during this literacy activity. Consult your pediatrician, physical therapist (PT), and/or occupational therapist (OT) first.



Did you know reading books is a great opportunity to support STEM learning?

Rosie Revere, Engineer is a book written by Andrea Beaty and illustrated by David Roberts.

Rosie Revere, Engineer is a book about a curious and 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?

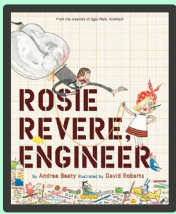
- If you do not have a paper copy of this book, watch a YouTube video of someone reading the book. If you prefer to read it to your child yourself, just mute the audio.

<https://www.youtube.com/watch?v=PMCKXaFsmCA>

- Check your local library to see if it allows you to borrow a digital version of this book to read on a laptop, tablet, or phone.

- Or find it online:

https://openlibrary.org/works/OL17334846W/Rosie_Revere_Engineer



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BOOKMARK

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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- Print this page and cut around the edges.
- Do not forget to **PEER!** Use **additional Prompts** if needed, **Evaluate** and **Expand** your child's answers, and **Repeat** the prompts.
- Look at STEMIE's tips for making adaptations to the storybook reading process and on the following pages:
<https://stemie.fpg.unc.edu/guide-book-adaptations>
- If you print this page, you can download or view online by scanning the QR code below.



Expanding | Engineering

Rosie Revere, Engineer

By Andrea Beaty

C

Complete a sentence

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

R

Recall

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

O

Open-ended questions

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

W

WH questions

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

D

Distancing questions

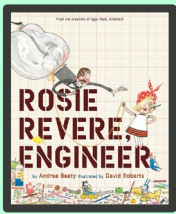
"When have you failed? How did you handle it?"

STEM Words & Ideas to Explore

- Create/Build
- Design
- Test
- Evaluate
- Improve



stemie.fpg.unc.edu



ROSIE REVERE, ENGINEER

ADAPTATIONS

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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SUPPORT CHILDREN WITH VISUAL IMPAIRMENT/DEAF-BLINDNESS/MULTIPLE DISABILITIES:

STORYBOX

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

- Cereal boxes
- Toilet paper rolls
- Tape
- Buttons
- Sticks & leaves
- Empty plastic bottles or cans



Image Credit: Creative Commons

This adaptation can also...

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



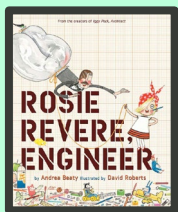
Follow your child's lead and interests. Enthusiastically ask your child questions about what they are doing and what they like.



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.



ROSIE REVERE, ENGINEER

ADAPTATIONS

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SUPPORT ALTERNATIVE WAYS OF COMMUNICATION:

PICTURES, SYMBOLS, SIGNS, AND/OR ICONS

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

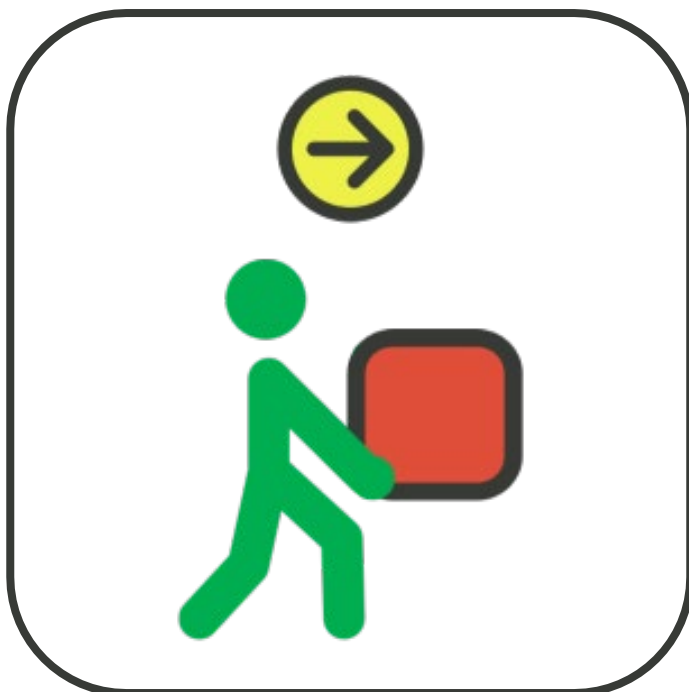


Image Credit: STEMIE

This adaptation can also...

- Increase children's attention and engagement
- Support children' learning
- Support children who are deaf/with hearing impairment



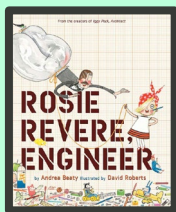
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ROSIE REVERE, ENGINEER ADAPTATIONS

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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VISUAL CUES:
USE TO PROMPT

HOW TO:

Step 1: Print and cut out the images. You can also create your own visual cues (empty squares included).

Step 2: As you read, use tape or Velcro to attach the pictures to the corresponding pages in the book.



Python



Embarrassed



Perplexed



Wheeze



Dismayed



Airplane



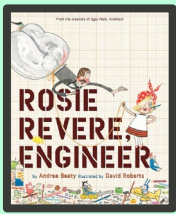
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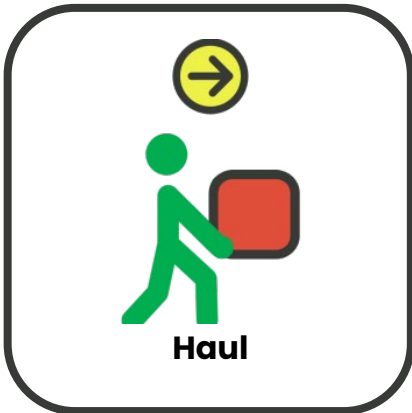


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ADAPTATIONS

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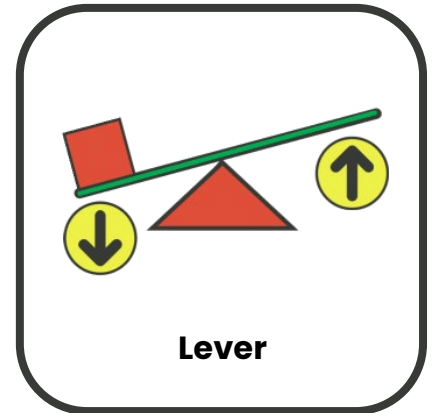
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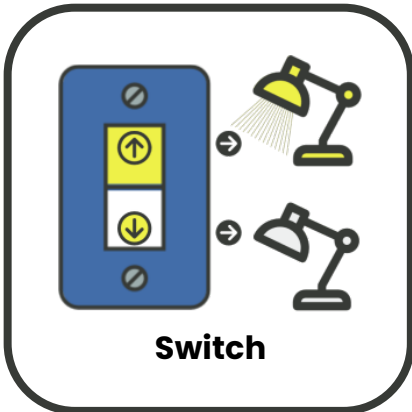
Haul



Whirl



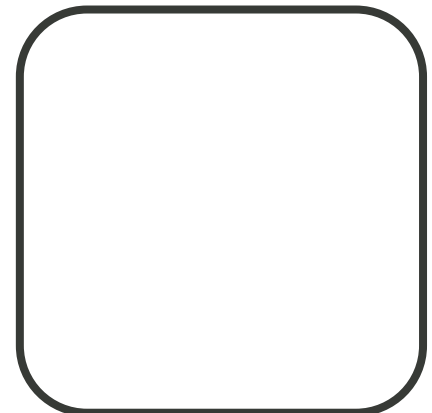
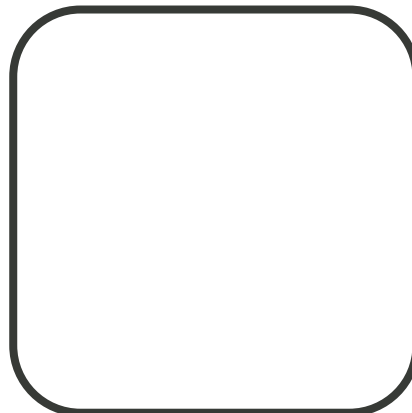
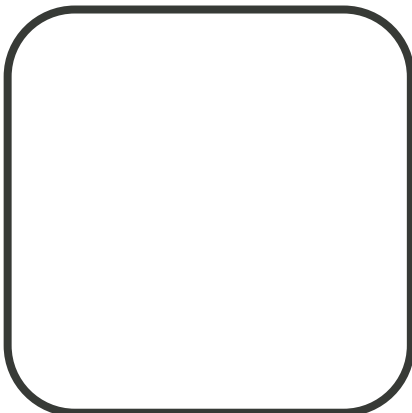
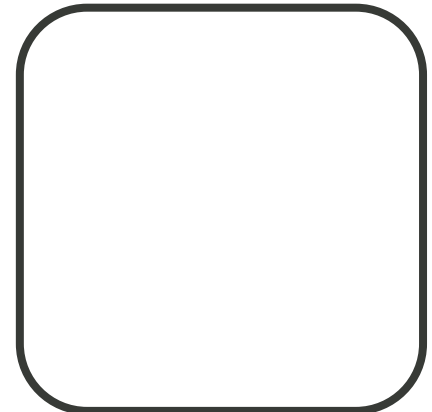
Lever



Switch



Gear



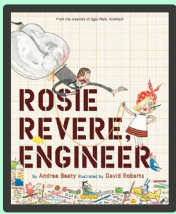
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EXPLORATION I

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

Every child is different, and these are only suggested adaptations and activities. Do what works best for encouraging your child's independent exploration during this daily routine. Consult your pediatrician, physical therapist (PT), and/or occupational therapist (OT) first.

Designer

Description: Help your child make a **plan** to **create** something from their imagination. Encourage your child to think about what materials would be best in **building** their **design**.

Help your child to **test** and **evaluate** their **plan** and their **build**. Encourage your child to **consider** if their build looks and does what they planned it to do.

What My Child Is Learning!

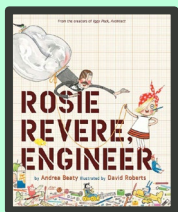
Engineering for children birth to five is about exploring materials and building knowledge about them so that they can be used to solve problems and/or create something with them.

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 **build** their plan.

Provide raw materials for constructing (blocks or tinker toys OR markers, old boxes, paper, and tape). Re-using and recycling packing materials or cardboard boxes to build is a wonderful way to for children to practice elements of the engineering design cycle.

Compare properties of different materials and objects used to construct (**big/little, hard/soft, smooth/rough**).

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



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EXPLORATION II

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Force Tester

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!

Engineering for children birth to five is about exploring materials and building knowledge about them so that they can be used to solve problems and/or create something with them.

Children are naturally curious about their environment. Help children make a connection between **objects and actions**. Help your child make a connection between words and real-life experiences and develop fundamental critical thinking and problem-solving skills.

Find out why and how different objects can move through the air quickly 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.

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ADDITIONAL ACTIVITY IDEAS

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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- 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, on top of, under**] 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.

