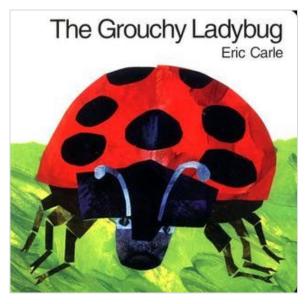
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Did you know reading books is a great opportunity to support STEM learning?

The Grouchy Ladybug is a book written and illustrated by Eric Carle.

As you follow the Grouchy Ladybug on her journey, you will learn the important concepts of **time**, **size**, **and shape**, as well as the benefits of friendship and good manners.

This author also wrote numerous other books with vivid pictures if you like this book.

- 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://archive.org/details/grouchylady00carl





BOOKMARK

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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- Print this page and cut around the edges.
- Do not forget to <u>PEER</u>! Use additional <u>P</u>rompts if needed, <u>E</u>valuate and <u>E</u>xpand your child's answers, and <u>R</u>epeat 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

The Grouchy Ladybug

By Eric Carle



Complete a sentence

"The yellow jacket showed the ladybug its

____." (stinger)



Recall

"Why did the ladybug not want to fight the lobster?"



Open-ended questions

"Why do you think the skunk lifted its tail to the ladybug?"



WH questions

"What sound does the hyena make?"



Distancing questions

"What food do you like to eat at the end of the day?"

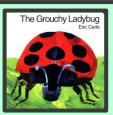
STEM Words & Ideas to Explore

- Animals
- Size (big/little)
- Time (morning, afternoon, night)
- Animal's parts (beak, legs, jaw, stinger, horn)



stemie.fpg.unc.edu





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:

Toy animals (to show the animal's parts)



Image Credit: Microsoft Stock

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.







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SUPPORT ALTERATIVE 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



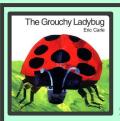
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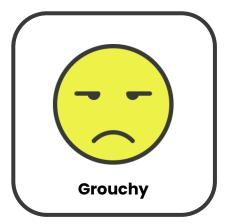
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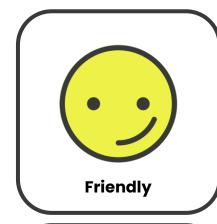
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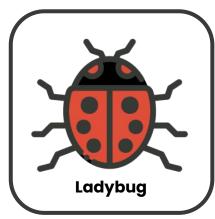
VISUAL CUES: USE TO PROMPT

HOW TO:

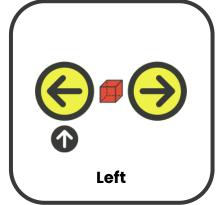
- **Step 1:** Print and cut out the images. You can also create your own visual cues (empty squares included).
- **Step 2:** As you read, use tape or Velcro to attach the pictures to the corresponding pages in the book.

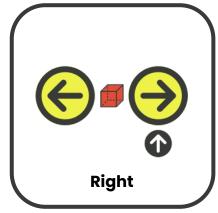














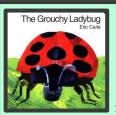
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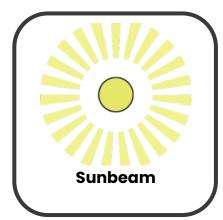


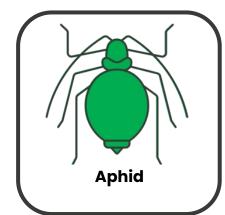


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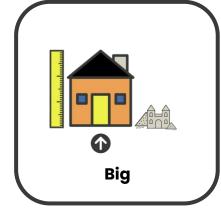
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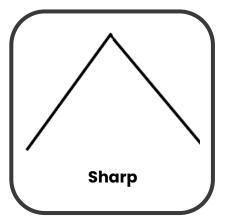


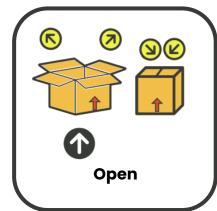


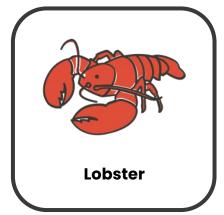
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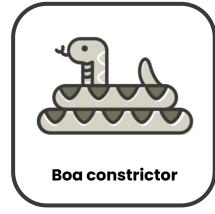
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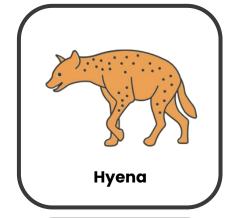






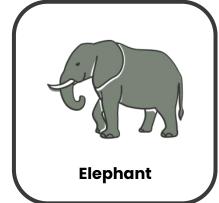














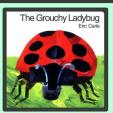
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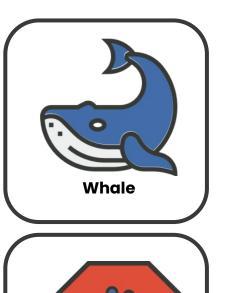




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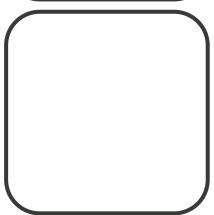


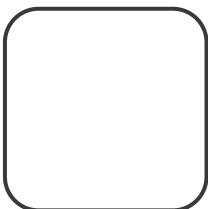














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EXPLORATION I

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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Nature Walker

Description: Help your child **notice and identify living things.** Go on a walk together and encourage your child to be aware of any **animals (including bugs)** or places animals might **live**. Discuss why the **animal might live where they do**.

What My Child Is Learning!

Going on a nature walk will facilitate your child's creativity and provide them with an easy way to learn more about animals and their environments.

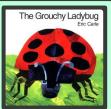
Your backyard, local parks, and walking trails are all good places to look for bugs. Try looking under rocks, bricks, and in stumps or large fallen branches. If you can't find any, try leaving a DIY bug catcher out overnight near a light source like a porch light or with a small push button light under or inside.

Discuss why the animal might live where they do. Examples of questions you might incorporate include:

- "What animal/insect is that?"
- "What do you think their beak/claws/antennae are for?"
- "Where do you think they live?"
- "Are they active in day (diurnal) or at night (nocturnal)?"
- "You're right, there is a bunny in the bushes! Why might it live there instead of in water?"
- "I see a worm wiggling in the dirt. Why might it live there? Do you think it is cold or hot in the dirt?"
- "You pointed at the bird in the tree. Do you think looking for food is easier or harder from up there?"

Make sure to release the insect once your child has been able to observe it for a brief period!





EXPLORATION II

STORYBOOK CONVERSATIONS WITH YOUR YOUNG CHILD

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Bug Bungalow Builder

Description: Help your child recognize that some things are *living, like plants, flowers,* and bugs and that some things are non-living by foraging for natural items to use to create a house for insects. This activity can be done over multiple days. Encourage your child to explore properties of grasses, twigs, and leaves to determine their usefulness for creating and **building bug** bungalows.

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.

- Take a stroll outdoors and look/forage for long grasses, twigs, and leaves, while looking for bugs. They may be under sticks and leaves or sitting on top of flower blooms. Encourage engagement by asking "What do you know about bugs?" "What do you want to know about bugs?" "Where do bugs usually live?" "Where can you find bugs?"
- Explore these items naturally and invite children to think of an **idea or plan for building bug homes**. Encourage creativity by asking "What can you use the grass for on the bug bungalow?" "What will you use to build the walls?" "How many twigs do you think you will need to build a bungalow wall?" "How long will you make your bug bungalow?" "What are some things you could add to improve the bungalow?"
- Talk about how creating bug homes invites helpful insects, which are living things, which pollinate flowers and eat other bugs that harm plants, making them essential to a healthy ecosystem/habitat.





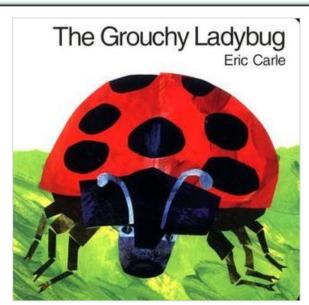


ADDITIONAL ACTIVITY IDEAS

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 Take a trip to the zoo or aquarium. Rather than thinking about animals that are typical to just your area, have conversations about the animals and their exhibits, comparing and contrasting what you see. Find a zoo or aquarium near you: https://www.aza.org/search-by-zipcode?locale=en. Discuss the temperature of the exhibits: "Does their home look hot or cold?" Ask about land versus water: "Why are some of the turtles on land and some are in the water? Why don't the lions live in the water too?" Ask about food and shelter: "What are the giraffes eating? Do you think those leaves grow where it is warm or freezing cold?"



- Play animal charades with your child. Take turns pretending to be animals and use materials in your home/environment to show where that animal might live. Pretend to do what the animal might do and eat what the animal might eat. This can be a game to play with siblings and friends too!
- Talk to your child about a time that they may have been grouchy. What did they do to help themselves feel better?
- Create an animal journal with your child.
 Help your child record animals that they
 see and/or are interested in. Then help
 your child research the animals' habitats
 and activities. Your child can draw pictures,
 take pictures, or use other forms of
 representation to record what they learn.

