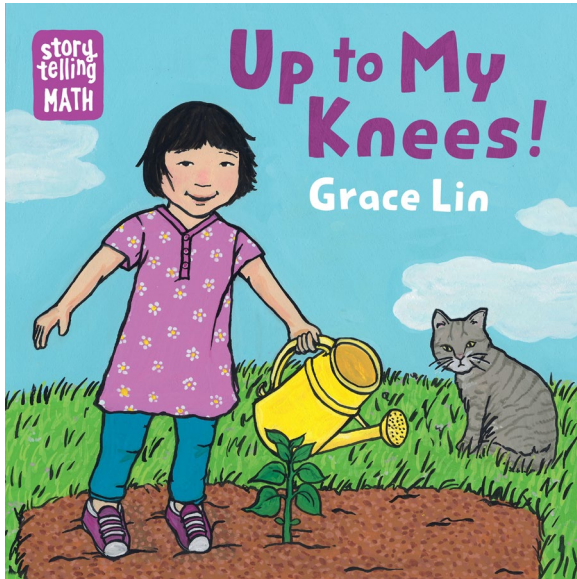




UP TO MY KNEES

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.

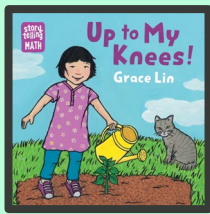


Did you know reading books is a great opportunity to support STEM learning?

Up To My Knees is a book written by Grace Lin.

It is springtime. Mei **plants a seed** and watches it grow. **How tall** will it get?

- 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.



UP TO MY KNEES 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 | Science & Math

Up To My Knees

By Grace Lin

C

Complete a sentence
"There is a _____
(sprout)."

R

Recall
"What did Mei do after she
dropped a seed in a hole?"

O

Open-ended questions
"What will happen after
planting a seed?"

W

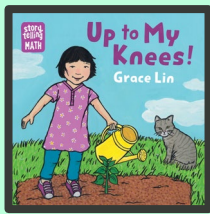
WH questions
"What makes plants grow?
(water, sun, time)"

D

Distancing questions
"How can you find out who
is taller/shorter?"

STEM Words & Ideas to Explore

- Measurement (tall/short)
- Living things (plants)



UP TO MY KNEES

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:

- Seed packet
- Faux plants
- Dirt in a taped shut bag



Image credit: Unsplash

This adaptation can also...

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



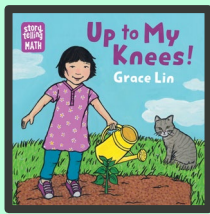
Follow your child's lead and interests. Enthusiastically ask your child questions about what they are doing and what they like.



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.



UP TO MY KNEES ADAPTATIONS

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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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



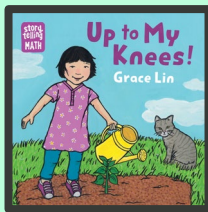
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UP TO MY KNEES ADAPTATIONS

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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.



Gardening



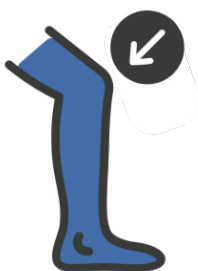
Dig



Seeds



Toes



Knee



Waist



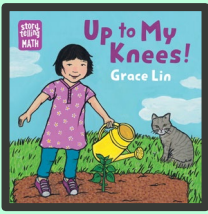
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UP TO MY KNEES

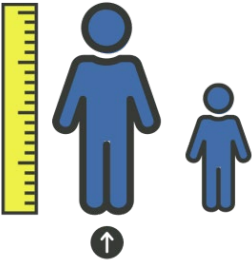
ADAPTATIONS

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

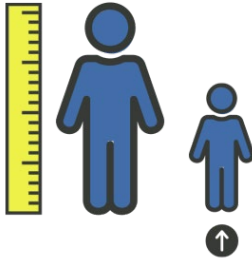
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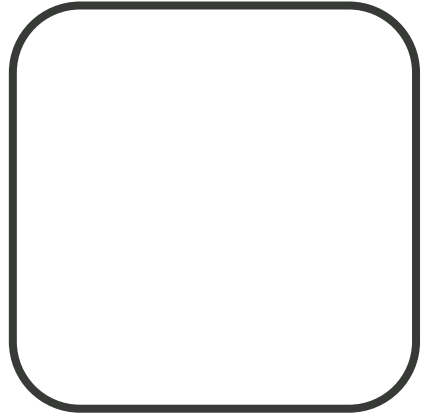
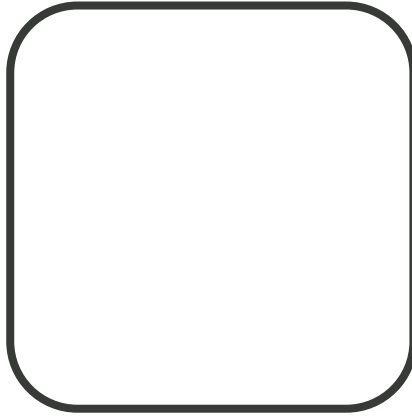
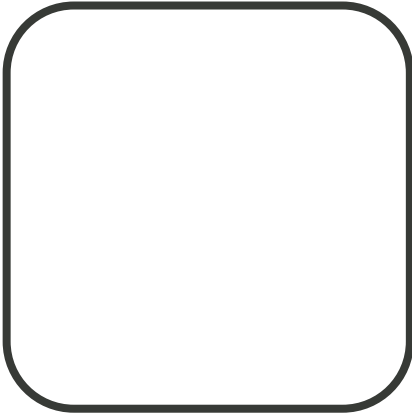
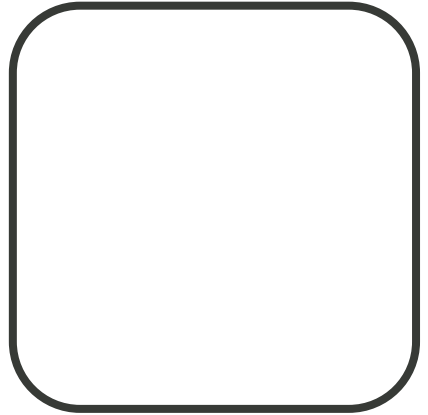
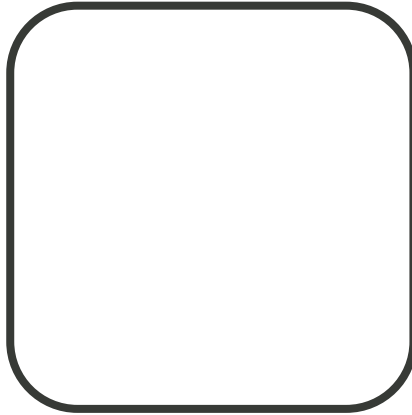
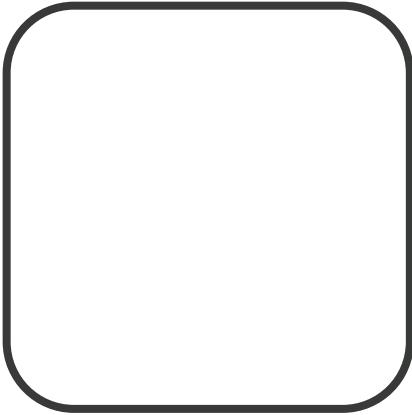
Shoulders



Tall



Short



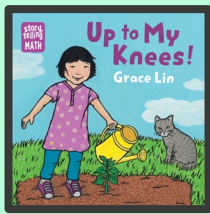
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UP TO MY KNEES

EXPLORATION I

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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Plant Measurer

Description: Help your child learn to **measure** and take data by keeping a running record of plant heights they observe while they are outside playing or on a nature walk.

What My Child Is Learning!

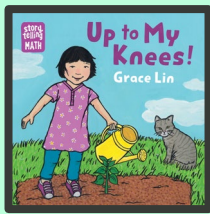
Children are naturally curious about their environment. Introduce STEM words, ask questions, and encourage them to identify **plants**. Help your child make a connection between words and real-life experiences and develop fundamental critical thinking and problem-solving skills, as well as math skills.

Let your child take the lead in **measuring**!

- Have your child stand next to a tree and ask "Which is **taller/shorter**? You or the **tree**?"
- Have your child stand in grass and ask "Which is **taller/shorter**? You or the **grass**?"
- Encourage children to find a plant that is **tall** enough to come up to their knees.

Adapted from LT². Learn more here: <https://www.learningtrajectories.org/math-activities/up-to-my-knees>





UP TO MY KNEES

EXPLORATION II

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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Gardener

Description: Help your child **observe** the **growth of plants** by planting **seeds**. The activities below can be done over multiple days.

Help your child understand **plants have needs**, such as sunlight, water, air, and nutrient-rich soil and that **plants have parts** that help them meet these needs, such as leaves and roots.

What My Child Is Learning!

Children are naturally curious about their environment. Introduce STEM words, ask questions, and encourage them to identify **plants**. Help your child make a connection between words and real-life experiences and develop fundamental critical thinking and problem-solving skills.

Your child may ask questions about what they are observing in order to understand what plant growth is. If not, encourage their observations and engagement by asking them questions.

1. Take a stroll outdoors and scavenge for seeds to examine and then plant. These can be acorns, dandelion seeds, sunflowers, beans, and more. Ask, "What plant do you think this seed will sprout into?" "How can we help this seed sprout and grow?"
2. Compare and contrast **living** (e.g., plants, flowers, trees) and non-living (e.g., rocks, air, water, soil) things. Ask, "What do you know about soil?" "How are plants and soil the same? Different?" "How are rocks and soil the same, Different?"
3. Use recycled egg cartons filled halfway with soil, place 1 to 2 seeds on top of soil in each egg holder, lightly tap seed into soil, and add a few drops of water. Ask, "How tall do you think this sprout will get?" "How many seeds should be put in each spot?"
Note: Some of the easiest seeds to grow are beans and herbs.
4. Talk about how plants have **parts (roots, stem, flower petals, leaves)** that help them grow and contribute to their life cycle.

UP TO MY KNEES



ADDITIONAL ACTIVITY IDEAS

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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- Start a small vegetable garden with your child. **Make a plan**, plant the seeds, and tend to the garden. **Document how the plants grow** and research "recipes" to prepare once the vegetables grow. Be sure to record all the steps and decide if you should make any changes next year!
- Explore fruits and vegetables at the grocery store. Help your child research how some of their favorite produce grows and talk about different climates that allow for different fruits and vegetables to grow!
- Check out our Discovery Play Activity for Sorting Leaves
- Check out our Discovery Play Activity for Gardening
- Check out our Discovery Play Activity for Nature Scavenger Hunt
- Check out our My STEM Adventure app, available on the App Store and Google Play. Follow the storybook activity taller/bigger and shorter/smaller.

