



## Unit 9 Botany: Plants and Flowers, Butterflies & Bees, Trees, & Birds

### Circle Time, Small Group, & Centers







<p><b><u>Knowledge Building Targets</u></b></p> <ul style="list-style-type: none"> <li>- What a seed needs to grow</li> <li>- Life cycle of a plant</li> <li>- Life cycle of a butterfly</li> <li>- Gardens &amp; plants</li> <li>- Parts of a flower</li> <li>- Kinds of flowers</li> <li>- Butterflies: types, what they eat, migration, life cycle</li> <li>- Importance of bees</li> <li>- Importance of plants &amp; trees</li> <li>- Animals that live in trees</li> <li>- Types of Birds &amp; nests</li> <li>- How &amp; why birds build nests</li> <li>- Scientists &amp; What they Do: Naturalist</li> </ul>	<p><b><u>Oral Language Skill Targets</u></b></p> <ul style="list-style-type: none"> <li>- Basic Vocabulary—prepositions, basic directional words</li> <li>- Story Vocabulary: Character-Who, Setting-Where</li> <li>- Length of sentences</li> <li>- Extended decontextualized accounts, explanations, and narratives</li> <li>- Retelling/Summarizing</li> </ul>
<p><b><u>Early Literacy Skills</u></b></p> <ul style="list-style-type: none"> <li>- Alphabet Letter Names &amp; Sounds</li> <li>- Name Recognition</li> <li>- Phonemic awareness</li> <li>- Print/Book Skills: title, author, directionality</li> <li>- Listening Comprehension <ul style="list-style-type: none"> <li>- Answering key questions (focus on Who, When questions)</li> <li>- Memory for events</li> <li>- Retelling</li> <li>- Sequencing of events</li> </ul> </li> <li>- Fiction vs. Nonfiction</li> </ul>	<p><b><u>Math Skills</u></b></p> <ul style="list-style-type: none"> <li>- Counting</li> <li>- Numbers</li> <li>- Shapes</li> <li>- Colors</li> <li>- Directional words</li> <li>- Measurement</li> <li>- Simple Addition (Sums under 5)</li> </ul>






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




Unit 9: Botany  
Overview

**Overview of Part 1—Plants & Flowers**







Book 1 <b>Book:</b> <i>One Bean</i> by Anne Rockwell 	Book 2 <b>Book:</b> <i>Planting a Rainbow</i> by Lois Ehlert	Book 3 <b>Book:</b> <i>One Little Lot</i> by Diane Mullen  	Book 4 <b>Book:</b> <i>Lola Plants a Garden</i> by Anna McQuinn  	Book 5 <b>Book:</b> <i>I Can Grow a Flower</i> by DK 
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Book 6 <b>Book:</b> <i>Inch by Inch</i> by Leo Lionni 	Book 7 <b>Book:</b> <i>Little Honeybee</i> by Jane Ormes  	Book 8 <b>Book:</b> <i>In A Garden</i> by Tim McCanna 	Book 9 <b>Book:</b> <i>The Curious Garden</i> by Peter Brown 
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**Overview of Part 2—Butterflies & Bees** NOTE: Butterfly Craft with *Little Butterfly* wordless book

Book 10 <b>Books:</b> <i>Butterflies</i> by Marfe Ferguson Delano (National Geo)  	Book 11 <b>Book:</b> <i>Waiting for Wings</i> by Lois Ehlert 	Book 12 <b>Books:</b> <i>Monarch and Milkweed</i> by Helen Frost & Leonid Gore 	Book 13 <b>Book:</b> <i>Bee</i> by Britta Teckentrup 
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**Overview of Part 3—Trees**

Book 14 <b>Books:</b> <i>A Tree Is Nice</i> by Marc Simont 	Book 15 <b>Book:</b> <i>A Grand Old Tree</i> by Mary Newell DePalma	Book 16 <b>Book:</b> <i>Tall, Tall Tree</i> by Anthony Fredericks  	Book 17 <b>Book:</b> <i>100 Bugs</i> by Kate Narita   
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**Overview of Part 4--Birds**

Book 18 <b>Books:</b> <i>Bird Builds a Nest</i> by Martin Jenkins 	Book 19 <b>Book:</b> <i>Owl Babies</i> by Martin Waddell 	Book 20 <b>Book:</b> <i>Bird Watch</i> by Christie Matheson 	Book 21 <b>Book:</b> <i>Balance the Birds</i> by Susie Ghahremani 
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Wordless Books

- |   |
|---|
| 1. <i>Little Butterfly</i> by Laura Logan |
| 2. <i>Bee &amp; Me</i> by Alison Jay      |

New Center Materials

Dramatic Play—Nature Center	Library—North America Books
Growing plants in a bag	Botany Book Basket—See Book Suggestions
Butterfly life cycle	
Butterfly Wings—dress up	
Butterfly Habitat Observation	
Life cycle of a flower and tree	
Life cycle of a butterfly	
Seed Packet Sort	
Measuring height and length	

### Additional Books

#### Botany Unit Preschool Books for Book Basket in Library

- ❖ Are you a Butterfly by Judy Allen and Tudor Humphries
- ❖ Seed Magic by Natalie McKinnon
- ❖ Flowers Are Calling by Rita Gray
- ❖ From Seed to Plant by Gail Gibbons
- ❖ Plant the Tiny Seed by Christie Matheson
- ❖ The Tiny Seed by Eric Carle
- ❖ Counting in the Garden by Kim Parker
- ❖ Counting on the Woods by George Ella Lyon
- ❖ Redwoods by Jason Chin
- ❖ In a Nutshell by Joseph Anthony
- ❖ Butterflies & Caterpillars—True or False by Melvin & Gilda Berger
- ❖ Beginner’s Guide to Butterflies – Stokes Guides
- ❖ Peterson’s Field Guides for Young Naturalists-Caterpillars
- ❖ The Bird Alphabet Book by Jerry Pallotta
- ❖ Alison’s Zinnia by Anita Lobel
- ❖ A Home for Bird by Phillip C. Stead
- ❖ A Nest Full of Eggs by Priscilla Belz Jenkins
- ❖ It’s Pumpkin Time by Zoe Hall
- ❖ Baby Bird’s First Nest by Frank Asch
- ❖ In the Tall, Tall Grass by Denise Fleming
- ❖ Bird Song by Betsy Franco & Steve Jenkins

Material List for Unit 9--Botany

Whole Group Reading	
Books	Cost
One Bean by Anne Rockwell	\$7.99
I Can Grow a Flower by DK	\$12.99
Seed to Plant by Kristin Baird Rattini (National Geographic Kids)	\$3.99
Lola Plants a Garden by Anna McQuinn	\$6.99
My First Pocket Guide: Wildflowers by National Geographic	\$5.99
Planting a Rainbow by Lois Ehlert	\$7.99
Inch by Inch by Leo Lionni	\$6.21
The Curious Garden by Peter Brown – hardcover	\$10.20
Butterflies by Marfe Ferguson Delano (National Geo. Kids)	\$4.99
Monarch & Milkweed by Helen Frost & Leonid Gore—hardcover	\$11.98
Waiting for Wings by Lois Ehlert—hardcover	\$12.98
Bee A Peek-Through Picture Book by Britta Teckentrup --hardcover	\$10.49
A Tree is Nice by Janice May Udry	\$6.99
A Grand Old Tree by Mary Newell DePalma—hardcover	\$17.09
Bird Builds a Nest by Martin Jenkins	\$13.59
Owl Babies by Martin Waddell	\$5.59
One Little Lot	\$14.79
100 Bugs!	\$13.49
Items without specific cost—made items or common classroom items	
Art supplies—paper, glue, paint, small clay pots, soil, baggies, beans, seeds, coffee filters, markers, clothespins	
<b>Total Circle Time Book Cost</b>	<b>\$146.05</b>

Wordless Books—Botany
<i>Bee and Me</i> with Alison Jay with bee counting activity.
<i>Little Butterfly</i> with coffee filter butterfly craft.

Centers and Small Groups	
Science Nature Center – Adding Materials	
Butterfly Garden Kit	\$22.99
Life Cycle of a Monarch butterfly	\$12.18
Rulers (no specific cost)	
Measuring tape	\$7.99
Balance Scale	\$16.34
Large bird- Balance the Birds	\$11.99
Small birds to glue onto unifix cubes	\$12.99
<b>Total Cost of Center</b>	<b>\$84.48</b>

**Total Cost of Unit 9 = \$230.53**

Unit 9: Botany -Additions to the Science Nature Center  
**Nature Center**



**Purpose:** Promote creative play, exploration and experimentation, and oral language skills.

How it Works:

- ❖ First introduced in Part 2- Butterflies and Bees.
- ❖ In the dramatic play center, set up a nature center with lots of scientific tools to investigate nature and conduct a few simple experiments.

\*\*Notes an activity that is an extension from a circle time book.

\*Notes an activity with an outline—see Unit 9 Materials section for materials to prepare these activities.

**Growing plants in a bag
**Butterfly life cycle
Butterfly Wings—dress up
**Butterfly habitat observation
**Life cycle of a flower and tree
**Life cycle of a butterfly
**Measuring height and length with a ruler and measuring tape
*Happy Bird Day Book with Activities –Memory, Bird ID

# Botany Nature Center



**Butterfly Life Cycle Model and Habitat**



**Butterfly Costume**



**Life Cycle of a Flower**



**Life Cycle of a Tree**



**Birds of North America Memory Game**



**Birds of North America Nomenclature Cards**



**Measuring with a ruler and measuring tape**

## Unit 9: Botany

### **Outline of Each Day's Circle Time**

#### **Whole Group Circle Time—Basic Outline**

1. Gathering Together (2 min): ABC Song to call students to circle.
2. Language Time! (3 min) – Nursery Rhyme, Finger Play, Song, Poem
3. Learning New Things (10 min)
  - a. Topic discussion for week 1: Showing Kindness to our Friends & Community
  - b. Story & Discussion Using 1, 2, 3 Shared Story Routine
4. Highlight Center Where You Can Learn More  
\*Remember to try and read the story a 2<sup>nd</sup> time either whole group or in small groups throughout the day.

#### **The 1, 2, 3 Shared Story Routine – Read Two Times**

##### 1<sup>st</sup> Read – Focus on Listening to the Story—Whole Group Story Time

###### **1. Before:**

1. Introduce the topic
2. Introduce the book to generate excitement.
3. Point out title, author, & illustrator.

###### **2. During:**

1. Read with very few interruptions so children can get a sense of the full story.
2. Model Thinking Aloud.
3. Draw children's attention to key content, vocabulary, and story elements: characters, setting, the problem, etc.

###### **3. After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.
2. Questions: Ask simple questions about the book.
3. Review vocabulary & connect content of the book to their knowledge of the topic.  
(2 & 3 should go in the order that makes sense for the book discussion)

##### 2<sup>nd</sup> Read – Discuss Together & Activity

###### **1. Before:**

1. Ask the children if they can remember what this book is about—show them the cover to remind them.
2. Point out the title, author, & illustrator.
3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

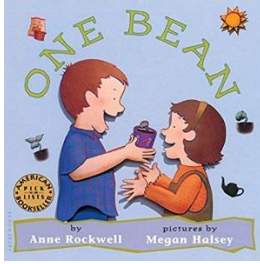
###### **2. During:**

1. Read with excitement and fluency.
2. Ask questions about how characters feel or what they might be thinking.
3. Highlight key vocabulary, content, and story elements.

###### **3. After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.
2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
3. Complete follow up activity





**Botany, Part 1—Plants & Flowers**

Book 1: One Bean by Anne Rockwell



**Materials Needed:** *One Bean* book

<b>Language Time:</b>	<b>Learning New Things—1, 2, 3 Shared Storybook</b>
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot hold hand in a fist</p> <p>One grew.... two grew... three grew..... four grew.... five grew... hold up 1 finger then 2, 3, etc</p> <p>They grew and they grew and they did not stop! Raise hand in the air very slowly</p> <p>Until one day, the pot went POP! Clap hands together</p>	<p><b>Notes on Book:</b> This book introduces children to the idea of a plant life cycle.</p> <p><b>Key Vocabulary:</b> wrinkly, stalk, dangling, buds, blossomed</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>For the next few weeks we are going to talk about plants, things that plants need to grow, animals that help the plants to grow, and animals that depend on plants.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Today, we are going to read about a little boy who plants a bean seed. The seed does amazing things as it grows and changes. Let's read to find out what happens to the seed.</i></li> <li><u>Point out the title and author</u> <i>One Bean is the title of the story. The author of this story is Anne Rockwell. Remember, the author is the person who writes the story.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full story</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(wrinkly) <i>Look! The bean skin has lots of little lines called wrinkles. It is wrinkly.</i></li> <li>(potted plant on windowsill) <i>He planted the bean and gave it water and put it in the window so it can get sunshine. Plants need sunshine and water to grow.</i></li> <li>(flowerpot) <i>The bean got too big for the small pot, so it had to be planted in a much bigger pot.</i></li> <li>(buds) <i>Look! The plant is starting to grow buds! A bud is like a plant baby!</i></li> <li>(bean pods) <i>The bean pods grew where the flowers were!</i></li> <li>(end) <i>The boy grew more beans like the one he started with! Delicious!</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc. <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!</li> </ol> </li> </ol>

Wrinkly= full of little lines; all bunched up

Stalks= the long, skinny part of a plant that supports the leaves, fruits, or flowers

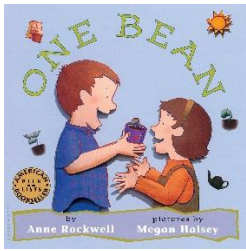
Dangling= hanging or swinging loosely

Buds= plant 'babies', flowers

Blossomed= a plant making flowers

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this book (thumbs up/thumbs down)? What was one thing you learned from this book? One thing I learned...*
2. Questions: Ask simple questions about the book.
  - a. *Who was in this story?* (boy, girl)
  - b. *What did the plant need to grow?* (water, sun, soil)
  - c. *How did the bean and seed change in this story?* (it grew into a new plant that blossomed and made new bean pods)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *At the end of the story, the beans are (dangling) from the plant.*
  - b. *What do we call the part of the plant that holds up the leaves and flowers?* (stalk)



**Botany, Part 1 – Plants and Flowers**  
**Book 1: One Bean**

**1, 2, 3 Shared Story Routine**  
**Re-Read Activity for this Book**

**Materials:** Book, plastic bags with zipper, paper towels, bean seeds, water



**Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Do you remember this story we read? Who can raise their hand and tell me what the story is about? This story is about planting a bean. We learned that we can grow a new plant from a seed if we give it water, sun, and soil.*

2. Point out the title & author –ask if anyone can tell you what the author does.

*The title of this story is One Bean. The author of this story is Anne Rockwell. Can anyone raise their hand and tell me what the author of a story does? Yes! The author is the person who writes the story.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*This time we are going to read the book and plant our own bean seeds just like the boy in the story. We are going to plant our seeds a little differently, though. We are going to plant our seeds in bags so we can watch them grow.*

**During:**

1. Read with excitement and fluency.
2. Ask questions about how characters feel or what they may be thinking.
  - a. *What happens when he puts the seed in the wet paper towel?*
  - b. (last page) *Has anyone tasted a bean seed before? Green beans and peas are seeds.*
3. Highlight key vocabulary, content, and story elements.
  - a. *Where does the story take place? What is the setting?* (the boy's home)
  - b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  
Wrinkly= full of little lines; all bunched up  
Stalks= the long, skinny part of a plant that supports the leaves, fruits, or flowers  
Dangling= hanging or swinging loosely  
Buds= plant 'babies', flowers  
Blossomed= a plant making flowers

**After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

*Did you like this book (thumbs up/thumbs down)? Why did you like/dislike this book? One thing I learned from this book is...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *Who was in this story?* (the boy, girl)
  - b. *What did the seed need in order to grow?* (dirt/soil, sun, water)

c. *What happened to the flower blossoms on the plant?* (they grew new bean pods)

d. *Did the boy like the beans?* (Yes. They were very, very good.)

### 3. Follow Up activity: Planting a bean seed

For this activity you are going to work with the children to plant a bean seed in a clear bag. Note- if using lima bean seeds, you can simply place them in the damp paper towel. If using dried lima beans purchased from a grocery store, soaking the lima beans overnight will help them to begin growing faster.

a. Show the children the different objects (the bag, the paper towel, the seed, the water).

b. Explain that each child will plant his or her own bean seed.

c. Show the children the steps- Dampen the paper towel. Place the paper towel in the bag labeled with the child's name. Place the bean seed on the paper towel so it is visible. Close the bag.

d. Place the beans where they will get light. Taping the bags to a window works well. Explain that children will get to watch their beans as they grow. *Look at your bean seed every day so you watch it change.* (You may wish to label each bag so children can identify their own seed.)

### 4. Follow Up activity: Journaling about the bean changes

Give the children a small journal. This could be as simple as a few blank pages stapled together, or as complex as an actual notebook. Explain: *You will be observing (watching) your bean seeds just like scientists. Scientists watch how things change and they write down what they notice.* Tell children how and when you would like them to journal about their bean seeds.

- Encourage the children to draw what their seed looks like and write about the changes.

- **The writing portion will be different for each child.**

- Some children may dictate their words to a teacher.
- Other children may be able to label parts of the plant in their picture.
- Others might use a combination of real and invented letters.
- Encourage the child, wherever they may be in the process of learning to write.
- Try to journal multiple times across the next few weeks as the seeds grow.



- Send the seeds home after a few weeks so children can share the experience with their families.

- If possible, plant in a pot before sending home.

- ***Note- the bean seeds will eventually rot unless they are planted in soil.***



**Botany, Part 1—Plants & Flowers**

Book 2: Planting a Rainbow by Lois Ehlert

**Materials Needed:** *Planting a Rainbow* book

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot hold hand in a fist</p> <p>One grew.... two grew... three grew..... four grew.... five grew... hold up 1 finger then 2, 3, etc</p> <p>They grew and they grew and they did not stop! Raise hand in the air very slowly</p> <p>Until one day, the pot went POP! Clap hands together .</p>	<p><b>Notes on Book:</b> This simple book is used to reinforce plant cycle, colors, and different flower names. This book will be used as a reference for the craft with <i>Lola Plants a Garden</i> (book 4).</p> <p><b>Key Vocabulary:</b> bulbs, sprout, seedlings, sow, buds, blossom/bloom</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Let's look at the cover of the book. What do you think this story will be about?</i> (give students a chance to respond)</li> <li><u>Point out the title and author</u> <i>Planting a Rainbow is the title of the story. The author of this story is Louis Ehlert. Remember, the author is the person who writes the story.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full story</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(bulbs) <i>A flower bulb is a type of seed.</i></li> <li>(garden center) <i>The garden store is a store where you can buy everything for plants! The seedlings are small plants.</i></li> <li>(plant life cycle) <i>seed, sprout, flower</i></li> <li>(flowerpot) <i>The bean got too big for the small pot, so it had to be planted in a much bigger pot.</i></li> <li>(and grow) <i>Look at all the beautiful plants!</i> (name some colors)</li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.             <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Bulbs</u>= certain types of flower seeds  <u>Sprout</u>= new plant growth  <u>Seedlings</u>= a young plant  <u>Sow</u>= planting seeds in the ground  <u>Buds</u>= plant 'babies', flowers  <u>Blossom/bloom</u>= a plant making flowers; flowers on a tree or bush</li> </ol> </li> </ol>

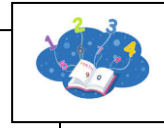
**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.  
*Did you like this book (thumbs up/thumbs down)? What was one thing you learned from this book? One thing I learned...*
2. Questions: Ask simple questions about the book.
  - a. *What was this book about?* (plants, flowers)
  - b. *How do flowers start at the very beginning of the plant cycle?* (seeds)
  - c. *What was your favorite flower?* (name and show some flower types)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *A gardener is a person who sows (plants) seeds in their garden.*
  - b. *All plants grow from seeds, but you can also buy seedlings (young plants) to plant in your garden.*



**Botany, Part 1—Plants & Flowers**

Book 3: One Little Lot by Diane C. Mullen



**CHALLENGE**

**Materials Needed:** *One Little Lot* book

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot hold hand in a fist</p> <p>One grew.... two grew... three grew..... four grew.... five grew.... hold up 1 finger then 2, 3, etc</p> <p>They grew and they grew and they did not stop! Raise hand in the air very slowly</p> <p>Until one day, the pot went POP! Clap hands together .</p>	<p><b>Notes on Book:</b> This book is full of lots of new vocabulary. Students will count all the ways (one to ten) an urban community unites to clean up an abandoned lot.</p> <p><b>Key Vocabulary:</b> preparing, soil, seedling, pollinating</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Let's look at the cover of the book. What do you think this story will be about? In this book we will read about a community garden. A community garden is a place where neighbors and friends can all work together to plant seeds to grow fruits and vegetables for everyone to eat.</i></li> <li><u>Point out the title and author</u> <i>One Little Lot is the title of the story. The author of this story is Diane C. Mullen. Remember, the author is the person who writes the story.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full story</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(picture of the empty lot) <i>Look at this lot. It is full of old tires, a couch, and broken bicycles. It is abandoned – no one is using it anymore.</i></li> <li>(Title page) <i>Look at all the garbage! Garbage doesn't belong in the grass, it belongs in a garbage can.</i></li> <li>(Three long days are spent) <i>Wow! The community is working together to clean-up the empty lot. I wonder what they are getting ready for!</i></li> <li>(Five big bags of soil) <i>They are emptying big bags of soil into the planter boxes! Soil is special dirt that helps plants to grow! They must be planting a garden! Worms love the new soil!</i></li> <li>(Seven showers pour) <i>Plants need soil, water, and what else? Oh yes- I remember- SUN! The plants are starting to grow!</i></li> <li>(Nine prized plants) <i>Point to and name the plants.</i></li> <li>(One little lot) <i>Look! The abandoned, empty lot has been turned into a community garden!</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc. <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child</li> </ol> </li> </ol>

friendly definitions. Reinforce these words throughout the day!

Preparing= to get ready

Seedling= a young plant

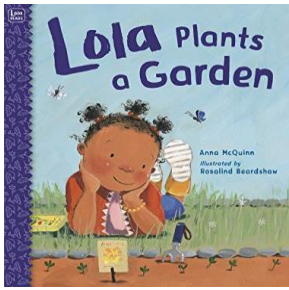
Soil= dirt that is full of lots of nutrients ( food) for plants to grow

Pollinating= carrying pollen from flower to flower

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part of this story? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this book about?* (planting a community garden)
  - b. *What do plants need to grow?* (water, soil, sun)
  - c. *What vegetables were planted in the garden?* (tomatoes, cucumbers, carrots, etc.)
  - d. *Who is welcome in the community garden?* (ALL are welcome!)
  - e. Math Story Problem: *In this story, neighbors worked together to grow a garden. They had 4 (hold up 4 fingers on one hand) planter boxes. At the end of the story, there were 9 plants (hold up 9 fingers). Were there more planter boxes or more plants? To answer that question, we have to figure out which number is bigger. Is 4 a bigger number or is 9 a bigger number? Nine is the number that is bigger. See? Nine (hold up 9 fingers again) is bigger than four (hold up four fingers again.) That means there were more plants than planter boxes. Thank you for helping me to figure out that math problem!*
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *The community worked together to prepare the garden.*
  - b. *All seeds need sun, soil, and water to grow into seedlings.*
  - c. *Bees work very hard to pollinate flowers! They are very important!*





**Botany, Part 1—Plants & Flowers**

Book 4: Lola Plants a Garden by Anna McQuinn

**Materials Needed:** *Lola Plants a Garden* book



Language Time:	Learning New Things
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot hold hand in a fist</p> <p>One grew.... two grew... three grew..... four grew.... five grew... hold up 1 finger then 2, 3, etc</p> <p>They grew and they grew and they did not stop! Raise hand in the air very slowly</p> <p>Until one day, the pot went POP! Clap hands together</p>	<p><b>Notes on Book:</b> This book is a simple story about a little girl who plants a garden with her mother. NOTE: Be sure to read the poem before the title page. It is key to the story. Also, be sure to read the poem after the story!</p> <p><b>Key Vocabulary:</b> poem, shoots, weeds</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Let's look at the cover of the book. What do you think this story will be about?</i> (give students a chance to respond)</li> <li><u>Point out the title and author</u> <i>Lola Plants a Garden is the title of the story. The author of this story is Anna McQuinn. Who can raise their hand and tell us what the author of the story does? Yes! The author writes the story (the words).</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story. <i>I wonder what Lola will plant in her garden!</i></li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(poem) <i>This book starts with a poem! Listen as I read. Poems often have rhyming words. Let's listen for some rhyming pairs (grow, row, bells, shells) (silver bells and cockleshells are types of flowers- show pictures if needed)</i></li> <li>(after page 1) <i>Her favorite poem is the one we just read!</i></li> <li>(library) <i>Lola needs to research about what plants she would like to put in her garden.</i></li> <li>(point out the plant life cycle) <i>seed, sprout (shoots), flower...she has to wait for her plants to grow.</i></li> <li>(poem at the end) <i>Lola hung shells and beads and had her friends come over to play in her garden!</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc. <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day! <u>Poem</u>= a piece of writing that shares ideas, feelings, or a story</li> </ol> </li> </ol>

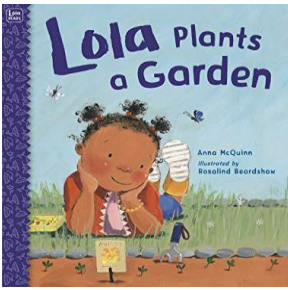
with the reader. It often times has words that rhyme.

Shoots= the part of the plant that produces a new stem, buds, and flowers

Weeds= any plant growing where it is not wanted

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? The beginning, middle, or end? Why? My favorite part of the story was...*
2. Questions: Ask simple questions about the book.
  - a. *Who was this story about? (Lola)*
  - b. *When did this story take place? (provide a prompt if needed-summer or winter)*
  - c. *What did Lola do in the story? (planted and grew a garden)*
  - d. *What happened in the beginning of the story? (prompt as needed – show pictures-Lola went to the library to read about what plants she would like to plant in her garden)*
  - e. *How did Lola feel when her friends came over to see her garden? (Happy!)*
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *In the beginning and end of this story we read Lola's favorite poem. Remember, poems often have rhyming words. (point out a couple rhyming words)*
  - b. *All plants grow from seeds. Lola had to be patient and wait for the shoots to grow in her garden (show picture).*



## Botany, Part 1 – Plants and Flowers

### **Book 4: Lola Plants a Garden** **1, 2, 3 Shared Story Routine** **Re-Read Activity for this Book** **Craft Time!: Making a Flower Garden Collage**



Materials: *Lola* Book, *Planting a Rainbow* book, Flower reference book(s) (for ideas), construction paper, child safe scissors, glue, crayons, magazines with flowers or pictures of flowers for children to cut out (see materials section for flowers to cut out)

### **Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Do you remember this story we read? Who can raise their hand and tell me what the story is about? This story is about Lola planting a garden.*

2. Point out the title & author—ask if anyone can tell you what the author does.

*The title of this story is Lola Plants a Garden. The author of this story is Anna McQuinn. Can anyone raise their hand and tell me what the author of a story does? Yes! The author is the person who writes the story. The illustrator, or the person who drew the pictures, is Rosalind Beardshaw. What does the illustrator do? Draws the pictures!*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Today, we are going to read the book again and then make a flower garden picture just like Lola does as she waits for her flowers to grow.*

### **During:**

1. Read with excitement and fluency.
2. Ask questions about how characters feel or what they may be thinking.
  - a. *Why does Lola place silver bells above her garden?* (the poem mentions silver bells)
  - b. *Who are Orla, Ben, and Ty?* (Lola's friends)
  - c. *What should Lola plant in her garden next summer?* (allow students to respond)
3. Highlight key vocabulary, content, and story elements.

- a. *Where does the story take place? What is the setting?* (the boy's home)
- b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  
Poem= a piece of writing that shares ideas, feelings, or a story with the reader. It often times has words that rhyme.  
Shoots= the part of the plant that produces a new stem, buds, and flowers  
Weeds= any plant growing where it is not wanted

**After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

*Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part of the story was...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.

- a. *Who was this story about?* (Lola)
- b. *When did this story take place?* (may need to prompt- summer or winter)
- c. *What did Lola plant in her garden?* (flowers)
- d. *Where does this story take place?* (outside Lola's house in her garden)
- e. *How did Lola learn about the flowers she wanted to plant?* (She read books!)

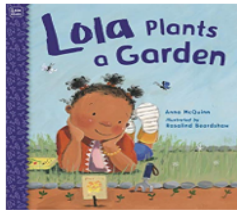
*\*Introduce the field guide to wildflowers to the children and other books if you have them.*

*\*We can look in these books to think about what flowers you want to add to your garden that we are going to make.*

3. Follow Up activity: Making a flower garden craft

For this craft you are going to work with the children to make a flower garden picture using construction paper, flowers cut out of magazines/pictures, flowers drawn with crayons, and flowers made out of construction paper.

- a. Show the children the different materials
- b. Explain that each child will create a flower garden picture. Show them a model.
- c. Give each child a piece of light blue construction paper for the sky.
- d. Then show them the different ways they can make:
  1. Grass and stems—with crayons or with green construction paper.
  2. Flowers—cut out flowers from the magazines/pictures, draw them with crayons, or cut them out of construction paper.
- e. Support them as they cut and glue materials to make the flower garden.



## Botany, Part 1 – Plants & Flowers



Tell a Story

Book 4: *Lola Plants a Garden* by Anna McQuinn

### Shared Writing

Materials: Book, white board or chalkboard to create shared writing

#### Shared Writing Routine:

- **Plan** – talk to the children about what to write
- **Write** – write within view of the children and “**think aloud**” as you write your sentence, highlighting the vocabulary and conventions you planned
- **Read** – Point to each word and read the sentence together.

#### Shared Writing Preparation Template: Tell a Story

##### Gist of the Writing:

Following is the structure for creating a story retell with your children for this book:

- First sentence introducing main character and problem (Lola wants to make a garden).
- Details reflecting how the problem continues (Lola gets ready for her garden by choosing her favorite flowers, and buying seeds. She and Mommy make the garden. They do lots of things while they wait for the garden to grow.).
- Resolution sentence. (Finally, Lola invites her friends to see her garden and they love everything about it).

Utilizing this structure, the writing will summarize the story in *Lola Plants a Garden* and will reflect the sequence of events that reflect the problem and then the solution.

##### Vocabulary Word(s): Choose some (you won't be able to include all)

Poem, shoots, weeds

##### Specific letter(s) or conventions to highlight:

*Punctuation, capital letters, letter formation*

##### Plan your sentences. Your sentences should follow the classic story pattern:

Beginning – Lola wants to make her own garden.

Middle – Her family helps her get ready for the garden by choosing flowers, buying seeds, etc.

Middle – Lola and Mommy make the garden.

Middle – Lola waits for her garden to grow.

End – Finally, Lola invites her friends to see her garden and they love everything about it.

#### STEPS IN THE PROCESS

##### 1. **Discuss the book and vocabulary:**

(Show pictures in the book as you discuss the story)

*We read a story called Lola Plants a Garden. In the beginning of the story, Lola wants to make her own garden and her Mommy says there is room near the vegetables. They get ready for the garden by choosing flowers and buying seeds. Lola and Mommy make the garden. Then she has to wait for her garden to grow. While she's waiting she makes a flower book. She weeds her garden as the plants get bigger. Finally, they invite her friends to see her garden and they love everything about it.*

##### 2. **Write Beginning Sentence:**

**Plan:** *Let's write! Stories have a beginning, a middle and an end. In this story, in the beginning, Lola wants her*

own \_\_\_\_\_ (garden.)

**Write:** Write the chosen sentence in view of children and “think aloud” as you write:

*I am starting my sentence so I will begin with a **capital** letter. As I write each word I make sure to leave a space between each of my words. I have finished my sentence so now I will add a period to show that my sentence is done. **Lola wants her own garden.***

**Read** aloud, pointing to each word. Read a second time asking children to “read” with you. *Lola wants her own garden.*

3. **Write Middle Sentences:**

**Plan:** Gather input from children for the detail sentences:

*Now that we have written our first important sentence let’s think about what else we can say. We wrote, Lola wants her own garden. We wrote about what happened at the beginning of the story. Now let’s write about what happened in the middle of the story. I will write the first part of the sentence and you write the end of the sentence.*

**Write:** Lola gets ready for her garden by \_\_\_\_\_ (choosing flowers, buying seeds) ask children for suggestions to finish your sentence. They may need a bit of guidance or some discussion. **Lola gets ready for her garden by choosing flowers.**

**Read** aloud pointing to each word. Read a second time asking children to “read” with you. *Lola gets ready for her garden by choosing flowers.*

\*\*Continue the **Plan/Write/Read** pattern, offering a sentence beginning and planning and writing the end of the sentence with the children. Following are possible sentence starters and possible endings that the children can be guided to create:

Then Lola and Mommy make the ... garden.

Next, while Lola waits for the plants to grow she... makes a flower book, weeds the garden, etc.

4. **Write Concluding Sentence:**

**Plan:** Again, you will write the sentence starter and children will contribute the end of the sentence. *Let’s think about how the story ended. I will write the first part of this next sentence and I would like you to think about how the sentence should end. Finally, Lola invites her friends to see her garden and they \_\_\_\_\_ (love everything about it.)* Ask children for suggestions to finish your sentence. They may need a bit of guidance or some discussion.

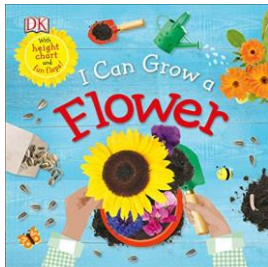
**Write:** Write the concluding sentence together, thinking aloud as you write about writing conventions that you would like the children to attend to. **Finally, Lola invites her friends to see her garden and they \_\_\_\_\_ (love everything about it.)**

5. **Read Finished Writing Together:** To finish, read the paragraph together pointing to each word. Keep the writing posted and in view of children, returning to it and reading together when possible. *Let’s read our story together.*

Lola wants her own garden. Lola gets ready for her garden by choosing flowers. Then Lola and Mommy make the garden. Next, while Lola waits for the plants to grow she makes a flower book. Finally, Lola invites her friends to see her garden and they love everything about it.

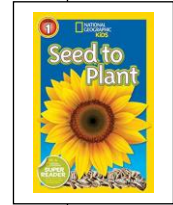
Please keep the paragraph posted and return to it from time to time.





## Botany, Part 1—Plants & Flowers

### Book 5: I Can Grow a Flower by Dawn Sirett



**Materials Needed:** *I Can Grow a Flower* book, life cycle of a flower cards (see materials section), *Seed to Plant* book.

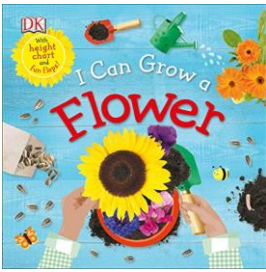
Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot hold hand in a fist</p> <p>One grew.... two grew... three grew..... four grew.... five grew... hold up 1 finger then 2, 3, etc</p> <p>They grew and they grew and they did not stop! Raise hand in the air very slowly</p> <p>Until one day, the pot went POP! Clap hands together</p>	<p><b>Notes on Book:</b> This book again reviews the plant life cycle, what plants need to live and grow, flower names, and also height. This is a great book to put in the nature center after the follow up activity for children to explore—lots of flaps to open.</p> <p><b>Key Vocabulary:</b> seed, shoot, gently, bud, plant life cycle, height</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Let's look at the cover of the book. What do you think this story will be about?</i> (give students a chance to respond)</li> <li><u>Point out the title and author</u> <i>I Can Grow a Flower is the title of the book. The author of this book is DK. Remember, the author is the person who writes the book. This book gives us lots of information about how to grow plants.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(Where do they come from?) <i>Oh, I know! Most plants grow from (turn the page) seeds!</i></li> <li>(planting the seeds) <i>Seeds need water, dirt, and sunlight to grow!</i></li> <li>(plant roots) <i>The plant is starting to grow under the soil!</i></li> <li>(After many days...point out the plant life cycle) <i>seed, sprout (shoots), bud</i></li> <li>(flowers) <i>Look at all of the beautiful flowers that grew from seeds!</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!                Seed= part of a plant that can grow into a new plant                Shoot= the part of the plant that produces a new stem, buds, and flowers                Gently= softly                Bud= plant 'babies', flowers                Plant Life Cycle= seed, sprout, bud, flower</li> </ol> </li> </ol>



Height= how tall something is

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this book (thumbs up/thumbs down)? What is something you learned from this book? One thing I learned is...*
2. Questions: Ask simple questions about the book.
  - a. *What was this book about?* (plant life cycle)
  - b. *Why do plants need water?* (provide a prompt if needed- All living things need water. Plants are living, and if they don't get water, they will die.)
  - c. *What does a plant need to live and grow?* (sun, water, soil)
  - d. (Use the book to review the life cycle of a sunflower on the last page)  
*Now that we have reviewed the life cycle, let's use my cards (show cards) to put the life cycle in the right order. What comes first? Yes, the seeds are the first step in the life cycle. What comes next? Sprout. Then, the bud. And, finally, the flower.*  
\*Highlight the seed to plant book and let students know that this book with the life cycle cards will be in the nature center.
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *In this book we read all about the life cycle of a plant. In the nature center, you will get a chance to practice putting the life cycle cards in the correct order.*



## Botany, Part 1 – Plants and Flowers

### Book 5: I Can Grow a Flower 1, 2, 3 Shared Story Routine Re-Read Activity for this Book Activity Time: Potted Flower



Materials: *I Can Grow a Flower* Book, Pot, Paint, soil, flowers or flower seeds

### Before:

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about the life cycle of a plant.*

2. Point out the title & author—ask if anyone can tell you what the author does.

*The title of this book is I Can Grow a Flower. The author of this story is DK. Can anyone raise their hand and tell me what the author of a story does? Yes! The author is the person who writes the words.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Today, we are going to read the book again and then we are going to decorate pots to plant real flowers in that you can then take home to share with your families.*

### During:

1. Read with excitement and fluency.
2. Ask questions about how characters feel or what they may be thinking.
  - a. *Where do pretty plants grow in this book?* (in the garden)
  - b. *What do plants need to grow well?* (Various answers- water, soil, air, light, warmth)
  - c. *What is the tallest plant in the garden?* (a beautiful yellow sunflower)
3. Highlight key vocabulary, content, and story elements.
  - a. Key Vocabulary Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!

Seed= part of a plant that can grow into a new plant

Shoot= the part of the plant that produces a new stem, buds, and flowers

Gently= softly

Bud= plant 'babies', flowers

Plant Life Cycle= seed, sprout, bud, flower

Height= how tall something is

### After:

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

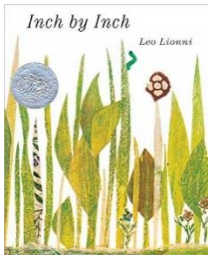
*Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part of the story was...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *What was this book about?* (planting seeds, the plant life cycle, what a plant needs)
  - b. *What do plants need to live and grow?* (water, soil, sun)
  - c. *Plants grow to all different heights. The sunflower is the biggest flower.* (Pull out the height chart and put it up in the nature center.) *While playing in the nature center, see how tall your friends are. Who is the tallest?*
3. Follow Up activity: Potted Flower Activity

This is a two part activity: For this activity you are going to work with the children to paint a small pot and then plant a flower to take home.

Part 1: Paint the pots

Part 2: Plant the flowers



## Botany, Part 1—Plants & Flowers



Book 6: Inch by Inch by Leo Lionni  
Connected Math Activity--Measurement

**Materials:** *Inch by Inch* book, set of rulers, inchworm that = 1 inch long (see materials)



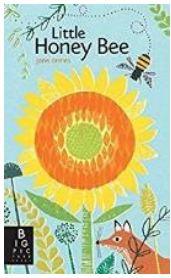
Language Time:	Learning New Things—1, 2, 3 Shared Story Book
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot <i>hold hand in a fist</i></p> <p>One grew.... two grew... three grew..... four grew.... five grew... <i>hold up 1 finger then 2, 3, etc</i></p> <p>They grew and they grew and they did not stop! <i>Raise hand in the air very slowly</i></p> <p>Until one day, the pot went POP! <i>Clap hands together</i></p>	<p><b>Notes on Book:</b> This book features plants but, does not discuss plants. It connects nicely to book 4s discussion of height. Use this book to discuss measurement. This book could be done across 2 days.</p> <p><b>Key Vocabulary:</b> inch, measure, foot (not in book)</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow.</i></li> <li><u>Introduce the book to generate excitement</u> <i>In the last book we discussed how tall the sunflower was—the tallest flower in the garden. Then we put up the sunflower height chart and talked about the height of our friends in the classroom. This book also talks about measuring things—seeing how tall and long things are. In this book a little worm likes to measure things. Let’s find out how he does it!</i></li> <li><u>Point out the title and author</u> <i>Inch by Inch is the title of the book. The author of this book is Leo Lionni. Remember, the author is the person who writes the book.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(Inch worm) <i>The inch worm is 1 inch long so he can measure things with his body!</i></li> <li>(nightingale) <i>The inch worm is very clever! He inched away instead of getting eaten. That was very smart!</i></li> </ol> </li> <li><u>Draw children’s attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day! <u>Inch</u>= how long the worm is (not very big, we can use our ruler to measure inches) <u>Measure</u>= to see how tall and long something is <u>Foot</u>= 12 inches</li> </ol> </li> </ol> <p><b>After:</b></p> <ol style="list-style-type: none"> <li><u>Ask their opinion</u>—did they like it? Thumbs up/down. Why? Provide a</li> </ol>

sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part was...*

2. Questions: Ask simple questions about the book.
  - a. *Who was this book about? (inchworm)*
  - b. *What did the inchworm do for the different birds? (measure them)*
  - c. *At the end of the story, how did the inchworm escape from being eaten? (he inched away as he measured the nightingale's sang)*
3. Measure Discussion and Activity:
  - a. *This is a ruler. A ruler is 1 foot. Show the inch marks. One ruler is 12 inches long. Show how big an inch is with your fingers. We are going to measure some items in our classroom. Watch me first, then we will practice together! Model how to measure things in the classroom and then provide guided practice as students work together to measure different items.*
    - i. *How many rulers (feet) is the table?*
    - ii. *How many rulers (feet) is \_\_\_\_\_(pick a student)?*
    - iii. *How many rulers (feet) is the bookshelf?*
  - b. *Then measure some small things using the inchworm. Show the children using the ruler that the inchworm is one inch. Now we are going to measure some small items with our inchworm. The inchworm is one inch long.*
    - i. *How many inchworms is the book?*
    - ii. *How many inchworms is the pencil?*
    - iii. *How many inchworms is the \_\_\_\_\_?(pick another small classroom item)*

*\*Put a set of inchworms and rulers in the nature center. Encourage the children to measure different things in the classroom.*

*\*Make a poster to display of how long different things are. As children report measurements add it to the poster.*



**Botany, Part 1—Plants & Flowers**

Book 7: Little Honeybee by Katie Haworth

**Materials Needed:** *Little Honeybee* book.



Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot <i>hold hand in a fist</i></p> <p>One grew.... two grew... three grew..... four grew.... five grew... <i>hold up 1 finger then 2, 3, etc</i></p> <p>They grew and they grew and they did not stop! <i>Raise hand in the air very slowly</i></p> <p>Until one day, the pot went POP! <i>Clap hands together</i></p>	<p><b>Notes on Book:</b> This rhyming book encourages children to count a variety of flowers. Each page contains several flaps fold down to reveal pictures of animals that can be counted. The number of bees on each page matches the number of flowers.</p> <p><b>Key Vocabulary:</b> nodding, crimson, petals, unfurl</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow.</i></li> <li><u>Introduce the book to generate excitement</u> <i>I see a big, beautiful sunflower, a fox, and a bee. Oh! And this green sticker says there are flaps to lift inside this book. I love this kind of book. I can't wait to see what's hiding inside! I think it's going to be about a bee and the flowers that the bee visits. This fox makes me think there might be other animals in the book too.</i></li> <li><u>Point out the title and author</u> <i>Little Honeybee is the title of the book. The author of this book is Jane Ormes. Remember, the author is the person who writes the book.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(Nodding) <i>The tulips are nodding. That means their big blooms are gently bobbing up and down.</i></li> <li>(Hollyhocks) <i>These hollyhocks are a deep red, or crimson.</i></li> <li>(Daisy) <i>These are the petals of the daisy (point to the petals). The petals make the flower and are usually bright and colorful.</i></li> <li>(Unfurl) <i>Flowers start out as little buds then they open up, or unfurl, so we can see the beautiful petals.</i></li> <li><i>At a number of points in the story pause to count the flowers, pointing as you go.</i></li> <li><i>At the end of the book look for all the creatures that come to the garden when the flowers unfurl.</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.             <ol style="list-style-type: none"> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child</li> </ol> </li> </ol>

friendly definitions. Reinforce these words throughout the day!

Nodding= bobbing up and down

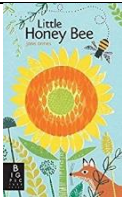
Crimson= dark red

Petals= they colorful parts of a flower

Unfurl= to open, unfold

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (honeybees visiting different types of flowers)
  - b. *What were the names of some of the flowers?* (snowdrops, tulips, etc...)
  - c. *What was your favorite flower?* (My favorite flower is the tulip.)
  - d. Math Story Problem: (Show the children the page with the daffodils and the tulips.) *In this picture I see the honeybees by yellow flowers called daffodils and reddish flowers called tulips. Let's count the yellow daffodils.. 1-2-3. Let's count the reddish tulips. 1-2-3-4. How many flowers is that altogether? Let's add the 3 daffodils and the 4 tulips to found out how many flowers in all. Point and count to the flowers as you count all. 1-2-3-4-5-6-7. Seven! Three daffodils plus 4 tulips equals seven flowers in all. 3 plus 4 equals 7. Thank you for helping me figure out that math problem.*
  - e. (Work together to find the honeybees on some of the pages) *There are 8 honeybees on this page. Let's count together and see if we can find all 8!*
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *Flower petals are very colorful! What is your favorite color petal we saw in this book?*
  - b. *When the petals unfurl, or open up, we can see their beautiful shape!*
  - c. *My favorite petals are crimson, or dark red.*



## Botany, Part 1—Plants and Flowers

### **Book 7: Little Honeybee** **1, 2, 3 Shared Story Routine** **Re-Read Activity for this Book**

#### **Before:**

- Materials Needed:** *Little Honey Bee*, flower picture cards, number cards
1. Ask if the child cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about the life cycle of a plant.*

2. Point out the title & author –ask if anyone can tell you what the author does.

*The title of this book is Little Honeybees. The author of this story is Jane Ormes. Can anyone raise their hand and tell me what the author of a story does? Yes! The author is the person who writes the words.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Today, we are going to read the book again and then we are going to talk about the story and work on some math activities!*

#### **During:**

1. Read with excitement and fluency.
2. Ask questions about how characters feel or what they may be thinking.
  - a. (“One lonely snowdrop”) *What color is the snowdrop?* (point to the flower)
  - b. (“Four nodding tulips”) *What do you think is behind this cloud? Let’s count them!*
  - c. (“Six crimson hollyhocks”) *What is the name of this tiny creature hiding behind the butterfly’s wing?*
  - d. (“Nine climbing roses”) *What color are these roses? What’s your favorite color?*
3. Highlight key vocabulary, content, and story elements.
  - a. *Where does the story take place? What is the setting?* (outside, in the garden)
  - b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  
**Nodding**= bobbing up and down



Crimson= dark red

Petals= they colorful parts of a flower

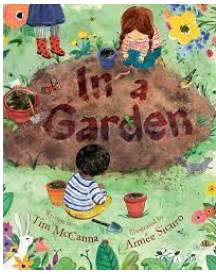
Unfurl= to open, unfold

**After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

*Did you like this book (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part of the story was...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *What was this story about?* (plants, flowers)
  - b. *Can you name another creature that was in this book?* (ladybug, deer, etc.)
  - c. *Let's try and name all of the creatures in the garden!* (at the end)
3. Follow Up activity: Do a variety of small group math activities across the next week or two. See **Botany Unit Materials** for math activity cards and manipulatives.



**Botany, Part 1—Plants & Flowers**

Book 8: In A Garden by Tim McCanna

**Materials Needed:** *In A Garden* book.

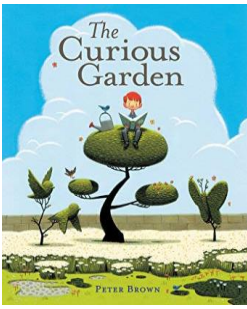


Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot hold hand in a fist</p> <p>One grew.... two grew... three grew..... four grew.... five grew...</p> <p>hold up 1 finger then 2, 3, etc</p> <p>They grew and they grew and they did not stop!</p> <p>Raise hand in the air very slowly</p> <p>Until one day, the pot went POP!</p> <p>Clap hands together</p>	<p><b>Notes on Book:</b> This rhyming book celebrates gardens, nature, and all sorts of critters in this delightful and vibrant read-aloud picture book.</p> <p><b>Key Vocabulary:</b> bursting, frantic, blossom, nectar, disguise</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow. We have also read about planting a garden.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Let's look at the cover of the book. What do you see? What do you think this story will be about? In this book we will hear lots of rhyming words. Remember, words that rhyme have the same ending sounds, like in look and book. Look and book both end in /ook/, so they rhyme! As I read, listen for more rhyming words.</i></li> <li><u>Point out the title and author</u> <i>The title of this story is <u>In A Garden</u>. The author of this book is Tim McCanna. Who remembers what the author of a story does? Yes, the author writes the words (the story). The illustrator of a story is the person who draws the pictures. In this story, the illustrator, the person who drew the pictures, is Aimee Sicuro.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(garden soil) <i>Look at the earthworms moving through the tunnels in the soil!</i></li> <li>(shoot) <i>I remember that a shoot is a new plant where the buds, leaves, and stem will grow.</i></li> <li>(frantic teams of busy ants) <i>The garden is busy with lots of activity!</i></li> <li>(fall, all) <i>I hear some rhyming words. Fall and all rhyme!</i></li> <li>(blossom) <i>Look at all the beautiful flower blossoms! There are so many different colors!</i></li> <li>(disguise) <i>The bugs disguise themselves, they change or hide, so they don't get eaten! How clever!</i></li> <li>(snow) <i>Look! It is snowing now, it must be winter now.</i></li> <li>(spring) <i>Wow! In the spring, it's time to start again!</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc. <ol style="list-style-type: none"> <li><b>Where did the story take place? Where is the setting?</b> (in a garden)</li> </ol> </li> </ol>

- b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!
- Bursting= popping open  
Frantic= wild, unruly, chaotic  
Blossom= flowers on a tree or bush  
Nectar= sugary syrup collected by bees to make honey  
Disguise= to hide or change your appearance; camouflage

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (all of the things that happen in a garden)
  - b. *What creatures can you find in a garden?* (ladybugs, ants, bees, birds, etc.)
  - c. *What happens to the garden in the winter?* (Show pictures, allow students to make observations. Discuss how the garden changes with the seasons.)
  - d. *Let's find some rhyming words that we heard in the story!*
    - i. *I will say two words, if they rhyme, clap your hands one time, like this!* (demonstrate- look, book, CLAP!)
    - ii. If the words do NOT rhyme, put your hands on your knees (demonstrate- Bug, tree, HANDS ON KNEES)
      1. Still, hill (CLAP!)
      2. Reeds, weeds (CLAP!)
      3. Flit, bit (CLAP!)
      4. Feet, round (HANDS ON KNEES)
      5. Sprout, out (CLAP!)
      6. Green, Unseen (CLAP!)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *In the spring, the plants burst through the ground as they grow bigger and bigger!*
  - b. *The garden can be quite frantic with all of the creatures that live there!*
  - c. *The flower blossoms are so beautiful and colorful!*
  - d. *We learned that the honeybees use the nectar they collect from the flowers to make honey! Yum!*
  - e. *In the garden, it is important for creatures to disguise themselves so they don't get eaten!*



**Botany, Part 1—Plants & Flowers**

Book 9: The Curious Garden by Peter Brown

**Materials Needed:** *The Curious Garden* book.

**CHALLENGE**

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>5 Little Seeds</b></p> <p><u>A finger play</u></p> <p>5 fat seeds in a flower pot <i>hold hand in a fist</i></p> <p>One grew.... two grew... three grew..... four grew.... five grew... <i>hold up 1 finger then 2, 3, etc</i></p> <p>They grew and they grew and they did not stop! <i>Raise hand in the air very slowly</i></p> <p>Until one day, the pot went POP! <i>Clap hands together</i></p>	<p><b><u>Notes on the Book:</u></b> This is a longer story about a boy who turns a city from a dark, dirty, ugly place to a light, beautiful, green place full of plants. By doing this he brings his community together. This book has lovely language and LOTS of good vocabulary to discuss and reinforce across time.</p> <p><b><u>Key Vocabulary:</u></b> greenery, dreary, drizzly, discoveries, curious, delicate, gardener, <b>blossomed</b></p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We are learning about plants and flowers and how they grow. We have also read about planting a garden.</i></li> <li><u>Introduce the book to generate excitement</u> <i>Let's look at the cover of the book. What do you see? What do you think this story will be about? In this book we will hear lots of new words! Pay attention as I read because we will talk about what happens in the story.</i></li> <li><u>Point out the title and author</u> <i>The title of this story is <u>The Curious Garden</u>. Curious can mean wanting to learn something. I am curious about plants. Have you heard of Curious George? He is the monkey who always wants to know how things work, and he wants to explore and always wants to learn. Curious can also mean strange or unusual—not like any other. The Curious Garden in this book is unusual because it wants to explore! It is not like other gardens...let's find out how it is curious! The author of this book is Peter Brown. Who remembers what the author of a story does? Yes, the author writes the words (the story).</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li>(in the beginning) <i>Look! There are no plants. This place looks sad.</i></li> <li>(as you read more pages, point out the plants) <i>More and more plants are starting to grow!</i></li> <li>(new gardeners) <i>Look at all the new gardeners- children, adults. Look how happy the gardens make everyone and how things are no longer dreary and dark, but now light, happy, and GREEN!</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.</li> </ol>

- a. *Where did the story take place? Where is the setting?* (in a city, on the train tracks)
- b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!
  - Greenery= plants and trees
  - Dreary= sad
  - Drizzly= rainy
  - Discoveries= to find something new
  - Curious= wanting to learn something new/wanting to explore
  - Delicate= not strong, gentle, easily broken
  - Gardener= someone who takes care of plants
  - Blossomed= flowering plants

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part of the story? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (a garden)
  - b. *Who was the curious gardener?* (the boy, Liam)
  - c. *What happens to the garden in the winter?* (Show pictures, allow students to make observations. Discuss how the garden changes with the seasons.)
  - d. *How did Liam improve the city?* (He took care of the garden and inspired others to get involved with gardening as well. He made the his city more beautiful.)
  - e. (Compare and contrast the first picture in the story to the last picture) *How are these two pictures the same* (both have buildings, both are in a city)? *How are they different* (The first one has no plants or greenery, the last pictures has lots of plants and greenery. The first picture is dark and dreary, the last picture is light and sunny.)? *How does the first picture make you feel* (sad, unhappy, tired)? *How does the last picture make you feel* (happy, excited, hopeful)?
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *When it is drizzly outside, we need a raincoat!*
  - b. *What did Liam discover on the train tracks? Wild flowers!*
  - c. *It's good Liam was curious! He discovered new plants, took care of them, and changed his entire community! Even kids can make big changes!*



## Botany, Part 2—Butterflies & Bees

### Book 10: Butterflies by Marfe Ferguson Delano

**Materials:** *Butterflies* book, life cycle model. This book has a follow up re-read activity: Setting up the butterfly habitat



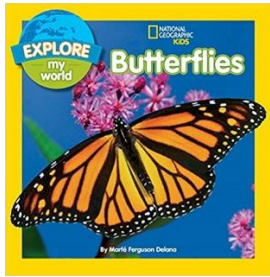
Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>The Caterpillar</u></b></p> <p>A little caterpillar crawled to the top of a tree. ‘I think I’ll take a nap it said.’</p> <p><i>Use your left arm as the tree and your right hand’s two fingers as the caterpillar-“crawl up the tree moving your fingers.</i></p> <p>So-under a leaf he began to creep</p> <p><i>Cover your two fingers (caterpillar) with your opened left hand (leaf)</i></p> <p>To spin a chrysalis</p> <p><i>Move your two hands around each other</i></p> <p>Then he fell asleep.</p> <p><i>Fold your hands and lay your head on your hands</i></p> <p>He slept and he slept in his chrysalis bed</p> <p><i>Hold your left hand over your right fist for the sleeping caterpillar.</i></p> <p>Till the sun came up one sunny spring day and said, “Wake up, wake up, little sleepy head. Wake up it’s time to get out of bed.”</p> <p><i>Shake your right fist and slowly emerge from under your left hands.</i></p> <p>So---he opened his eyes that sunshiny day and...OH! He was a butterfly and he flew away!</p> <p>Open your fingers of your right hand as your left hand holds your</p>	<p><b><u>Notes on Book:</u></b> This is a non-fiction book explaining how butterflies feed on nectar, the life cycle of a butterfly, and general information. It has wonderful pictures and is a good one to put out for children to explore after you read it.</p> <p><b><u>Key Vocabulary:</u></b> caterpillar, chrysalis, nectar</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b> <i>We have been learning about plants, gardens, and flowers. Now we are going to learn about an important insect that depends on flowers and helps flowers. We are going to learn about butterflies!</i></li> <li><b><u>Introduce the book to generate excitement</u></b> <i>Let’s look at the cover of the book. What do you see? What do you think this book will be about? In this book we will learn about the lifecycle of a butterfly!</i></li> <li><b><u>Point out the title and author</u></b> <i>The title of this book is <u>Butterflies</u>. The author is Marfe Ferguson Delano. Remember, the author is the person who wrote the story. This book will give us lots of information to help us learn! It has real pictures of butterflies. I am <u>curious</u> about butterflies, and I can’t wait to learn more!</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li>(pg. 9) <i>Wow! Look at the butterfly’s tongue that it uses to drink the sweet nectar from the flower. Say that vocabulary word with me “nec-tar”</i></li> <li>(pg. 11) <i>Some butterflies like to eat bugs! That’s interesting! (draw attention to other foods in the pictures)</i></li> <li>(pg. 16) <i>Look at the ways the butterflies try to stay safe- they blend in with their surroundings (camouflage), they also have spots that look like eyes on their wings! Wow!</i></li> <li>(pg. 22) <i>Look at the tiny, very hungry, caterpillars! Wow! These caterpillars will become butterflies!</i></li> <li>(pg. 24) <i>Look at the hard shell of the chrysalis. Inside, the caterpillar turns into a butterfly!</i></li> </ol> </li> </ol>

wrist and then fly with both hands away.

- f. (pg. 28 and 29) *Let's look at each step in the life cycle of a butterfly.*
3. Draw children's attention to key content, vocabulary, and story elements: characters, setting, the problem, etc.
- a. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!
- Caterpillar= larvae, or young, butterflies or moths
- Chrysalis= (or pupa) is the transformation (a big change) stage in the life cycle of a butterfly. A hard, protective cover forms around the caterpillar, and inside, the butterfly is formed!
- Nectar= sugary liquid

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this book (thumbs up/thumbs down)? What was one thing you learned about butterflies from this book? I learned...*
2. Questions: Ask simple questions about the book.
- a. *What was this story about?* (butterflies)
- b. *What do butterflies eat?* (nectar from flowers, fruit, bugs)
- c. *How do butterflies protect themselves from being eaten?* (camouflage, large spots that look like eyes on their wings to scare predators away)
- d. *How do butterflies sleep?* (hanging upside down on a leaf)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
- a. Using the toy models, go over the life cycle of the butterfly with the children.
- i. *First a mommy butterfly lays lots of little butterfly eggs* (show the eggs model).
- ii. *Then, the eggs hatch into tiny caterpillars* (show tiny caterpillar model).
- iii. *The tiny caterpillars grow and grow into bigger caterpillars* (show next model of caterpillar).
- iv. *Then, the caterpillar makes a hard shell around its body called a chrysalis* (show chrysalis model).
- v. *Finally, after sleeping for many days, a butterfly emerges from the chrysalis, dries its wings, and flies away* (show butterfly model).



**Botany, Part 2—Butterflies & Bees**  
**Book 10: Butterflies**  
**1, 2, 3 Shared Story Routine**  
**Re-Read Activity for this Book**

Materials: *Butterflies* book, life cycle model, butterfly habitat, paper, crayons & pencils, and numbers to note the observation day.



**Learning New Things—1, 2, 3 Shared Storybook**

**Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about the life cycle of a butterfly.*

2. Point out the title & author—ask if anyone can tell you what the author does.

*The title of this book is Butterflies. The author of this story is Marfe Ferguson Delano. Can anyone raise their hand and tell me what the author of a story does? Yes! The author is the person who writes the words.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*We are going to watch our very own classroom caterpillars grow into butterflies (point to habitat). SO, it is very important that we learn about butterflies so we can take good care of our classroom caterpillars.*

**During:**

1. Read with excitement and fluency.
2. Model Thinking Aloud/Draw Attention to Key Points.
  - a. Briefly discuss vocabulary: caterpillar, chrysalis, nectar
    - i. *Butterflies like to eat nectar from flowers! (clap out syllables in nectar – “nectar”*
    - ii. *Caterpillars are larvae, or young, butterflies and moths. “Cat-er-pill-ar”*
    - iii. *The chrysalis is a hard covering that forms around a caterpillar before it turns into a butterfly. “chry-sa-lis”*
3. Highlight key vocabulary, content, and story elements.

- a. *Where do butterflies live?* (outside)
- b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  
Caterpillar= larvae, or young, butterflies or moths  
Chrysalis= (or pupa) is the transformation (a big change) stage in the life cycle of a butterfly. A hard, protective cover forms around the caterpillar, and inside, the butterfly is formed!  
Nectar= sugary liquid

**After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.



*Did you like this book (thumbs up/thumbs down)? What was your favorite part of the book? My favorite part of the book was...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *What was this story about?* (butterflies)
  - b. *What do butterflies eat?* (nectar from flowers, fruit, bugs)
  - c. *How do butterflies protect themselves from being eaten?* (camouflage, large spots that look like eyes on their wings to scare predators away)
  - d. Review the life cycle of the butterfly
    - i. *First a mommy butterfly lays lots of little butterfly eggs* (show the eggs model).
    - ii. *Then, the eggs hatch into tiny caterpillars* (show tiny caterpillar model).
    - iii. *The tiny caterpillars grow and grow into bigger caterpillars* (show next model of caterpillar).
    - iv. *Then, the caterpillar makes a hard shell around its body called a chrysalis* (show chrysalis model).
    - v. *Finally, after sleeping for many days, a butterfly emerges from the chrysalis, dries its wings, and flies away* (show butterfly model).
3. Follow Up activity: Introduce the butterfly habitat. Explain that a habitat is the home of an animal. *This is our butterfly habitat/home. See the little caterpillars? They will grow into beautiful monarch butterflies. We will observe them as they go from caterpillar to butterfly. We observe just with our eyes and we can make pictures of what we see and write down what we see (show paper). Remember, it takes a long time for the caterpillars to turn into the butterflies so we will need to be patient.*
  - a. **Make sure the butterfly habitat includes** a place to display a number. You want to note what number day it is since the classroom started observing the butterfly habitat.  
\*Children should be encouraged to write their number on their observation picture/notes.
  - b. **Also include:** books on butterflies, paper, crayons and pencils for children to make pictures as they observe (all good scientists write down their observations), and the model of the life cycle of the butterfly. Encourage the children to visit the nature center to observe the butterfly habitat and write down their observations.
  - c. **Display the students' observations** (pictures/notes) in order of observation day. This will be fun to review across the time the butterfly is going through its metamorphosis. Then, send pictures home (maybe make a little book)



## Botany, Part 2 – Butterflies & Bees

Book 10: *Butterflies* by Marfe Ferguson Delano

### Shared Writing

Materials: Book, white board or chalkboard to create shared writing

✓ Discuss and Respond to Questions

#### Shared Writing Routine:

- Plan – talk to the children about what to write
- Write – write within view of the children and “**think aloud**” as you write your sentence, highlighting the vocabulary and conventions you planned
- Read – **Point to each word** and read the sentence together.

#### Shared Writing Preparation Template: Discuss and Respond to Questions

**Topic of Message** (the question can be the first sentence in the writing): *Question you will be responding to:* **How do butterflies change as they grow?**

**Vocabulary** words to include:

Caterpillar= larvae, or young, butterflies or moths

Chrysalis= (or pupa) is the transformation (a big change) stage in the life cycle of a butterfly. A hard, protective cover forms around the caterpillar, and inside, the butterfly is formed!

Nectar= sugary liquid

**Specific letter(s) or conventions to highlight:**

Capital letters, **question mark**, period and letter focused on in Alphabetics Group

**Plan your sentences.** This writing can use the question as the topic sentence.

Question: **How do butterflies change as they grow?**

Possible Response: **First butterflies are eggs.**

Expanded Possible Response: **First, butterflies are tiny eggs on leaves.**

#### S IN THE PROCESS:

1. **Discuss the book and vocabulary:** *We read a book called Butterflies. In this book we learned about all butterflies. We learned that butterflies change as they grow. Let’s look through the book and remember how butterflies change.* (Begin by looking at page 20 and continuing through page 27. Ask children to recall the stages of the butterfly life cycle.) *Butterflies are really amazing. They change so much as they grow! Today, we are going to answer the question “How do butterflies change as they grow?” We can use the pictures and the words in this book to help us answer that question. Are you ready to help me write?*
2. **Write Topic Sentence:** *Today we are going to answer a question with our writing. I will write that question on our writing board: **How do butterflies change as they grow?***  
**Plan:** *We will start our writing with this question and then we will write an answer to the question. Watch me write the question:*  
**Write:** **How do butterflies change as they grow?** (Think aloud as you write, mentioning the capital letter, the question word {how}, and the question mark.)

**Read:** Read aloud pointing to each word. Read a second time asking students to “read” with you. **How do butterflies change as they grow?**

3. **Write Response sentence:**

**Plan:** *We will tell how butterflies change as they grow. I think we should start by telling about the very beginning of a butterfly’s life. Do you remember what happens at the very beginning? Does it start as a butterfly? No! First, a butterfly begins as a tiny egg on a leaf. Let’s write that.*

**Write:** **First a butterfly begins as a tiny egg on a leaf.**

**Read:** Read aloud pointing to each word. Read a second time asking students to “read” with you.

4. **Expand the response sentence (if you choose):**

**Plan:** *Let’s **think** some more. We answered the question when we wrote, “First a butterfly begins as a tiny egg on a leaf.” What happens next?*

**Write** the sentence or sentences that you have chosen to include on the board, again drawing attention to the capital letter and punctuation by thinking aloud. Read aloud pointing to each word. Read a second time asking students to “read” with you. Possible expansions:

Then a small caterpillar comes out of the egg.

~AND/OR~

The caterpillar eats and gets bigger.

~AND/OR~

Next, the caterpillar makes a chrysalis around itself.

**Read:** Read aloud pointing to each word. Read a second time asking students to “read” with you.

5. **Wrap Up:**

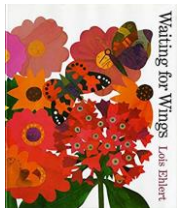
**Plan:** *We answered the question How does a butterfly change as it grows?” Now we need to write a sentence to wrap up our writing. It needs to be a sentence that tells what we just wrote about. Let’s think. We could say, “Finally, it comes out of the chrysalis and is a butterfly.” Does that tell what we just wrote about? Yes! Okay. Let’s write that sentence.*

**Write:** **Finally it comes out of the chrysalis and is a butterfly.**

**Read** the writing in its entirety, repeat with the children reading with you.

How does a butterfly change as it grows? First a butterfly starts as a tiny egg on a leaf. Then a small caterpillar comes out of the egg. The caterpillar eats and gets bigger. Next, the caterpillar makes a chrysalis around itself. Finally, it comes out of the chrysalis and is a butterfly.

Keep the writing posted and in view of students, returning to it and reading together again when possible.



**Botany, Part 2—Butterflies & Bees**

Book 11: Waiting for Wings by Lois Ehlert

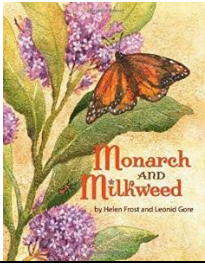
Materials: *Waiting for Wings* book



Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>The Caterpillar</u></b></p> <p>A little caterpillar crawled to the top of a tree. ‘I think I’ll take a nap it said.’</p> <p><i>Use your left arm as the tree and your right hand’s two fingers as the caterpillar- “crawl up the tree moving your fingers.</i></p> <p>So--under a leaf he began to creep</p> <p><i>Cover your two fingers (caterpillar) with your opened left hand (leaf)</i></p> <p>To spin a chrysalis</p> <p><i>Move your two hands around each other</i></p> <p>Then he fell asleep.</p> <p><i>Fold your hands and lay your head on your hands</i></p> <p>He slept and he slept in his chrysalis bed</p> <p><i>Hold your left hand over your right fist for the sleeping caterpillar.</i></p> <p>Till the sun came up one sunny spring day and said, “Wake up, wake up, little sleepy head. Wake up it’s time to get out of bed.”</p> <p><i>Shake your right fist and slowly emerge from under your left hands.</i></p> <p>So--he opened his eyes that sunshiny day and...OH! He was a butterfly and he flew away!</p> <p>Open your fingers of your right hand as your left hand holds your wrist and then fly with both hands away.</p>	<p><b><u>Notes on the Book:</u></b> This is a rhyming book that features butterflies. The last two pages have great information about butterflies and flowers. Be sure to spend some time on these pages.</p> <p><b><u>Key Vocabulary:</u></b> caterpillar, chrysalis, nectar, bloom</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b> <i>We have been learning about butterflies.</i></li> <li><b><u>Introduce the book to generate excitement</u></b> <i>This is a story about butterflies. It is also a rhyming book. Remember, <b>rhyming word</b> are words that end the same way like sip and dip---they both end with -ip. Listen for the rhyming words in this book and let’s see what the butterflies are up to!</i></li> <li><b><u>Point out the title and author</u></b> <i>The title of this story is <u>Waiting for Wings</u>. The author is Lois Ehlert. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li>(point out a few rhyming pairs) <i>View, glue- those words rhyme! Torn, born. Fly, sky.</i></li> <li>Be sure to spend some time on the butterfly identification page after the story. Tell them the butterfly names. <i>Do you know which one is the kind we are watching in the classroom?</i> (Painted Lady) Make sure they see this kind of butterfly and practice its name.</li> </ol> </li> <li><b><u>Draw children’s attention</u></b> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Caterpillar</u>= larvae, or young, butterflies or moths  <u>Chrysalis</u>= (or pupa) is the transformation (a big change) stage in the life cycle of a butterfly. A hard, protective cover forms around the caterpillar, and inside, the butterfly is formed!  <u>Nectar</u>= sugary liquid  <u>Bloom</u>= flowering trees and bushes           </li> </ol> </li> </ol>

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this book (thumbs up/thumbs down)? What was your favorite part? My favorite part was ...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (life cycle of a butterfly)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. Using the toy models, go over the life cycle of the butterfly with the children.
    - i. *First a mommy butterfly lays lots of little butterfly eggs* (show the eggs model).
    - ii. *Then, the eggs hatch into tiny caterpillars* (show tiny caterpillar model).
    - iii. *The tiny caterpillars grow and grow into bigger caterpillars* (show next model of caterpillar).
    - iv. *Then, the caterpillar makes a hard shell around its body called a chrysalis* (show chrysalis model).
    - v. *Finally, after sleeping for many days, a butterfly emerges from the chrysalis, dries its wings, and flies away* (show butterfly model).



**Botany, Part 2—Butterflies & Bees**

Book 12: Monarch and Milkweed by Helen Frost

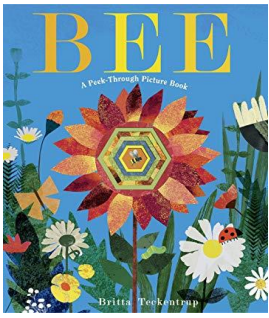
CHALLENGE

**Materials Needed:** *Monarch and Milkweed* book

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>The Caterpillar</u></b>            A little caterpillar crawled to the top of a tree. ‘I think I’ll take a nap it said.’  <i>Use your left arm as the tree and your right hand’s two fingers as the caterpillar-“crawl up the tree moving your fingers.</i></p> <p>So-under a leaf he began to <i>creep</i>  <i>Cover your two fingers (caterpillar) with your opened left hand (leaf)</i></p> <p>To spin a chrysalis  <i>Move your two hands around each other</i></p> <p>Then he fell asleep.  <i>Fold your hands and lay your head on your hands</i></p> <p>He slept and he slept in his chrysalis bed  <i>Hold your left hand over your right fist for the sleeping caterpillar.</i></p> <p>Till the sun came up one sunny spring day and said, “Wake up, wake up, little sleepy head. Wake up it’s time to get out of bed.”  <i>Shake your right fist and slowly emerge from under your left hands.</i></p> <p>So---he opened his eyes that sunshiny day and...OH! He was a butterfly and he flew away!  <i>Open your fingers of your right hand as your left hand holds your wrist and then fly with both hands away.</i></p>	<p><b><u>Notes on Book:</u></b> This is the story about the monarch butterfly’s life cycle and migration. It is a longer book, but children should stay interested.</p> <p><b><u>Key Vocabulary:</u></b> caterpillar, chrysalis, nectar, milkweed</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b>  <b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u>  <i>We are learning about butterflies and we are watching our very own caterpillars grow into butterflies.</i></li> <li><u>Introduce the book to generate excitement</u>  <i>This story is about a specific type of butterfly that we can see in our neighborhoods...the Monarch butterflies. This book tells us more about Monarch butterflies. Listen carefully to see if you can hear the flower that the monarch loves the most and the incredible journey Monarch butterflies will take.</i></li> <li><u>Point out the title and author</u>  <i>The title of this story is <u>Monarch and Milkweed</u>. The authors are Helen Frost and Leonid Gore. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li><i>Milkweed is a very special plant to the monarch butterfly, It is the ONLY plant she will lay her eggs on.</i></li> <li><i>Mommy monarch lays only one egg on each milkweed plant.</i></li> <li><i>These are the same butterflies that we are watching grow in our classroom!</i></li> </ol> </li> <li><u>Draw children’s attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Caterpillar</u>= larvae, or young, butterflies or moths  <u>Chrysalis</u>= (or pupa) is the transformation (a big change) stage in the life cycle of a butterfly. A hard, protective cover forms around the caterpillar, and inside, the butterfly is formed!  <u>Nectar</u>= sugary liquid  <u>Milkweed</u>= special plant—only one on which the Monarch will lay her eggs</li> </ol> </li> </ol>

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (monarch butterflies)
  - b. *What did the caterpillar eat?* (milkweed leaves)
  - c. *What does the monarch butterfly eat?* (nectar)
  - d. *What special plant does the monarch butterfly lay her eggs on?* (milkweed)
  - e. *Where do monarch butterflies travel in the fall?* (Mexico- to stay warm in the winter) \*on the classroom map, show the monarch journey.
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. Using the toy models, go over the life cycle of the butterfly with the children.
    - i. *First a mommy butterfly lays an egg on a monarch leaf* (show the eggs model).
    - ii. *Then, the egg hatches into a tiny caterpillar* (show tiny caterpillar model).
    - iii. *The tiny caterpillar grows and grows into a bigger caterpillar* (show next model of caterpillar).
    - iv. *Then, the caterpillar makes a hard shell around its body called a chrysalis* (show chrysalis model).
    - v. *Finally, after sleeping for many days, a butterfly emerges from the chrysalis, dries its wings, and flies away* (show butterfly model).



**Botany, Part 2—Butterflies & Bees**



Book 13: Bee: A Peek Through Picture Book by

Materials: *Bee* book

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>The Caterpillar</u></b></p> <p>A little caterpillar crawled to the top of a tree. ‘I think I’ll take a nap it said.’</p> <p>Use your left arm as the tree and your right hand’s two fingers as the caterpillar-“crawl up the tree moving your fingers.</p> <p>So-under a leaf he began to <i>creep</i></p> <p>Cover your two fingers (caterpillar) with your opened left hand (leaf)</p> <p>To spin a chrysalis Move your two hands around each other</p> <p>Then he fell asleep. Fold your hands and lay your head on your hands</p> <p>He slept and he slept in his chrysalis bed Hold your left hand over your right fist for the sleeping caterpillar.</p> <p>Till the sun came up one sunny spring day and said, “Wake up, wake up, little sleepy head. Wake up it’s time to get out of bed.”</p> <p>Shake your right fist and slowly emerge from under your left hands.</p> <p>So---he opened his eyes that sunshiny day and...OH! He was a butterfly and he flew away! Open your fingers of your right hand as your left hand holds your wrist and then fly with both hands away.</p>	<p><b><u>Notes on Book:</u></b> This is peek-through picture book about bees. In this bright and lively book students will discover the big ways this little insect contributes to the beauty of the environment, from pollinating colorful flowers to buzzing about the bright and beautiful meadow.</p> <p><b><u>Key Vocabulary:</u></b> hue, pollen, blossom</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b> <i>We have been learning about flowers and butterflies. We learned that butterflies drink nectar from the flowers. Butterflies are insects (bugs). Another insect that is important to flowers are bees!</i></li> <li><b><u>Introduce the book to generate excitement</u></b> <i>This is a story about Bees. They are another insect like butterflies that are very important to flowers. Like butterflies, they drink the nectar from flowers and carry pollen from one flower to another. By mixing pollen we get more flowers! So, without bees and butterflies we would not have flowers. They are important to our world! Listen for rhyming words as I read!</i></li> <li><b><u>Point out the title and author</u></b> <i>The title of this story is <u>BEE</u>. The author is Britta Teckentrup. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li><i>Pollen is a powdery substance on a flower that needs to mix with other flowers to make more flowers!</i></li> <li><i>A bee’s special job is to spread pollen from one flower to another flower.</i></li> <li><i>Bees carry pollen to flowers on trees to make help them make fruit!</i></li> <li><i>The miracle= bees help make more flowers. Bees are very important!</i></li> <li><i>Point out some rhyming words- day, sway- gold, unfold- sing, wing</i></li> </ol> </li> </ol>



3. Draw children's attention to key content, vocabulary, and story elements: characters, setting, the problem, etc.
  - a. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!
    - Hue= shades of color
    - Pollen= powdery substance on a flower that is needed to make more flowers
    - Blossom= flowering plants

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (bees)
  - b. *Why are bees important?* (they help make more flowers)
  - c. *How does the bee help make more flowers?* (they spread pollen from flower to flower)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *Butterflies and bees spread pollen from flower to flower.*
  - b. *Bees like to visit flowers that are many different hues, colors.*
  - c. *Blossoms grow on trees and bees visit them and spread pollen from flower to flower to help them grow fruit!*



**Botany, Part 3—Trees**

**Book 14: A Tree Is Nice by Janice May Udry**

Materials: *A Tree Is Nice* book

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>Birds in a Tree</u></b>            There was one little bird, in            a little tree. She was all            alone and she didn't want            to be.  <i>Hold up one finger, make it            wiggle as the little bird.</i></p> <p>So she flew far away, over            the sea  <i>Fly the bird around and then            behind your back.</i></p> <p>And brought back a friend            to live in the tree.  <i>Bring your hand back around            from your back, now with 2            fingers up.</i></p> <p>Repeat, substituting two,            three, four, for one as you            finish each verse.</p> <p><b><u>Last Verse:</u></b>            Now there are 5 little birds            living in the tree. They are            5 kind friends that are            happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b><u>Notes on Book:</u></b> This is a classic tale about the beauty of our everyday world. Students will be introduced to the many functions of trees while observing beautiful watercolor pictures.</p> <p><b><u>Key Vocabulary:</u></b> Trunk, limbs, branches, leaves, hoe, shade</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b>  <b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b>  <i>For the next few days we are going to talk about trees. Like flowers, trees are another plant that are alive and need soil, sun, and water to live. This book tells us all the important jobs of a tree.</i></li> <li><b><u>Introduce the book to generate excitement</u></b>  <i>Let's look at the cover of this book. What do you think this book will be about? This book tells us all the important jobs of a tree. Let's find out all of the ways that trees are useful!</i></li> <li><b><u>Point out the title and author</u></b>  <i>The title of this story is <u>A Tree is Nice</u>. The author is Janice May Udry. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li><i>Oh, birds like trees because they can build their nest in the tree.</i></li> <li><i>Because they are alive, trees need water, sun, and soil just like our bean and flower.</i></li> <li><i>It takes a very long time for a tree to grow big</i> (point out the boy in comparison to the little tree and bigger tree).</li> </ol> </li> <li><b><u>Draw children's attention</u></b> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Trunk</u>= The trunk is the main body of the tree. It is covered in bark. The branches grow from the trunk.  <u>Limbs</u>= a fork in the tree – where it splits into two branches  <u>Branches</u>= pieces connected to the trunk of the tree</li> </ol> </li> </ol>

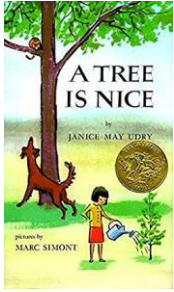
Leaves= grow from branches, usually green, help to feed the tree through photosynthesis

Hoe= garden tool used to plant a tree

Shade= a dark spot from something blocking the sun

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (trees)
  - b. *How are trees useful?* (use pictures from the story to prompt as needed)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *What are the parts of a tree?*
    - i. *Trunk, branches, limbs, leaves*



## Botany, Part 3 – Trees



### Book 14: *A Tree is Nice* by Marc Simont

#### Shared Writing

Materials: Book, white board or chalkboard to create shared writing

✓ Discuss and  
Respond to Questions

#### Shared Writing Routine:

- Plan – **talk to the children** about what to write
- Write – write within view of the children and **“think aloud”** as you write your sentence, highlighting the vocabulary and conventions you planned
- Read – **Point to each word** and read the sentence together.

#### Shared Writing Preparation Template: Discuss and Respond to Questions

**Topic of Message** (the question can be the first sentence in the writing): *Question you will be responding to:* **Why is a tree nice?**

**Vocabulary** words to include:

Trunk= The trunk is the main body of the tree. It is covered in bark. The branches grow from the trunk.

Limbs= a fork in the tree – where it splits into two branches

Branches= pieces connected to the trunk of the tree

Leaves= grow from branches, usually green, help to feed the tree through photosynthesis

Hoe= garden tool used to plant a tree

Shade= a dark spot from something blocking the sun

**Specific letter(s) or conventions to highlight:**

Capital letters, **question mark**, period and letter focused on in Alphabetic Group

**Plan your sentences.** This writing can use the question as the topic sentence.

Question: **Why is a tree nice?**

Possible Response: **Trees have leaves**

Expanded Possible Response: **Trees have leaves we can rake up and play in when it's Fall.**

#### S IN THE PROCESS:

6. **Discuss the book and vocabulary:** *We read a book called A Tree is Nice. In this book we read about all the things that make trees nice. Let's look through the book and remember some of the reasons that trees are nice. (Flip through a few pages and ask children to recall what makes trees nice.) Trees are so wonderful. They do so many things that we can enjoy. Today, we are going to answer the question “Why is a tree nice?” We can use the pictures and the words in this book to help us answer that question. Are you ready to help me write?*
7. **Write Topic Sentence:** *Today we are going to answer a question with our writing. I will write that question on our writing board:*  
**Plan:** *We will start our writing with this question and then we will write an answer to the question. Watch me*

*write the question:*

**Write:** **Why is a tree nice?** (Think aloud as you write, mentioning the capital letter, the question word {why}, and the question mark.)

**Read:** Read aloud pointing to each word. Read a second time asking students to “read” with you. **Why is a tree nice?**

8. **Write Response sentence:**

**Plan:** *We will use words from this sentence to begin our first sentence. What are some important words from our question to include in our answer? Yes, a tree is nice. Those are important words to include. So we can begin our answer with “A tree is nice because....” Who can help me think of something nice about trees to end that sentence? Yes, trees have leaves. In the Fall, the leaves fall down and we can play in them. Let’s write that.*

**Write:** **A tree is nice because it has leaves that we can play in when they fall down.**

**Read:** Read aloud pointing to each word. Read a second time asking students to “read” with you.

9. **Expand the response sentence (if you choose):**

**Plan:** *Let’s **think** some more. We answered the question when we wrote, “A tree is nice because it has leaves that we can play in when they fall down.” Can we add more information about trees? What are some other nice things trees do for us?*

**Write** the sentence or sentences that you have chosen to include on the board, again drawing attention to the capital letter and punctuation by thinking aloud. Read aloud pointing to each word. Read a second time asking students to “read” with you. Possible expansions:

Trees are nice because birds can build their nests in it.

~AND/OR~

Trees are nice because some of them give us apples to eat.

**Read:** Read aloud pointing to each word. Read a second time asking students to “read” with you.

10. **Wrap Up:**

**Plan:** *We answered the question “Why is a tree nice?” Now we need to write a sentence to wrap up our writing. It needs to be a sentence that tells what we just wrote about. Let’s think. We could say, “Trees do many wonderful things for us.” Does that tell what we just wrote about? Yes! Okay. Let’s write that sentence.*

**Write:** **Trees do many wonderful things for us.**

**Read** the writing in its entirety, repeat with the children reading with you.

**Why is a tree nice?** A tree is nice because it has leaves we can play in when they fall down. A tree is nice because birds can build their nests in it. Trees are nice because they give us apples to eat. Trees do many wonderful things for us.

Keep the writing posted and in view of students, returning to it and reading together again when possible.



## Botany, Part 3—Trees

### Book 15: A Grand Old Tree by Mary Newell DePalma

Materials: *A Grand Old Tree* Book, Life Cycle of a Tree Cards (see materials folder)

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>Birds in a Tree</u></b>            There was one little bird, in a little tree.            She was all alone and she didn't want to be.  <i>Hold up one finger, make it wiggle as the little bird.</i></p> <p>So she flew far away,            over the sea  <i>Fly the bird around and then behind your back.</i></p> <p>And brought back a friend to live in the tree.  <i>Bring your hand back around from your back, now with 2 fingers up.</i></p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p><b><u>Last Verse:</u></b>            Now there are 5 little birds living in the tree.            They are 5 kind friends that are happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b><u>Notes on Book:</u></b> This is a story about the life of one grand tree. It is a bit sad, but tells about the importance of a tree, its contributions, and its life cycle.</p> <p><b><u>Key Vocabulary:</u></b> Trunk, roots, branches, leaves, sowed seeds</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b>  <i>We have been learning about trees. Today, we are going to learn about the life cycle of a tree.</i></li> <li><b><u>Introduce the book to generate excitement</u></b>  <i>Let's look at the cover of this book. What do you notice in the picture on the cover? I see lots of different creatures. Can you name these creatures? Let's find out more about the life cycle of a tree!</i></li> <li><b><u>Point out the title and author</u></b>  <i>The title of this story is <u>A Grand Old Tree</u>. When something is grand, it means that it is large and beautiful. The author is Mary Newell DePalma. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li><i>Trees are very important homes for many animals.</i></li> <li><i>Birds carry tree and plant seeds far away.</i></li> <li>Point out how the tree changed across the seasons—<i>no leaves in the winter, colorful leaves that fall off the trees in the fall, flowers in the spring, and green leaves in the summer.</i></li> <li><i>When trees die, they become part of the earth, part of the soil.</i></li> </ol> </li> <li><b><u>Draw children's attention</u></b> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Trunk</u>= The trunk is the main body of the tree. It is covered in bark. The branches grow from the trunk.  <u>Roots</u>= grow under the ground at the bottom of the trunk and get water</li> </ol> </li> </ol>

and nutrients from the dirt.

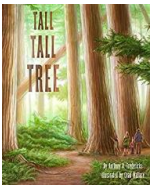
Branches= pieces connected to the trunk of the tree

Leaves= grow from branches, usually green, help to feed the tree through photosynthesis

Sowed Seeds= spread the seeds around so they can grow into new trees

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (the life cycle of a tree)
  - b. *Who made their home in the grand old tree?* (birds, squirrels, caterpillars, ladybugs)
  - c. *Use the life cycle cards to review the life of the grand old tree:*
    - i. *Seed*
    - ii. *Sprout*
    - iii. *Sapling*
    - iv. *Mature tree (grand)*
3. Retell: Tell A Simple Guided Retell—pause before saying the bolded word so that the children join in. *I am going to briefly tell the story we just read and I would like you to help me!*
  - a. *Once there was a Grand Old **TREE**. Her roots sank deep in the earth and her branches reach high in the **SKY**. She was a home for many **ANIMALS**. Birds made **NESTS** in her branches and squirrels played in her leaves. She lived for many years and sowed many seeds. When she was very old she died and her trunk and branches became a part of the **EARTH**.*



### Botany, Part 3—Trees

Book 16: Tall Tall Tree by Anthony D. Fredericks



**Materials Needed:** *Tall Tall Tree* book



Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>Birds in a Tree</u></b>            There was one little bird, in a little tree.            She was all alone and she didn't want to be.  <i>Hold up one finger, make it wiggle as the little bird.</i></p> <p>So she flew far away,            over the sea  <i>Fly the bird around and then behind your back.</i></p> <p>And brought back a friend to live in the tree.  <i>Bring your hand back around from your back, now with 2 fingers up.</i></p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p><b><u>Last Verse:</u></b>            Now there are 5 little birds living in the tree.            They are 5 kind friends that are happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b><u>Notes on Book:</u></b> This book describes some of the animals that make their homes in and around tall redwood trees. Rhyming words help the reader to anticipate the number that is coming next. Children are encouraged to find and count the animals in groups from 1-10.</p> <p><b><u>Key Academic Vocabulary:</u></b> seldom, canopy, darting, roosting</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b>  <b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b>  <i>We have been learning about trees. Today, we are going to learn about very tall trees called redwoods. We will meet some of the animals that make their homes in and around this type of tree.</i></li> <li><b><u>Introduce the book to generate excitement</u></b>  <i>Let's look at the cover of this book. When I look at this picture, I almost can't believe what I'm seeing. Do you see these tiny people next to this huge tree? Do you believe that trees can grow this big?</i></li> <li><b><u>Point out the title and author</u></b>  <i>The title of this story is <u>Tall, Tall Tree</u>. The author is Anthony D. Fredericks. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li><i>Point out and count some animals as you read.</i></li> <li><i>Salamanders! We learned about those already! Look! They also live around redwood trees.</i></li> <li><i>Practice counting to 10 altogether.</i></li> <li><i>On the last page, point out the people in comparison to the redwood tree. Wow! Look at the people standing next to the redwood tree. I can barely see them because they are so tiny compared to the huge, gigantic redwood trees!</i></li> </ol> </li> <li><b><u>Draw children's attention</u></b> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Seldom</u>= hard to spot, not seen very often  <u>Canopy</u>= learned this when we talked about the rainforest- the very top</li> </ol> </li> </ol>



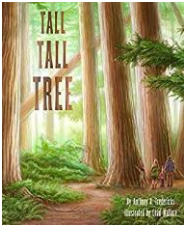
of the trees in the forest

Darting= moving all around very quickly

Roosting= settling into sleep, often on a branch

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (the animals that live around big Red Wood trees)
  - b. *Who lives around the redwood trees?* (Salamanders, chipmunks, etc.)
  - c. *What were the woodpeckers doing?* (sorting acorns)
  - d. Math Story Problem: (Open the book to the page with the 4 busy woodpeckers.) *Let's read this page again.* (Read text aloud.)  
*Woodpeckers are birds. I see some in this picture. Let's count them.*  
(Count only the 3 large woodpeckers.) *Wait a minute! The story said there were 4 woodpeckers. We only counted 3. How many more woodpeckers do we need to find? We found 3 but we need to find 4. Yes! One. We need to find one more woodpecker because 4 is one more than 3. Can anyone find the one woodpecker we didn't count? It must be hiding somewhere. There it is! Thank you for helping me to figure out how many more 4 is than 3 so we could find all of the woodpeckers in the picture.*
  - e. *Use the life cycle cards to review the life of the grand old tree:*
    - i. *Seed*
    - ii. *Sprout*
    - iii. *Sapling*
    - iv. *Mature tree (grand)*
3. Activity: Work together to do the ***Find the Hidden Animals*** activity at the end of the book. *You've met 10 animals (from 1 to 10) that live in and around a redwood tree. Did you see other animals "hiding" in the illustrations (pictures)? Look closely for these critters. Some of them only show a part of themselves.*



## Botany, Part 3—Trees

### **Book 16: Tall Tall Tree** **1, 2, 3 Shared Story Routine** **Re-Read Activity for this Book**

**Materials Needed:** *Tall, Tall Tree* Book, animal picture cards, number cards (in materials section)



#### **Learning New Things—1, 2, 3 Shared Storybook**

##### **Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about animals that live in and around redwood trees.*

2. Point out the title & author –ask if anyone can tell you what the author does.

*The title of this story is Tall, Tall Tree. The author is Anthony D. Fredericks. Remember, the author is the person who wrote the story.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Listen as I read this story again! When I'm finished I'll ask you questions about what happened in the story.*

##### **During:**

1. Read with excitement and fluency.
2. Model Thinking Aloud/Draw Attention to Key Points.
  - a. (Let's count them- one, two, three) *Do you think this child could reach all the way around the tree?*
  - b. (Two brown and spotted owls) *What are the owls having for dinner? Does that sound like a yummy meal to you?*
  - c. (Eight sleeping bats) *Look at these bats. They're upside down! Do you sleep like a bat?*
  - d. (Crawl along the needles) *Where are the needles in this picture? Why are the leaves of the Red Wood called needles?*
3. Highlight key vocabulary, content, and story elements.

- a. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions.

Reinforce these words throughout the day!

Seldom= hard to spot, not seen very often

Canopy= learned this when we talked about the rainforest- the very top of the trees in the forest

Darting= moving all around very quickly

Roosting= settling into sleep, often on a branch




##### **After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

*Did you like this book (thumbs up/thumbs down)? What was your favorite part of the book? My favorite part of the book was...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *What was this story about? (The animals that live in and near the Red Wood trees)*
  - b. *Which animal was your favorite?*
  - c. *Would you like to visit a huge Red Wood tree? Why?*
3. Follow Up activity: Do a variety of small group math activities across the next week or two. See **Botany Unit Materials** for math activity cards and manipulatives.



<b>Botany, Part 3—Trees</b>  <u>Book 17: 100 Bugs by Kate Narita</u>  <b>Materials Needed:</b> <i>100 Bugs</i> book	  
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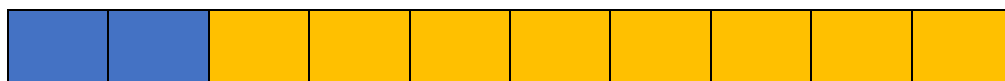
Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p style="text-align: center;"><b><u>Birds in a Tree</u></b></p> <p>There was one little bird, in a little tree. She was all alone and she didn't want to be.</p> <p style="text-align: center;">Hold up one finger, make it wiggle as the little bird.</p> <p>So she flew far away, over the sea</p> <p style="text-align: center;">Fly the bird around and then behind your back.</p> <p>And brought back a friend to live in the tree.</p> <p style="text-align: center;">Bring your hand back around from your back, now with 2 fingers up.</p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p style="text-align: center;"><u>Last Verse:</u></p> <p>Now there are 5 little birds living in the tree. They are 5 kind friends that are happy as can be.</p> <p style="text-align: center;">Wiggle 5 happy fingers!</p>	<p><b><u>Notes on Book:</u></b> In this book students will learn different ways to add to 10 using 10 different kinds of bugs.</p> <p><b><u>Key Academic Vocabulary:</u></b> explorers, farrow, weather vane, zooming</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u> <i>We have been learning about bugs and trees. Today, we are going to count 100 bugs!</i></li> <li><u>Introduce the book to generate excitement</u> <i>This book will teach us lots of different ways to add to 10. We will see lots of different types of plants and bugs!</i></li> <li><u>Point out the title and author</u> <i>The title of this story is <u>100 Bugs!</u> The author is Kate Narita. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li><i>Point out and count some bugs and plants as you read.</i></li> <li><i>Point out key vocabulary as you read. Explorers, farrow, weather vane, zooming</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.       <ol style="list-style-type: none"> <li><i>Where does the story take place? Outside, barn, etc.</i></li> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Explorers</u>= a person who goes on adventures to find new places/things  <u>Farrow</u>= a litter (born at the same time) of pigs  <u>Weather vane</u>= shows which way the wind is moving  <u>Zooming</u>= move very quickly         </li> </ol> </li> </ol>

**After:**

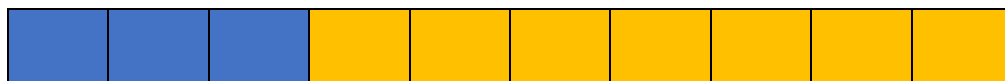
1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (bugs and plants, counting to 10)
  - b. *Who was in the story?* (boy and girl)
  - c. *Let's practice counting to 10 together!*
3. Activity: Using colored blocks or counters, model different ways to add to 10. *Let's practice counting to 10 with blocks!*
  - a.  $1+9, 9+1$
  - b.  $2+8, 8+2$
  - c.  $3+7, 7+3$
  - d.  $4+6, 6+4$
  - e.  $5+5, 5+5$



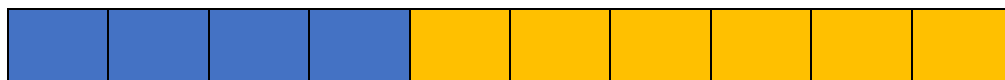
*I have 1 blue block and 9 orange blocks. How many blocks do I have altogether? (Point and count out loud) I have 10 blocks!*



*I have 2 blue blocks and 8 orange blocks. How many blocks do I have altogether? (Point and count out loud) I have 10 blocks!*



*I have 3 blue blocks and 7 orange blocks. How many blocks do I have altogether? (Point and count out loud) I have 10 blocks!*



*I have 4 blue blocks and 6 orange blocks. How many blocks do I have altogether? (Point and count out loud) I have 10 blocks!*



*I have 5 blue blocks and 5 orange blocks. How many blocks do I have altogether? (Point and count out loud) I have 10 blocks!*

\*Continue on if students are still engaged and switch the blue and orange blocks (1 orange + 9 blue, etc). If ready, give students an opportunity to put blue and orange blocks together to make 10. Provide a 10s frame for additional support.

	10s frame				



## Botany, Part 3—Trees

### **Book 17: 100 Bugs!** **1, 2, 3 Shared Story Routine** **Re-Read Activity for this Book**

**Materials Needed:** *100 Bugs!* Book, insect picture cards (in materials section), tactile number cards

CHALLENGE



### **Learning New Things—1, 2, 3 Shared Storybook**

#### **Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about different kind of insects. Each group of insects was in two spots and when we counted them altogether there were 10.*

2. Point out the title & author –ask if anyone can tell you what the author does.

*The title of this story is 100 Bugs! A Counting Book. The author is Kate Narita. Remember, the author is the person who wrote the story. The illustrator is Suzanne Kaufman. She drew the pictures.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Listen as I read this story again! When I'm finished I'll ask you questions about what happened in the story.*

#### **During:**

1. Read with excitement and fluency.
2. Model Thinking Aloud/Draw Attention to Key Points.
  - a. (Walkingsticks) *Walkingsticks are so hard to find! They look just like real sticks. Can you help me find them in this picture? It says there's one by the old hose and nine by the gold rose.*
  - b. (Ladybugs) *Let's count the ladybugs in this picture. There are four by the rafters- that's the ceiling- and six by the asters- those are purple flowers. Count together. 4 ladybugs in the rafters and 6 by the asters. Four plus 6 equals ten!*
  - c. (Damsel flies) *I wonder how many damselflies there are altogether? There are seven by the wishing well and three by the coralbells. Let's count them to find out how many that is altogether.*
3. Highlight key vocabulary, content, and story elements.
  - a. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions.

Reinforce these words throughout the day!

Explorers= a person who goes on adventures to find new places/things

Farrow= a litter (born at the same time) of pigs

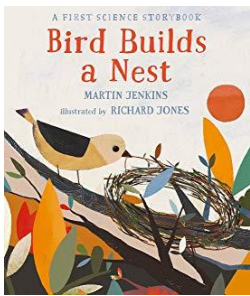
Weather vane= shows which way the wind is moving

Zooming= move very quickly

#### **After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.  
*Did you like this book (thumbs up/thumbs down)? What was your favorite part of the book? My favorite part of the book was...*
2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. **What** was this story about? (Different kinds of insects)
  - b. **Which** insect was your favorite? (My favorite insect was...)
  - c. **Math Story Problem:** *There were so many interesting bugs in this book!* (Show page with leafhoppers.) *On this page there are 3 leafhoppers by the farrow. Remember that farrow means a group of animals that were born at the same time. There were 7 leafhoppers by the yarrow. Yarrow is this plant over here. That's 10 leafhoppers all together. How many leafhoppers would there be if the ones by the pigs hopped away?* (Cover pigs with hand.) *There were 10 leafhoppers and 3 hopped away. How many are left? Let's count to find out.* (Count the 7 leafhoppers by the yarrow.) *Seven! Ten take away three equals seven. Thank you for helping me to figure out that math problem.*
3. Follow Up activity: Do a variety of small group math activities across the next week or two. See **Botany Unit Materials** for math activity cards and manipulatives.





**Botany, Part 4—Birds**

Book 18: Bird Builds a Nest by Martin Jenkins

Materials: *Bird Builds a Nest* Book



Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>Birds in a Tree</u></b>            There was one little bird, in a little tree. She was all alone and she didn't want to be.  <i>Hold up one finger, make it wiggle as the little bird.</i></p> <p>So she flew far away, over the sea  <i>Fly the bird around and then behind your back.</i></p> <p>And brought back a friend to live in the tree.  <i>Bring your hand back around from your back, now with 2 fingers up.</i></p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p><b><u>Last Verse:</u></b>            Now there are 5 little birds living in the tree. They are 5 kind friends that are happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b><u>Notes on Book:</u></b> This book talks about how birds build their nests. It also introduces children to some math and science concepts: small/medium/large, light/heavy, push/pull, and counting.</p> <p><b><u>Key Vocabulary:</u></b> pushing, pulls, delicious, twigs</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b>  <b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b>  <i>We have been talking about plants &amp; trees. We've talked about what plants &amp; trees need to live and how insects (like butterflies and bees) and animals need plants for food and shelter. Now we are going to learn more about how birds need plants and trees. Birds need plants. They need plants to help make their nests.</i></li> <li><b><u>Introduce the book to generate excitement</u></b>  <i>Let's look at the cover of this book. What do you think this book will be about? In this book we will read about how a bird makes a nest.</i></li> <li><b><u>Point out the title and author</u></b>  <i>The title of this story is <u>Bird Builds a Nest</u>. The author Martin Jenkins. Remember, the author is the person who wrote the story. The illustrator is Richard Jones. Does anyone remember what the illustrator of a story does? The illustrator draws the pictures!</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li><i>I wonder what the bird wants for breakfast...Look! It is going to eat a juicy worm!</i></li> <li><i>The bird needs twigs. I wonder why it needs twigs....</i></li> <li><i>The bird is using the twigs to build something round...hmm...I wonder what it will be!</i></li> <li><i>It's a nest! Why do birds build nests? Oh! Eggs!</i></li> </ol> </li> <li><b><u>Draw children's attention</u></b> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><b><u>Key Vocabulary</u></b> Briefly define/highlight key vocabulary using child friendly</li> </ol> </li> </ol>

definitions. Reinforce these words throughout the day!

Pushing= when you try to move something away from you

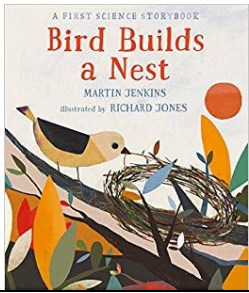
Pulls= when you move something towards (closer to) you

Delicious= very tasty

Twigs= small sticks

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (a bird building a nest)
  - b. *Where did the bird build the nest?* (on a tree branch)
  - c. *What did the bird use to make its nest?* (twigs)
  - d. *What did the bird eat for breakfast?* (worm)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *The bird used twigs to build her nest.*
  - b. *Birds think worms are delicious!*
  - c. *What are some things the bird pushes into place?* (twigs)
  - d. *What does the bird pull from the ground?* (worm)



## **Book 18: Bird Builds a Nest**

### **1, 2, 3 Shared Story Routine Re-Read Activity for this Book**



Materials: Book, nest and bird matching picture cards

#### **Learning New Things—1, 2, 3 Shared Storybook**

##### **Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about a bird who is building her nest.*

2. Point out the title & author –ask if anyone can tell you what the author does.

*The title of this story is Bird Builds a Nest. The author is Martin Jenkins. Remember, the author is the person who wrote the story.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Listen as I read this book again. After I read, we will play a game where we match different kinds of birds to their nests. Every bird makes its nest a little differently. Let's read this story again to remember how this bird builds its nest.*

##### **During:**

1. Read with excitement and fluency.
2. Model Thinking Aloud/Draw Attention to Key Points.
  - a. *Point out math terms: small/medium/large, light/heavy, push/pull, counting*
  - b. (last page) *The nest was waiting for eggs! Let's count them together!*
3. Highlight key vocabulary, content, and story elements.
  - a. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions.

Reinforce these words throughout the day!

Pushing= when you try to move something away from you

Pulls= when you move something towards (closer to) you

Delicious= very tasty

Twigs= small sticks

##### **After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

*Did you like this book (thumbs up/thumbs down)? What was your favorite part of the book? My favorite part of the book was...*

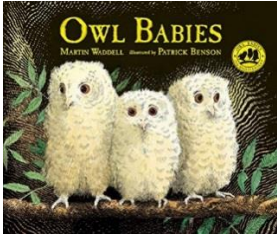
2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *What was this story about? (a bird building its nest)*

- b. *Why did the bird build a nest?* (for her eggs)
- c. *What did the bird use to build its nest?* (twigs)

3. Follow Up activity: Bird/Nest Matching

For this activity you are going to work with the children to match different kinds of birds to their nests.

- a. Show the children the pictures of the birds. Name the birds in each picture. Children repeat the bird names.
- b. Show the children the cards with pictures of nests. Talk about the characteristics of each nest. *Where is the nest? What is the nest made from? Is the nest big or small?*
- c. Match the birds to their nest. Ask questions like, *Which kind of bird would make a big nest near water?*
- d. After matching the birds to their nests, review the work. *Yes. This is a hummingbird's nest. Look. The hummingbird is tiny and so is its nest. The hummingbird makes its round nest with tiny twigs.*



**Botany, Part 4—Birds**

Book 19: Owl Babies by Martin Waddell

Materials: *Owl Babies* Book

Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b>Birds in a Tree</b>            There was one little bird, in a little tree. She was all alone and she didn't want to be.  <i>Hold up one finger, make it wiggle as the little bird.</i></p> <p>So she flew far away, over the sea  <i>Fly the bird around and then behind your back.</i></p> <p>And brought back a friend to live in the tree.  <i>Bring your hand back around from your back, now with 2 fingers up.</i></p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p><u>Last Verse:</u>            Now there are 5 little birds living in the tree. They are 5 kind friends that are happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b>Notes on Book:</b> This is a story about three little baby owls waiting for their mother to bring them food.</p> <p><b>Key Vocabulary:</b> trunk, branches, twigs, nest</p> <p><b>Read Using the 1, 2, 3 Shared Story Routine</b></p> <p><b>Before:</b></p> <ol style="list-style-type: none"> <li><u>Introduce the Topic</u>  <i>We have been talking about plants &amp; trees. We've talked about what plants &amp; trees need to live and how insects (like butterflies and bees) and animals need plants for food and shelter. Now we are going to learn more about how birds need plants and trees. Birds need plants. They need plants to help make their nests.</i></li> <li><u>Introduce the book to generate excitement</u>  <i>This is a book about three baby owls. They wake up to find that their mother is not in their nest. Where do you think their mommy went? Let's find out!</i></li> <li><u>Point out the title and author</u>  <i>The title of this story is <u>Owl Babies</u>. The author Martin Waddell. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b>During:</b></p> <ol style="list-style-type: none"> <li><u>Read</u> with very few interruptions so child can get a sense of the full Story.</li> <li><u>Model Thinking Aloud</u> <ol style="list-style-type: none"> <li><i>Trees are very important homes for birds. The owls have built their nest in the tree.</i></li> <li><i>Owls eat mice.</i></li> <li><i>Owls are awake at night.</i></li> </ol> </li> <li><u>Draw children's attention</u> to key content, vocabulary, and story elements: characters, setting, the problem, etc.           <ol style="list-style-type: none"> <li><i>Where does this story take place?</i> (outside, in a tree)</li> <li><b>Key Vocabulary</b> Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!  <u>Trunk</u>= The main stem of a tree. It goes from the ground to the leaves.  <u>Branches</u>= The big parts of the tree that grow out from the trunk.  <u>Twigs</u>= Small sticks  <u>Nest</u>= A bird's home</li> </ol> </li> </ol>

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *Who was this story about?* (3 baby owls- Percy, Sarah, Bill)
  - b. *What happened in the story?* (3 baby owls couldn't find their mother)
  - c. *When did the story take place?* (at night)
  - d. *Did the mommy owl come back? Where do you think she was?* (yes)
3. Activity Tell A Simple Guided Retell—pause before saying the bolded word so that the children join in. *I am going to briefly tell the story we just read and I would like you to help me!*

*Once there were three baby **OWLS** who lived with their mommy in the trunk of a tree. One night they woke up and their mommy was **GONE/NOT THERE**. The 3 owl babies decided to wait for her on the branches of the tree. They worried she might not come home. But, then they heard a swooping sound above them and it was their **MOMMY!** She came home and the 3 owl babies were so happy to see her.*



## Botany, Part 4 – Birds



Tell a Story

Book 19: *Owl Babies* by Martin Waddell

### Shared Writing

Materials: Book, white board or chalkboard to create shared writing

#### Shared Writing Routine:

- **Plan** – talk to the children about what to write
- **Write** – write within view of the children and “**think aloud**” as you write your sentence, highlighting the vocabulary and conventions you planned
- **Read** – **Point to each word** and read the sentence together.

#### Shared Writing Preparation Template: Tell a Story

##### Gist of the Writing:

Following is the structure for creating a story retell with your children for this book:

- First sentence introducing main character and problem (Sarah, Percy, and Bill are baby owls who live with their mother in the hole of a tree and one day they woke up to find their mother was gone).
- Details reflecting how the problem continues (The owl babies left their home and sat on the branches of the tree but their mother didn’t return. The babies got scared and decided to sit on the same branch but still their mother didn’t return).
- Resolution sentence. (Finally their mother came back and they were very happy).

Utilizing this structure, the writing will summarize the story in *Owl Babies* and will reflect the sequence of events that reflect the problem and then the solution.

##### Vocabulary Word(s): Choose some (you won’t be able to include all)

trunk, branches, twigs, nest

##### Specific letter(s) or conventions to highlight:

*Punctuation, capital letters, letter formation*

##### Plan your sentences. *Your sentences should follow the classic story pattern:*

Beginning – Sarah, Percy and Bill are baby owls who live with their mother in the hole of a tree and one day they woke up to find their mother was gone.

Middle – The owl babies came out of their house and sat on the branches of the tree but their mother didn’t come back.

Middle – Then the owl babies got scared and decided to sit on the same branch but still their mother didn’t come back.

Middle – Next the owl babies got very lonely and wished their mother would come home.

End – Finally, their mother came back and they were happy.

#### STEPS IN THE PROCESS

##### 6. **Discuss the book and vocabulary:**

(Show pictures in the book as you discuss the story)

*We read a story called Owl Babies. In the beginning of the story, we meet Sarah, Percy, and Bill. They are baby owls who live in a hole in the trunk of a tree with their mother. One day, the baby owls wake up and their mother is gone! They are so scared. First they went out of their house and sat on the branches but their mother didn’t come back. Then they sat on the same branch but still their mother didn’t come back. They felt lonely and*

*scared. Finally, their mother came back and they were very happy!*

7. **Write Beginning Sentence:**

**Plan:** *Let's write! Stories have a beginning, a middle and an end. In this story, in the beginning, Sarah, Percy, and Bill are baby owls who live in a tree with their \_\_\_\_\_ (mother.)*

**Write:** Write the chosen sentence in view of children and “think aloud” as you write:

*I am starting my sentence so I will begin with a capital letter. As I write each word I make sure to leave a space between each of my words. I have finished my sentence so now I will add something new called an exclamation point. This exclamation point shows that my sentence is done and it shows that it was really a big deal that their mother was gone. Sarah, Percy, and Bill were baby owls who live with their mother in a tree, but one day they woke up and she was gone!*

**Read** aloud, pointing to each word. Read a second time asking children to “read” with you. *Sarah, Percy, and Bill are baby owls who live with their mother in a tree, but one day they woke up and she was gone!*

8. **Write Middle Sentences:**

**Plan:** Gather input from children for the detail sentences:

*Now that we have written our first important sentence let's think about what else we can say. We wrote, Sarah, Percy, and Bill are baby owls who live with their mother in a tree, but one day they woke up and she was gone! We wrote about what happened at the beginning of the story. Now let's write about what happened in the middle of the story. I will write the first part of the sentence and you write the end of the sentence.*

**Write:** The baby owls came out of their home and sat on the branches of the tree but their mother didn't come \_\_\_\_\_ (back/home) ask children for suggestions to finish your sentence. They may need a bit of guidance or some discussion. **The baby owls came out of their home and sat on the branches of the tree but their mother didn't come back.**

**Read** aloud pointing to each word. Read a second time asking children to “read” with you. *The baby owls came out of their home and sat on the branches of the tree but their mother didn't come back.*

\*\*Continue the **Plan/Write/Read** pattern, offering a sentence beginning and planning and writing the end of the sentence with the children. Following are possible sentence starters and possible endings that the children can be guided to create:

Then the owl babies got scared and decided to sit on the same branch but still... their mother didn't come back.

Next the owl babies got very lonely and wished... their mother would come home.

9. **Write Concluding Sentence:**

**Plan:** Again, you will write the sentence starter and children will contribute the end of the sentence. *Let's think about how the story ended. I will write the first part of this next sentence and I would like you to think about how the sentence should end. Finally, their mother came back and they were very \_\_\_\_\_ (happy.)* Ask children for suggestions to finish your sentence. They may need a bit of guidance or some discussion.

**Write:** Write the concluding sentence together, thinking aloud as you write about writing conventions that you would like the children to attend to. **Finally, their mother came back and they were very \_\_\_\_\_ (happy.)**

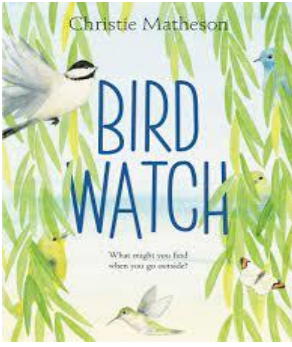
10. **Read Finished Writing Together:** To finish, read the paragraph together pointing to each word. Keep the writing posted and in view of children, returning to it and reading together when possible. *Let's read our story*



*together.*

Sarah, Percy, and Bill were baby owls who live with their mother in a tree, but one day they woke up and she was gone! The baby owls came out of their home and sat on the branches of the tree but their mother didn't come back. Finally, their mother came back and they were very happy.

Please keep the paragraph posted and return to it from time to time.



**Botany, Part 4—Birds**

Book 20: Bird Watch by Christie Matheson

Materials: *Bird Watch* book

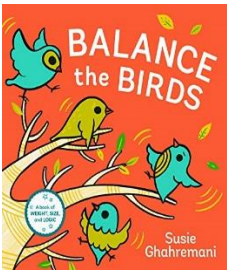


Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>Birds in a Tree</u></b>            There was one little bird, in a little tree.            She was all alone and she didn't want to be.  <i>Hold up one finger, make it wiggle as the little bird.</i></p> <p>So she flew far away,            over the sea  <i>Fly the bird around and then behind your back.</i></p> <p>And brought back a friend to live in the tree.  <i>Bring your hand back around from your back, now with 2 fingers up.</i></p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p style="text-align: center;"><u>Last Verse:</u>            Now there are 5 little birds living in the tree.            They are 5 kind friends that are happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b><u>Notes on Book:</u></b> Count backward from ten as you search for hidden birds in this seek-and-find picture book with beautiful artwork and a focus on counting, and a treasure hunt.</p> <p><b><u>Key Vocabulary:</u></b> treasure, feast, spy, <b>nectar</b></p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b>  <i>We have been talking about plants &amp; trees. We've talked about what plants &amp; trees need to live and how insects (like butterflies and bees) and animals need plants for food and shelter. Now we are going to work on counting while we find hidden birds in the pictures of this book!</i></li> <li><b><u>Introduce the book to generate excitement</u></b>  <i>In this book, we will meet lots of new kinds of birds. We will go on a treasure hunt to see if we can count and find all of the birds together!</i></li> <li><b><u>Point out the title and author</u></b>  <i>The title of this story is <u>Bird Watch</u>. The author is Christie Matheson. Remember, the author is the person who wrote the story.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li>(first page) <i>Let's look at all of the birds we will be asked to find in the story. Talk about characteristics of each, color, size, etc.</i></li> <li><i>As you read, stop and find the birds in the pictures. Practice counting together as you point to each bird. If time permits, allow different students to find and point to the birds.</i></li> <li><i>Briefly discuss vocabulary when you come across it as you read</i> <ol style="list-style-type: none"> <li><i>I can't wait to go on a <u>treasure</u> hunt! Treasure is something very special.</i></li> <li><i>The birds are having a <u>feast</u>! That's a really BIG meal.</i></li> <li><i>I <u>spy</u> lots of birds. I look very closely to find them!</i></li> <li><i>Nectar! I remember that butterflies and bees also like to drink the sugary liquid!</i></li> </ol> </li> </ol> </li> </ol>

3. Draw children's attention to key content, vocabulary, and story elements: characters, setting, the problem, etc.
  - a. *Where does this story take place?* (outside)
  - b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!
    - Treasure= something very special/valuable
    - Feast= a very large meal
    - Spy= to look carefully to find something
    - Nectar= sugary liquid found in flowers

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (counting different types of birds)
  - b. *Who was brave around the hawks?* (the hummingbird)
  - c. *When did the story take place?* (during the day)
3. Review vocabulary & connect content of the book to their knowledge of the topic (2 & 3 should go in the order that makes sense for the book discussion)
  - a. *Trees are very important because they provide a place for birds to live! Trees are a treasure!*
  - b. *Great job spying and counting all of the birds in the pictures!*



**Botany, Part 4—Birds**

Book 21: Balance the Birds by Susie Ghahremani

Materials: Balance the Birds Book



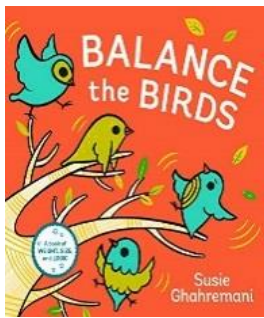
Language Time:	Learning New Things—1, 2, 3 Shared Storybook
<p><b><u>Birds in a Tree</u></b>            There was one little bird, in a little tree.            She was all alone and she didn't want to be.  <i>Hold up one finger, make it wiggle as the little bird.</i></p> <p>So she flew far away,            over the sea  <i>Fly the bird around and then behind your back.</i></p> <p>And brought back a friend to live in the tree.  <i>Bring your hand back around from your back, now with 2 fingers up.</i></p> <p>Repeat, substituting two, three, four, for one as you finish each verse.</p> <p><b><u>Last Verse:</u></b>            Now there are 5 little birds living in the tree.            They are 5 kind friends that are happy as can be.  <i>Wiggle 5 happy fingers!</i></p>	<p><b><u>Notes on Book:</u></b> The simple, short text and bright colors of this book invite children to explore concepts of weight and balance.</p> <p><b><u>Key Vocabulary:</u></b> balance, remain, heavy, light</p> <p><b><u>Read Using the 1, 2, 3 Shared Story Routine</u></b></p> <p><b><u>Before:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Introduce the Topic</u></b>  <i>We have been talking about plants &amp; trees. We've talked about what plants &amp; trees need to live and how insects (like butterflies and bees) and animals need plants for food and shelter. Now we are going to look at birds balancing! When we balance we make sure both sides are equal (the same).</i></li> <li><b><u>Introduce the book to generate excitement</u></b>  <i>Let's look at the cover of our book. I see (point and count) 1, 2, 3, 4 birds on a tree. It looks like the birds might be having a hard time staying on the tree. I wonder why?</i></li> <li><b><u>Point out the title and author</u></b>  <i>The title of this story is <u>Balancing Birds</u>. The author is <u>Suzie Ghahremani</u>. Remember, the author is the person who wrote the story. — I think this book is going to be about birds and helping them to balance.</i></li> </ol> <p><b><u>During:</u></b></p> <ol style="list-style-type: none"> <li><b><u>Read</u></b> with very few interruptions so child can get a sense of the full Story.</li> <li><b><u>Model Thinking Aloud</u></b> <ol style="list-style-type: none"> <li>Point out the key vocabulary words.               <ol style="list-style-type: none"> <li><b>Balance-</b> <i>This is how the birds balance. They are even on both side. There are four here and four over here.</i></li> <li><b>Remain-</b> <i>Half the birds remain. That means half of them are still here on the tree.</i></li> <li><b>Heavy-</b> <i>This side is too heavy. If something is heavy, it weighs a lot and is hard to lift. These four birds are heavy.</i></li> <li><b>Light-</b> <i>This side is too light because there are no birds there. Zero birds weigh nothing so zero birds is light.</i></li> </ol> </li> <li><i>At a number of points in the story pause to count the birds, pointing as you go.</i></li> <li><i>At the end of the book, count the birds on either side of the tree. Some birds are light and some are heavy. Together they balance because the birds on each side of the tree weight the same amount.</i></li> </ol> </li> </ol>

3. Draw children's attention to key content, vocabulary, and story elements: characters, setting, the problem, etc.
  - a. *Where does this story take place?* (in a tree)
  - b. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions. Reinforce these words throughout the day!
    - Balance= even on both sides
    - Remain= leftover
    - Heavy= weighs a lot
    - Light= not heavy, easy to lift

**After:**

1. Ask their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem. *Did you like this story (thumbs up/thumbs down)? What was your favorite part? My favorite part was...*
2. Questions: Ask simple questions about the book.
  - a. *What was this story about?* (birds on a tree trying to balance)
  - b. *What does balance mean?* (to make equal on both sides)
  - c. *Will the sides of the tree balance if one side is heavy and one is light?* (No) *Why not?* (The sides have to weigh the same.)
3. Follow up activity: Shared Retell. Read the retelling below, leaving out the underlined words to see if students can complete the sentence. If they can't after three seconds, provide the word and reread the sentence. Show the key pictures as you retell the story. Consider placing post-it notes in the book to help you find the pages more easily.

*First, there were four birds on both sides of the tree. The birds were balanced. Then, half the birds left, so one side was heavy and one side was light. Last, many small birds came to help balance the big bird that was very heavy.*



## Botany, Part 4—Birds

### **Book 21: Balance the Birds** **1, 2, 3 Shared Story Routine** **Re-Read Activity for this Book**



Materials: *Balance the Birds* Book

### **Learning New Things—1, 2, 3 Shared Storybook**

#### **Before:**

1. Ask if the children can remember what this book is about—show them the cover to remind them.

*Who can raise their hand and tell me what the book is about? This book is about balancing birds. Does anyone remember what it means to balance? Yes! It means that both sides are equal (the same).*

2. Point out the title & author –ask if anyone can tell you what the author does.

*The title of this story is Balance the Birds. The author is Suzie Ghahremani. Remember, the author is the person who wrote the story.*

3. Tell them we are going to read the story again and discuss the story. So be ready to share your ideas!

*Listen as I read this book again. After I read, we will play a game where we will use a scale to balance birds (or other objects you are using).*

#### **During:**

1. Read with excitement and fluency.
2. Model Thinking Aloud/Draw Attention to Key Points.
  - a. *(Half on the left side, and half on the right.) Are these birds balanced?*
  - b. *(Uh oh! Off they go!) Why do you think the birds flew away?*
  - c. *(Four crocs building with blocks) How many crocs were building with blocks? Let's count them.*
  - d. *(Page with large bird approaching and no words) Oh boy! This bird is much larger than this one. Which one is heavier? Will they balance?*
3. Highlight key vocabulary, content, and story elements.
  - a. **Key Vocabulary** Briefly define/highlight key vocabulary using child friendly definitions.

Reinforce these words throughout the day!

Balance= even on both sides

Remain= leftover

Heavy= weighs a lot

Light= not heavy, easy to lift

#### **After:**

1. Ask for their opinion—did they like it? Thumbs up/down. Why? Provide a sentence stem.

*Did you like this book (thumbs up/thumbs down)? What was your favorite part of the book? My favorite part of the book was...*

2. Ask a few questions about story elements and discuss 2-3 interesting vocabulary words.
  - a. *Who was this story about?* (Birds trying to balance on a tree)
  - b. *What does heavy mean?* (Something that weighs a lot is heavy)
  - c. *Who was lighter? The big bird or the little bird?* (The big bird)
3. Follow-up Activity:
  - a. After reading the book, show the children the balance scale and the birds, or the counters you will be using to represent the birds.
  - b. Explain *I will read the book again and this time I will use the balance scale and the birds to act out the story.*
  - c. Starting with eight small birds and one larger bird, read through the book again. On the first page, “Half on the left side and half on the right,” put four birds on each side of the balance scale. Continue in this way, removing and adding birds as the story progresses.
  - d. Point out what is happening with the scale. *Oh, look this side is heavier because it has more birds. It is very low and the other side is high.*
  - e. When the big bird lands, allow the children time to experiment with trying to balance the big bird with smaller birds.

**\*For children ready for a challenge-** Encourage the children to use the birds to act out the story as much as possible. Be sure you have started with the correct number of birds available.

**\*For children who need extra guidance-** Act out the entire story for the children. Allow for lots of time with experimenting with the scale later. Guide the children toward understanding that the word “balance” means that both sides of the scale with sit evenly.

**\*Or, use the bird counters to do one of the activities found in the Botany Materials folder.**

## Wordless Books Small Group Work for the Botany Unit

### Books in this Unit

1. *Little Butterfly*
2. *Bee and Me*

### Wordless Books General Outline

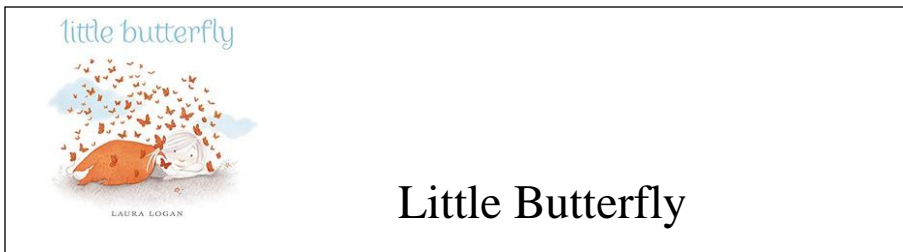
**Skills Targeted:** Length of sentences, retelling, explanations, vocabulary, and listening comprehension, and print/book skills.

**Materials:** Books and follow up activity

#### **Outline of Activity: Wordless book routine—SAMMY**

1. **Show** children the book, read title & author, and generate excitement
2. **Ask** “*What do you think this book is about?*”
3. **Model**--Read it the first time with the children where you tell the story—asking a few basic questions as you read.
4. **Make sure they understood** what happened in the story by asking a few questions/reviewing: who the characters were, what the problem was that resolved, and how it ended.
5. **Your Turn:** Read the story again, this time letting the children tell the story. Provide prompts as needed—what is happening on this page? Who is that? How did the story end? Have the child complete your sentence--The girl and the boy became \_\_\_\_\_(friends).
6. After Reading Activity.





## Little Butterfly

**Skills Targeted:** Length of sentences, retelling, explanations, vocabulary, listening comp., and book skills

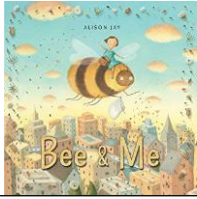
**Materials:** *Little Butterfly* by Laura Logan, butterfly craft materials (coffee filters, markers, cup with water, clothespin, pipecleaners).

**Story Synopsis:** A young girl wearing an orange cloak around her shoulders gets off the school bus. Her cloak tears. A monarch butterfly follows her. Feeling sad, the little girl sits under a tree to look at her cloak. Her cat climbs into her lap but soon snatches the butterfly, tearing its wing. The little girl is angry with her cat and feels sad for the butterfly. She holds the butterfly in her hands before releasing it into the air. The butterfly flies away and the little girl lies down to rest. Hundreds of butterflies join her and she goes on an amazing adventure, soaring through the air with them. The injured butterfly reappears and the little girl runs happily after it, pretending that her torn cloak is a butterfly's wings.

### Outline of Activity: Wordless book routine—SAMMY

1. **Show** children the book, read title & author, and generate excitement by pointing out the little girl, the tear in her cloak, and all the butterflies surrounding her.
2. **Ask** “*what do you think this book is about?*” Ask, “*Have you ever seen so many butterflies?*” “*What do you think this story is going to be about?*”
3. **Model-** Read it the first time with the children where you tell the story—asking a few basic questions as you read. “*What happened to the girl’s cloak?*” “*How does the girl feel?*”
4. **Make sure they understood** what happened in the story by asking a few questions/reviewing. “*Why did the little girl cry?*” “*Do you think the little girl really flew through the air with the butterflies or was she just imagining?*”
5. **Your Turn:** Read the story again, this time letting the children tell the story. Provide prompts as needed. “*The orange thing that the girl is wearing is called a \_\_\_\_\_ (cloak.)*” “*Tell me what happened to the butterfly’s wing.*”
6. **After Reading Activity** (setting)- Remind children that every story happens in a certain place. *The place where the story happens is called the setting.* Ask children what the setting of this story is. “*Where did this story happen?*” If children need support in answering, guide them to an answer by providing two options. “*Did the story happen inside or outside?*”
7. **Craft Time!** After Reading Activity (butterfly craft)- Show the children a completed model of the craft. Explain the steps for making the craft.
  - Use the markers to color the coffee filter.
  - Dip one edge of the coffee filter into the water. Watch as the colors spread.
  - Spread the coffee filter out flat and allow to dry.
  - Draw a face on a clothespin.
  - Glue two small pipe cleaners onto the clothespin to represent antennae.
  - Once the coffee filter is dry, scrunch it up and place it inside the clothespin to make the butterfly’s wings.





## Bee & Me

**Skills Targeted:** Length of sentences, retelling, explanations, vocabulary, listening Comprehension, and print/book skills

**Materials:** *Bee and Me* by Allison Jay, tabs to mark the following pages for story retell:



Items for bee counting and fine motor activity (bowl of tiny bee erasers, tongs, bee hive made from folded paper with numbers written in each chamber.)



**Story Synopsis:** Somewhere in a busy city, a young girl reads a book alone in her room. A bee flies into her bedroom window, frightening her. She traps the bee inside a drinking glass where he becomes weak. The little girl learns from a book that bees need sugar water. She gives some to the bee and he feels better. The little girl releases the bee out her window but he soon returns wet from a storm. This time she lets him in willingly and cares for

him. They spend time together doing fun things and he grows bigger and bigger as she feeds him sugar water. Eventually the bee is so big that he carries her on his back while he flies around visiting plants. He shows her how he helps plants with pollination. They bring some plant seeds back with them and plant them in her window box. The bee flies away. As the seasons change, the plants begin to grow, as does the little girl's friendship with a neighbor. Soon the whole city is full of plants, bees, and butterflies.

### **Outline of Activity: Wordless book routine—SAMMY**

1. **Show** children the book, read title & author, and generate excitement. *“There is a little girl flying on the back of a big bee. The bee is scattering something around the city.”*
2. **Ask** *“what do you think this book is about?”* Ask, *“What do you think the bee is dropping?”* *“What do you think this story is going to be about?”*
3. **Model**-- Read it the first time with the children where you tell the story— asking a few basic questions as you read. *“Oh no! What flew into the girl's room?”* *“Does the bee feel well?”* *“What is the girl doing to help the bee?”*
4. **Make sure they understood** what happened in the story by asking a few questions/reviewing. *“Was the little girl happy to have the bee in her room at first?”* *“How did the little girl help the bee to get better?”* *“What did the bee and the girl do together?”*
5. **Your Turn:** Read the story again, this time letting the children tell the story. Provide prompts as needed. *“The bee feels \_\_\_\_\_ (sick.)”* *“The little girl is feeding the boy \_\_\_\_\_ (sugar water.)”* *“The bee is getting \_\_\_\_\_ (bigger/better.)”*

6. **After Reading Activity (Story Retelling)**- Describe what happened in the beginning, middle, and end of the story. Show the children the pictures (above) that you marked earlier. Discuss what is happening in the picture and how the characters felt.

**Differentiation:**

Children Who Need a Challenge: Encourage the children to use complete sentences. Encourage the children to think critically about how the characters felt at this point in the story.

Children Who Need Support: Support the child's retelling by encouraging them to complete your sentences. For example, "*The bee flew into the little girl's \_\_\_\_\_ (bedroom.) The little girl feels \_\_\_\_\_ (scared.)*"

7. **After Reading Activity (Bee counting and fine motor)**- Show the children the hive, pointing out the numbers inside each chamber. Have the children repeat the numbers after you. Demonstrate using the tongs to pick up the bee erasers, one at a time, and placing them inside the hive chamber. Count slowly as you do this. Stop when you reach the number for that hive chamber. Point to the next hive chamber and ask the children how many bees should go inside. Allow the children to take turns placing bees inside chambers. Once all of the children have had a chance to practice using the tongs to place the correct number of bees into each chamber, the activity can be placed in the nature center for free exploration.

Children Who Need a Challenge: Encourage the children to count and move the bees independently. Model the activity with smaller numbers so the children can practice with the bigger numbers.

Children Who Need Support: Model the activity multiple times. Encourage the children to count with you. Model the higher numbers so the children can practice with the smaller numbers.



## Small Group Math Instruction – Botany

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**General Math Resource – Number Chart**



- Materials:**
- Book
  - Picture cards with groups of flowers
  - Included number cards or Tactile number cards

## Little Honey Bee – Math Activity Cards

Small Number Recognition without Counting

Counting & Number Recognition

More Than/Less Than/Equal To

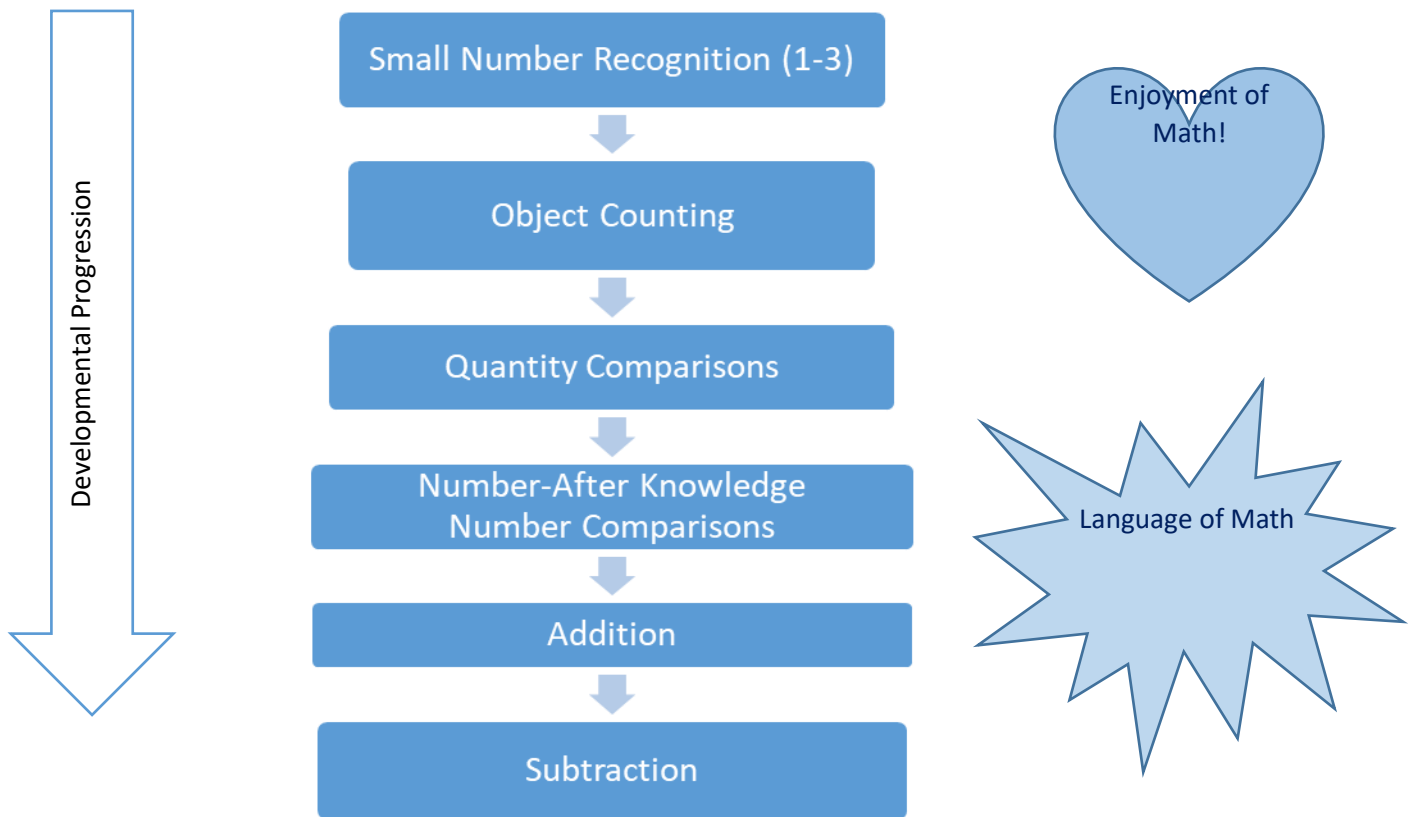
Quantity Comparisons

Number-After Knowledge

Addition

Subtraction

### Developmental Progression for Number Knowledge



Small Number Recognition without Counting – Quantities of 1 - 3

1. Ask the children if they remember what this book was about (show book). Remind them that there were numbers in this book. *"Numbers tell us how many there is of something."*
2. Say, *"Sometimes when there is a really small group of things, I don't even need to count them to know how many are there. I can just look and tell how many."*
3. Demonstrate by setting out a picture card with a small number of flowers (1-3), name the quantity and then check your work by counting the items. Add the correct number card to label the quantity.
4. Continue to set out different flower picture cards with small amounts of flowers (1-3) and encourage the children to quickly name the quantity without counting, check the work by counting the items together, and labeling the quantity with the number card.

Easy- Stay with 1 vs. 2 until they have this solid and without help. Start by having the children who are hesitant to repeat the number after you. Then put the same quantity down for them to state the quantity. Repeat 1 vs 2 many times so children practice saying each number multiple times.

Medium- Follow the procedure outlined above.

Hard- Move quickly and encourage the children to set out their own group to try to trick the teacher. The child sets out a small group of 1-3, the teacher names the quantity (sometimes correctly, sometimes not) and the child tells if the

Counting and Number Recognition

1. Ask the children if they remember what this book was about. Remind them that there were numbers in this book. Say, *"Numbers tell us how many."* Show them your number cards and say *I have some number cards right here. As we read the book, I will put out the number card to match the numbers talked about in the book.*
2. Read the book again (or just look for the numbers on each page) emphasizing the numbers written in the book. Lay out the appropriate number card for each page.
3. Set out the flower picture cards and tell them: *We are going to play a game where we will count these flowers and then find the number card that tells how many flowers there are in each group. These are the same flowers that are in the book. Do you remember the names of some of those flowers?* Put out the picture card with 3 flowers, count them together, and match the correct number card 3.
4. Repeat with pictures with different amounts of flowers. Use the names of the flowers in the book.

For extra guidance: Encourage the child to count with you. For a challenge: Encourage the child to count alone.

Easy- Follow above procedure using numeral cards 1-5 and flowers in groups of 1-5.

Medium- Follow above procedure using numeral cards 1-10 and flowers in groups of 1-10.

Hard- Follow above procedure using numeral cards 10-20 and flowers in groups of 10-20.



### More Than, Less Than, Equal To

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two pictures with different numbers of flowers (1-10) one clearly smaller (2) and one clearly bigger (5 items)
3. Explain. *"Today we are going to play a game with groups of flowers called more than, less than, and equal to. We will say more than for the group that has more—the bigger group, less than for the group that is smallest (has less) and equal to means the groups are the same—they have the same number of flowers"*
4. Count each group of flowers
5. Point out which group is biggest and smallest. *The group that has 5 flowers is bigger, it has more than the group that has 2 flowers. Which group is the bigger group? Let's say this group with 5 (point) has more flowers than this group 3 (point). 5 is more than 3."*
6. Repeat this many times, encouraging children to tell which group has more than the other and which has less than the other. Be sure to create equal groups as well and explain that we say "equal" when the groups have the same number. Encourage the children to say the sentence: This group is greater than/less than/equal to this group.  
\*Note- you will need to make duplicate copies of the cards if you want groups that are equal. Otherwise, focus on the terms "more than" and "less than."

Easy- Move slowly and encourage children to repeat after you (heavy modeling). Use pictures with 1-5 times and start with simply asking which is bigger vs. smaller with clearly bigger and smaller items.

Hard- Give the children the opportunity to "be the teacher" by creating two groups and telling which is greater than or less than.

### Number-After Knowledge

#### Part 1

1. Show children the Number Chart, pointing to the number list at the bottom. *"Here is a list of our numbers from 1 to 10. Let's all say them in order together 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10. Great! We all just counted to 10.* Do this a couple times until they all can do it clearly.
2. Pointing to the number 1 ask the children *what number comes next, what number comes after 1.* Point to the number 3 and ask what comes next. If they cannot tell you, start at number 1 and count up to 4 and point out 4 comes next. Do this for a variety of numbers (1-5), pointing each time as you ask. Once they have this down, ask them without pointing to the number – *what number comes after \_\_\_\_\_?* Once they can do this for 1-5 move on to part 2 and add numbers 6-10 in part 1.

#### Part 2

1. Give each child a number chart and a set of 6 counters (enough to make numbers 1-3 initially).
2. Tell them *"we are going to put the number of counters to represent each number."* Point to the number 1, *how many counters do we need to show 1? Yes one. Let's place the counter above the number 1.* Have each child place one counter above the number 1. Do the same thing for numbers 2 and 3.
3. Ask them questions comparing the numbers 1 – 3. *Which number is bigger, 2 or 3? Yes, look 3 has more counters, 3 is more than/bigger than 2.*
4. Point out that each number is one more than the number before it. 2 is one more than 1, 3 is one more than 2—show this with the counters.

**As children are ready, repeat these steps with numbers 1-5 and then 4-6**

### Addition

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two pictures with groups of flowers (a group of 2 and a group of 1).
3. Explain, *"Today we are going to do addition. Addition means putting together. When we add things together they get bigger"*
4. Count each group of flowers and place the matching numeral cards below the groups.
5. Say, *"Now we are going to find out how many there are altogether. We are going to add these groups."* Show the addition card. *This symbol means addition and we say plus when we read it.* Place the addition sign between the two numeral card and the equals sign after. Point to equal sign -- *This symbol means equals, the number all together.*
6. Count the groups with the children. Place the matching numeral card for the sum at the end of the equation
7. Read the whole equation, encouraging children to read with you. *"Two plus one equals three."*

**Repeat this many times with groups of varying amounts with sums of 2 - 5.**

Easy- Move slowly and encourage children to repeat after you. For example, *"This group has 2. How many? Yes, 2. This group has 1. How many? Yes, 1. When I add them together. I get (point to each manipulative as you count) 1, 2, 3. How many? Yes, 3. Two plus one equals 3. Say that with me again."*

\*Use small groups with sums up to 5. \*Do not use numeral cards.

Hard- Use groups with sums up to 10.

### Subtraction

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out one group of manipulatives with up to 5 manipulatives. Explain, *"Today we are going to do subtraction. Subtraction means taking away. When we subtract something, it gets smaller"*
3. Use the counting manipulatives in your math tools box. Explain, *"This book was about flowers. We are going to pretend that these manipulatives are flowers. We are going to subtract, or take away, flowers."* Count the manipulatives with the children and place the matching numeral card under the group.
4. Place the subtraction sign to the right of the numeral card and say, *"This symbol means subtraction, we say minus when we read it. Now we are going to subtract or take away."*
5. Tell the children how many you will be subtracting and place the matching numeral card to the right of the subtraction sign and the equals sign after that. *"Let's take away 2 flowers."*
6. Encourage the children to count with you as you take away that amount of manipulatives.
7. Say, *"How many are left now?"*
8. Count the remainder together and place the matching numeral card after the equals sign.
9. Read the whole equation. *Five minus two equals three.*

**Repeat this many times with groups of varying amounts and differences up to 10.**

Easy- Move slowly and encourage children to repeat after you \*Use small groups with differences up to 5. \*Do not use numeral cards.

Hard- Use groups with differences up to 20.



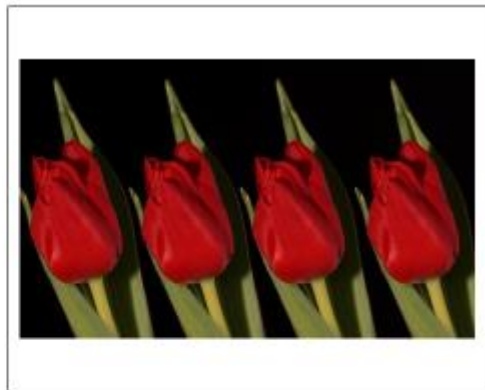
1



2



3



4



5



6



7



8



9



10



**Materials:**

- Book
- Animal Picture cards
- Tactile Number cards

## **Tall Tall Tree – Math Activity Cards**

Small Number Recognition without Counting

Counting & Number Recognition

More Than/Less Than/Equal To

Quantity Comparisons

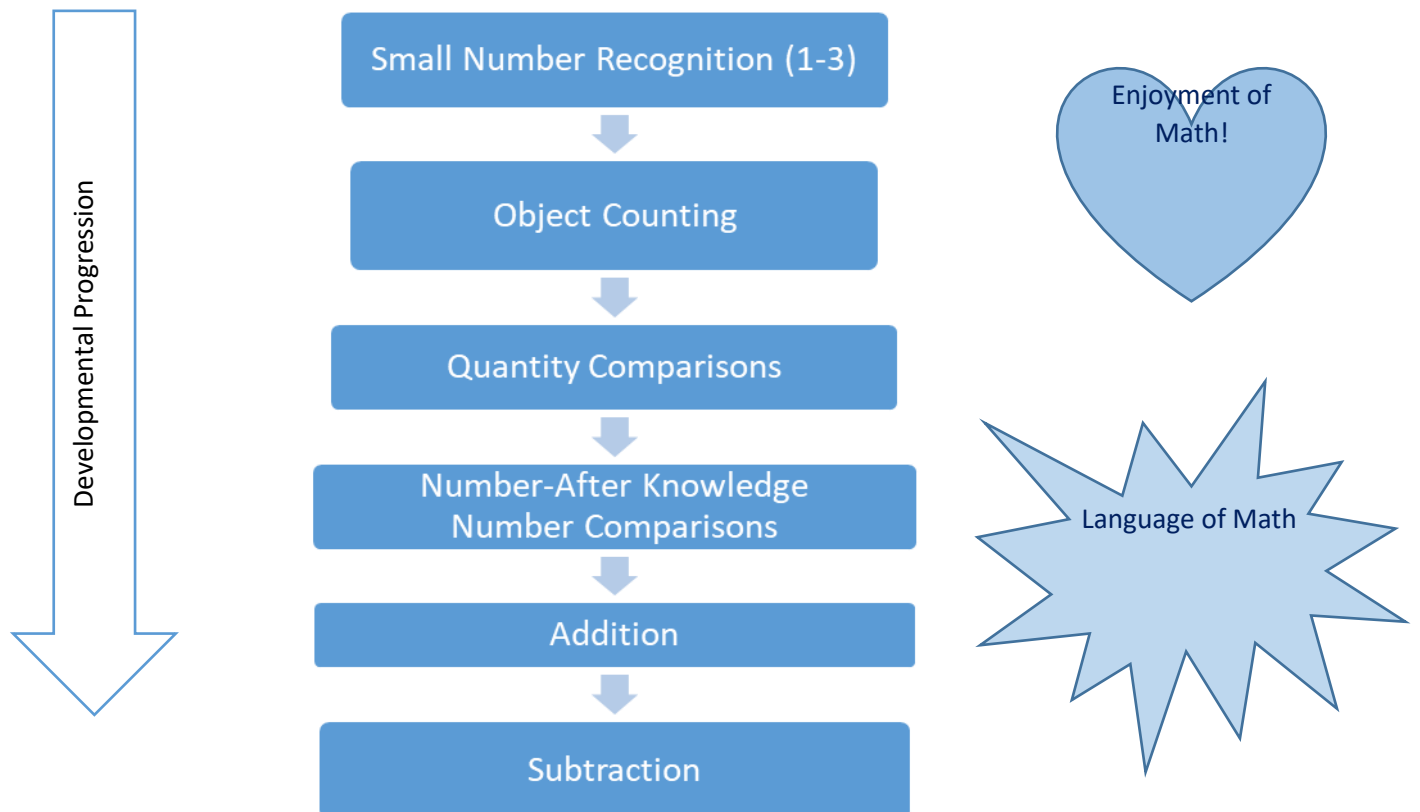
Number-After Knowledge

Addition

Subtraction

Patterning

### Developmental Progression for Number Knowledge



Small Number Recognition without Counting – Quantities of 1 - 3

1. Ask the children if they remember what this book was about (show book). Remind them that there were numbers in this book. *"Numbers tell us how many there is of something."*
2. Say, *"Sometimes when there is a really small group of things, I don't even need to count them to know how many are there. I can just look and tell how many."*
3. Demonstrate by setting out a few matching animal cards (1-3), name the quantity and then check your work by counting the items. Add the correct number card to label the quantity.
4. Continue to set out small amounts of different matching animal cards (1-3) and encourage the children to quickly name the quantity without counting, check the work by counting the items together, and labeling the quantity with the number card.

Easy- Stay with 1 vs. 2 until they have this solid and without help. Start by having the children who are hesitant to repeat the number after you. Then put the same quantity down for them to state the quantity. Repeat 1 vs 2 many times so children practice saying each number multiple times.

Medium- Follow the procedure outlined above.

Hard- Move quickly and encourage the children to set out their own group to try to trick the teacher. The child sets out a small group of 1-3, the teacher names the quantity (sometimes correctly, sometimes not) and the child tells if the teacher is correct. Once they can do this, move on to larger quantities of 4-6.

Counting and Number Recognition

1. Ask the children if they remember what this book was about. Remind them that there were numbers in this book. Say, *"Numbers tell us how many."* Show them your number cards and say *I have some number cards right here. As we read the book, I will put out the number card to match the numbers talked about in the book.*
2. Read the book again (or just look for the numbers on each page) emphasizing the numbers written in the book. Lay out the appropriate number card for each page.
3. Set out some matching animal cards and tell them: *We are going to play a game where we will count these animals and then find the number card that tells how many animals there are in each group.* Put 3 animals out, count them together, and match the correct number card 3.
4. Repeat with different amounts. You can set out animals as they appear in the book (1 eagle, 2 owls, 3 salamanders, etc.) or you can vary the amount of each animal you set out (1 lady bug, 2 banana slugs, 3 honey bees, etc.)

For extra guidance: Encourage the child to count with you. For a challenge: Encourage the child to count alone.

Easy- Follow above procedure using numeral cards 1-5 and animals in groups of 1-5.

Medium- Follow above procedure using numeral cards 1-10 and animals in groups of 1-10.

Hard- Follow above procedure using numeral cards 10-20 and animals in groups of 10-20.

### More Than, Less Than, Equal To

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two groups of matching animal pictures (1-10) one clearly smaller (2) and one clearly bigger (5 animals)
3. Explain. *"Today we are going to play a game with groups of animals called more than, less than, and equal to. We will say more than for the group that has more—the bigger group, less than for the group that is smallest (has less) and equal to means the groups are the same—they have the same number of animals"*
4. Count each group of animals.
5. Point out which group is biggest and smallest. *The group that has 5 animals is bigger, it has more than the group that has 2 animals. Which group is the bigger group? Let's say this group with 5 (point) has more animals than this group 3 (point). 5 is more than 3."*
6. Repeat this many times, encouraging children to tell which group has more than the other and which has less than the other. Be sure to create equal groups as well and explain that we say "equal" when the groups have the same number. Encourage the children to say the sentence: This group is greater than/less than/equal to this group.

Easy- Move slowly and encourage children to repeat after you (heavy modeling). Use sets with 1-5 times and start with simply asking which is bigger vs. smaller with clearly bigger and smaller items.

Hard- Give the children the opportunity to "be the teacher" by creating two groups and telling which is greater than or less than. Use larger groups of 10-20 (by combining different animal pictures) **if** children have mastered counting objects that high.

### Number-After Knowledge

#### Part 1

1. Show children the Number Chart, pointing to the number list at the bottom. *"Here is a list of our numbers from 1 to 10. Let's all say them in order together 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10. Great! We all just counted to 10.* Do this a couple times until they all can do it clearly.
2. Pointing to the number 1 ask the children *what number comes next, what number comes after 1.* Point to the number 3 and ask what comes next. If they cannot tell you, start at number 1 and count up to 4 and point out 4 comes next. Do this for a variety of numbers (1-5), pointing each time as you ask. Once they have this down, ask them without pointing to the number – *what number comes after \_\_\_\_\_?* Once they can do this for 1-5 move on to part 2 and add numbers 6-10 in part 1.

#### Part 2

1. Give each child a number chart and a set of 6 counters (enough to make numbers 1-3 initially).
2. Tell them *"we are going to put the number of counters to represent each number."* Point to the number 1, *how many counters do we need to show 1? Yes one. Let's place the counter above the number 1.* Have each child place one counter above the number 1. Do the same thing for numbers 2 and 3.
3. Ask them questions comparing the numbers 1 – 3. *Which number is bigger, 2 or 3? Yes, look 3 has more counters, 3 is more than/bigger than 2.*
4. Point out that each number is one more than the number before it. 2 is one more than 1, 3 is one more than 2—show this with the counters.

**As children are ready, repeat these steps with numbers 1-5 and then 4-6**



### Addition

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two groups of animal picture cards (a group of 2 and a group of 1).
3. Explain, *"Today we are going to do addition. Addition means putting together. When we add things together they get bigger"*
4. Count each group of animals and place the matching numeral cards below the groups.
5. Say, *"Now we are going to find out how many there are altogether. We are going to add these groups."* Show the addition card. *This symbol means addition and we say plus when we read it.* Place the addition sign between the two numeral card and the equals sign after. Point to equal sign -- *This symbol means equals, the number all together.*
6. Count the groups with the children. Place the matching numeral card for the sum at the end of the equation
7. Read the whole equation, encouraging children to read with you. *"Two plus one equals three."*

**Repeat this many times with groups of varying amounts with sums of 2 - 5.**

Easy- Move slowly and encourage children to repeat after you. For example, *"This group has 2. How many? Yes, 2. This group has 1. How many? Yes, 1. When I add them together. I get (point to each manipulative as you count) 1, 2, 3. How many? Yes, 3. Two plus one equals 3. Say that with me again."*

\*Use small groups with sums up to 5. \*Do not use numeral cards.

Hard- Use groups with sums up to 10.

### Subtraction

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out one group of animal pictures with up to 5 manipulatives. Explain, *"Today we are going to do subtraction. Subtraction means taking away. When we subtract something, it gets smaller"*
3. Count the animal picture cards with the children and place the matching numeral card under the group.
4. Place the subtraction sign to the right of the numeral card and say, *"This symbol means subtraction, we say minus when we read it. Now we are going to subtract or take away."*
5. Tell the children how many you will be subtracting and place the matching numeral card to the right of the subtraction sign and the equals sign after that. *"Let's take away 2 animal picture cards."*
6. Encourage the children to count with you as you take away that amount of animal pictures.
7. Say, *"How many are left now?"*
8. Count the remainder together and place the matching numeral card after the equals sign.
9. Read the whole equation. *Five minus two equals three.*

**Repeat this many times with groups of varying amounts and differences up to 10.**

Easy- Move slowly and encourage children to repeat after you \*Use small groups with differences up to 5. \*Do not use numeral cards.

Hard- Use groups with differences up to 20.

### Recognizing and Extending Patterns

1. Ask the children if they remember what this book is about. Have a brief discussion.
2. Explain that *“today we are going to be learning about patterns. Patterns repeat over and over.”*
3. Using the bat, banana slug, and ladybug pictures, create the start of a simple pattern and read it aloud to the children. *“bat, ladybug, bat, ladybug, bat”* Ask, *“What comes next in my pattern?”*
4. Allow the children to add the next picture in the pattern.
5. Read the completed pattern.

**Repeat many times with a variety of increasingly difficult, but still simple patterns. AABAA or ABBA or AABB, ABCABC patterns are all appropriate.**

Easy- Follow the steps outlined above but move slowly. Build the simple AB pattern a couple times. Encourage the children to read the pattern with you before telling what comes next.

Hard- Follow the steps above in Outline (Medium) but move quickly. Encourage the children to read the patterns independently before extending them. Use more complex patterns from the onset. Consider using a growing pattern like AB, AAB, AAAB.

### Creating Patterns

1. Ask the children if they remember what this book is about. Have a brief discussion
2. Explain that *“today we are going to be making patterns. Patterns repeat over and over.”* Use the bat, banana slug, and ladybug picture cards to create patterns.
3. Create the AB simple pattern and read it aloud to the children. *“Banana slug, bat, banana slug, bat, banana slug, bat.”* Create a few more patterns as models for the children.
4. Tell the children, *“Now, it is your turn to make a pattern.”* Encourage the children to create a pattern.
5. Read the completed pattern.

**Repeat many times, encouraging children to create more complex, but still simple, patterns. AABA or ABBA or AABB patterns are all appropriate.**

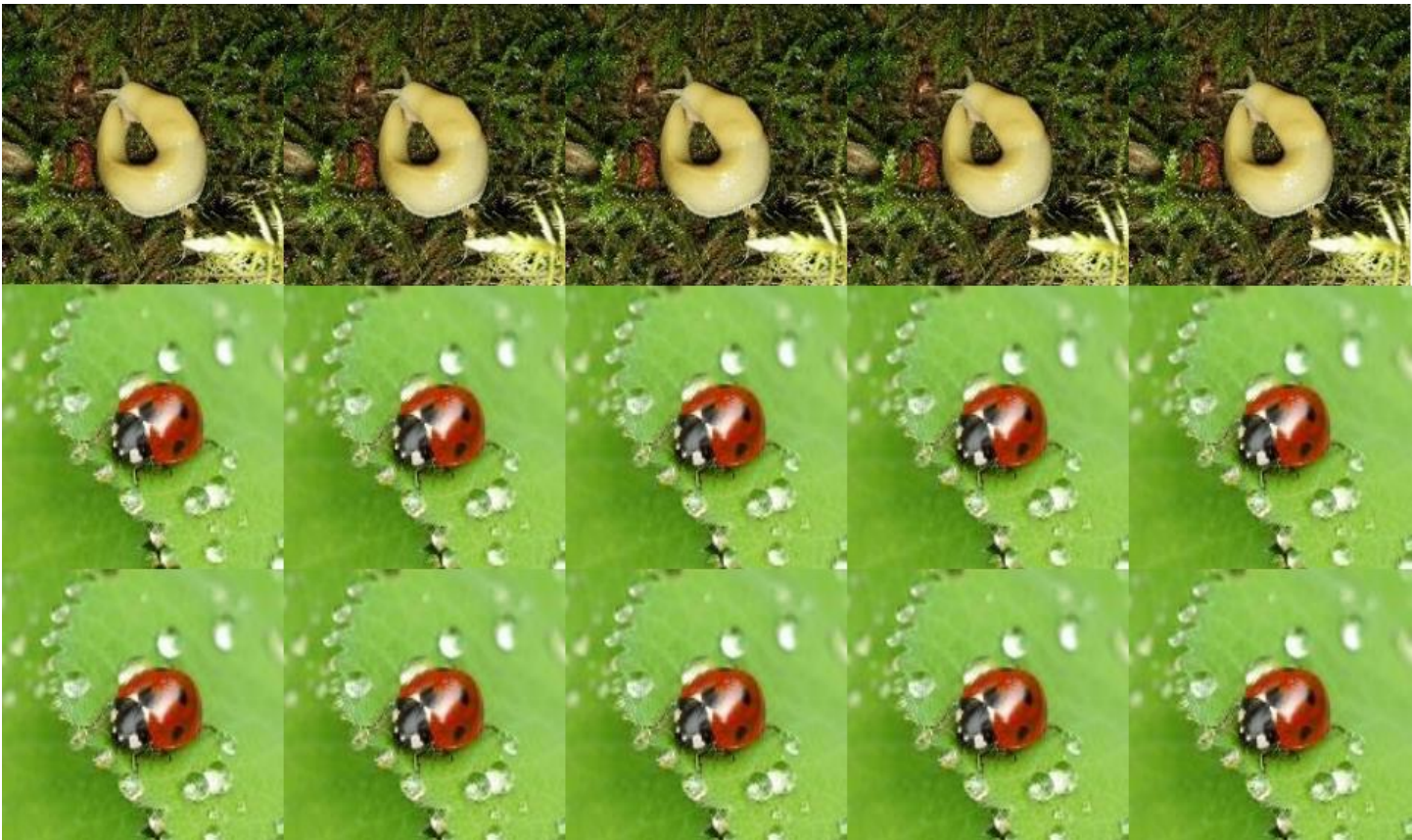
Easy- Follow the steps outlined above but move slowly. Use very simple AB patterns. Create a several patterns first before encouraging children to create their own.

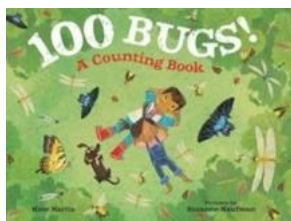
Hard- Follow the steps above in Outline (Medium) but move quickly. Create just one or two model patterns before asking children to create their own. Encourage children to use more complex patterns from the onset. Consider using a growing pattern like AB, AAB, AAAB.

Book 16 – Tall Tall Tree – Math Manipulatives









Materials:

- Book
- Insect Picture Cards
- Tactile Number Cards

## **100 Bugs! – Math Activity Cards**

Small Number Recognition without Counting

Counting & Number Recognition

More Than/Less Than/Equal To

Quantity Comparisons

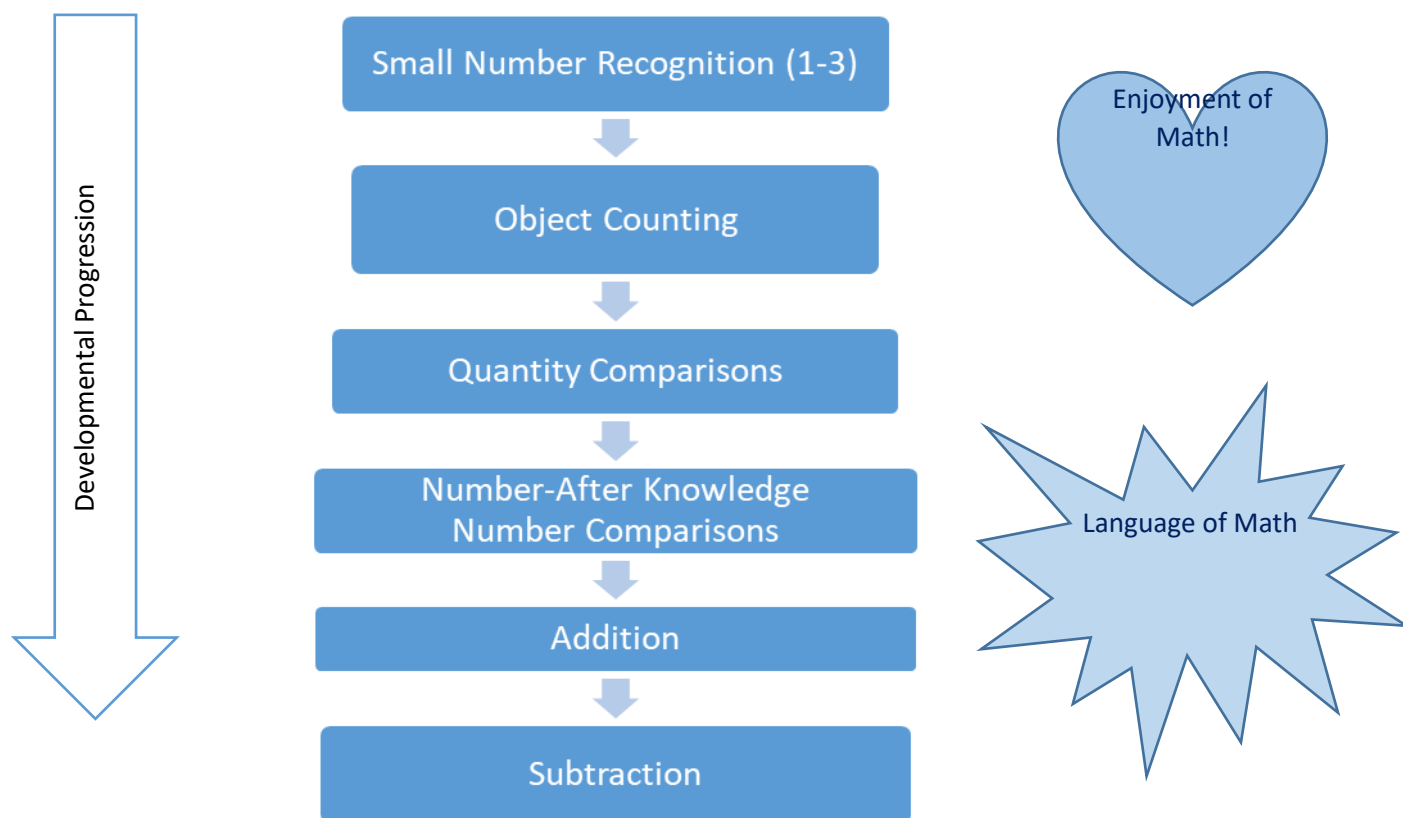
Number-After Knowledge

Addition

Subtraction

Patterning

### Developmental Progression for Number Knowledge



Small Number Recognition without Counting – Quantities of 1 - 3

1. Ask the children if they remember what this book was about (show book). Remind them that there were numbers in this book. *"Numbers tell us how many there is of something."*
2. Say, *"Sometimes when there is a really small group of things, I don't even need to count them to know how many are there. I can just look and tell how many."*
3. Demonstrate by setting out a few insect picture cards (1-3), name the quantity and then check your work by counting the items. Add the correct number card to label the quantity.
4. Continue to set out small amounts of different insect picture cards (1-3) and encourage the children to quickly name the quantity without counting, check the work by counting the items together, and labeling the quantity with the number card.

Easy- Stay with 1 vs. 2 until they have this solid and without help. Start by having the children who are hesitant to repeat the number after you. Then put the same quantity down for them to state the quantity. Repeat 1 vs 2 many times so children practice saying each number multiple times.

Medium- Follow the procedure outlined above.

Hard- Move quickly and encourage the children to set out their own group to try to trick the teacher. The child sets out a small group of 1-3, the teacher names the quantity (sometimes correctly, sometimes not) and the child tells if the teacher is correct. Once they can do this, move on to larger quantities of 4-6.

Counting and Number Recognition

1. Ask the children if they remember what this book was about. Remind them that there were numbers in this book. Say, *"Numbers tell us how many."* Show them your number cards and say *I have some number cards right here. As we read the book, I will put out the number card to match the numbers talked about in the book.*
2. Read the book again (or just look for the numbers on each page) emphasizing the numbers written in the book. Lay out the appropriate number card for each page.
3. Set out some insect picture cards and tell them: *We are going to play a game where we will count these insects and then find the number card that tells how many insects there are in each group.* Put 3 insects out, count them together, and match the correct number card 3.
4. Repeat with different amounts.

For extra guidance: Encourage the child to count with you. For a challenge: Encourage the child to count alone.

Easy- Follow above procedure using numeral cards 1-5 and animals in groups of 1-5.

Medium- Follow above procedure using numeral cards 1-10 and animals in groups of 1-10.

Hard- Follow above procedure using numeral cards 10-20 and animals in groups of 10-20.

### More Than, Less Than, Equal To

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two groups of insect pictures (1-10) one clearly smaller (2) and one clearly bigger (5 insects)
3. Explain. *"Today we are going to play a game with groups of insects called more than, less than, and equal to. We will say more than for the group that has more—the bigger group, less than for the group that is smallest (has less) and equal to means the groups are the same—they have the same number of insects"*
4. Count each group of insects.
5. Point out which group is biggest and smallest. *The group that has 5 insects is bigger, it has more than the group that has 2 insects. Which group is the bigger group? Let's say this group with 5 (point) has more insects than this group 3 (point). 5 is more than 3."*
6. Repeat this many times, encouraging children to tell which group has more than the other and which has less than the other. Be sure to create equal groups as well and explain that we say "equal" when the groups have the same number. Encourage the children to say the sentence: This group is greater than/less than/equal to this group.

Easy- Move slowly and encourage children to repeat after you (heavy modeling). Use sets with 1-5 times and start with simply asking which is bigger vs. smaller with clearly bigger and smaller items.

Hard- Give the children the opportunity to "be the teacher" by creating two groups and telling which is greater than or less than. Use larger groups of 10-20 (by combining different animal pictures) **if** children have mastered counting objects that high.

### Number-After Knowledge

#### Part 1

1. Show children the Number Chart, pointing to the number list at the bottom. *"Here is a list of our numbers from 1 to 10. Let's all say them in order together 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10. Great! We all just counted to 10.* Do this a couple times until they all can do it clearly.
2. Pointing to the number **1** ask the children *what number comes next, what number comes after 1*. Point to the number **3** and ask what comes next. If they cannot tell you, start at number 1 and count up to 4 and point out 4 comes next. Do this for a variety of numbers (1-5), pointing each time as you ask. Once they have this down, ask them without pointing to the number – *what number comes after \_\_\_\_\_?* Once they can do this for 1-5 move on to part 2 and add numbers 6-10 in part 1.

#### Part 2

1. Give each child a number chart and a set of 6 counters (enough to make numbers 1-3 initially).
2. Tell them *"we are going to put the number of counters to represent each number."* Point to the number 1, *how many counters do we need to show 1? Yes one. Let's place the counter above the number 1.* Have each child place one counter above the number 1. Do the same thing for numbers 2 and 3.
3. Ask them questions comparing the numbers 1 – 3. *Which number is bigger, 2 or 3? Yes, look 3 has more counters, 3 is more than/bigger than 2.*
4. Point out that each number is one more than the number before it. 2 is one more than 1, 3 is one more than 2—show this with the counters.

**As children are ready, repeat these steps with numbers 1-5 and then 4-6**



### Addition

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two groups of insect picture cards (a group of 2 and a group of 1).
3. Explain, *"Today we are going to do addition. Addition means putting together. When we add things together they get bigger. There was a lot of addition in this book. Each group of insects was in two different places. When we counted the two groups together, we were doing addition."*
4. Count each group of insects and place the matching numeral cards below the groups.
5. Say, *"Now we are going to find out how many there are altogether. We are going to add these groups."* Show the addition card. *This symbol means addition and we say plus when we read it.* Place the addition sign between the two numeral card and the equals sign after. Point to equal sign -- *This symbol means equals, the number all together.*
6. Count the groups with the children. Place the matching numeral card for the sum at the end of the equation
7. Read the whole equation, encouraging children to read with you. *"Two plus one equals three."*

**Repeat this many times with groups of varying amounts with sums of 2 - 5.**

Easy- Move slowly and encourage children to repeat after you. For example, *"This group has 2. How many? Yes, 2. This group has 1. How many? Yes, 1. When I add them together. I get (point to each manipulative as you count) 1, 2, 3. How many? Yes, 3. Two plus one equals 3. Say that with me again."*

\*Use small groups with sums up to 5. \*Do not use numeral cards.

Hard- Use groups with sums up to 10.

### Subtraction

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out one group of animal pictures with up to 5 manipulatives. Explain, *"Today we are going to do subtraction. Subtraction means taking away. When we subtract something, it gets smaller"*
3. Count the insect picture cards with the children and place the matching numeral card under the group.
4. Place the subtraction sign to the right of the numeral card and say, *"This symbol means subtraction, we say minus when we read it. Now we are going to subtract or take away."*
5. Tell the children how many you will be subtracting and place the matching numeral card to the right of the subtraction sign and the equals sign after that. *"Let's take away 2 insects."*
6. Encourage the children to count with you as you take away that amount of insect pictures.
7. Say, *"How many are left now?"*
8. Count the remainder together and place the matching numeral card after the equals sign.
9. Read the whole equation. *Five minus two equals three.*

**Repeat this many times with groups of varying amounts and differences up to 10.**

Easy- Move slowly and encourage children to repeat after you \*Use small groups with differences up to 5. \*Do not use numeral cards.

Hard- Use groups with differences up to 20.

### Recognizing and Extending Patterns

1. Ask the children if they remember what this book is about. Have a brief discussion.
2. Explain that *“today we are going to be learning about patterns. Patterns repeat over and over.”*
3. Using 3 types of insect picture cards (for example- the butterfly, ladybug, and bumblebee pictures), create the start of a simple pattern and read it aloud to the children. *“butterfly, ladybug, butterfly, ladybug, butterfly”* Ask, *“What comes next in my pattern?”*
4. Allow the children to add the next picture in the pattern.
5. Read the completed pattern.

**Repeat many times with a variety of increasingly difficult, but still simple patterns. AABAA or ABBA or AABB, ABCABC patterns are all appropriate.**

Easy- Follow the steps outlined above but move slowly. Build the simple AB pattern a couple times. Encourage the children to read the pattern with you before telling what comes next.

Hard- Follow the steps above in Outline (Medium) but move quickly. Encourage the children to read the patterns independently before extending them. Use more complex patterns from the onset. Consider using a growing pattern like AB, AAB, AAAB.

### Creating Patterns

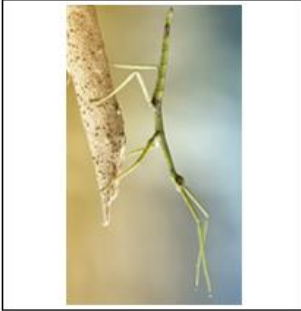
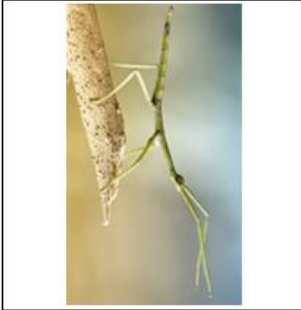
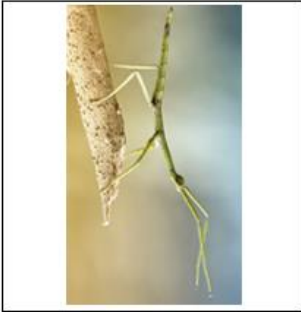
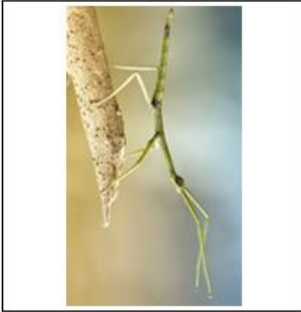
1. Ask the children if they remember what this book is about. Have a brief discussion
2. Explain that *“today we are going to be making patterns. Patterns repeat over and over.”* Use 3 types of insect picture cards (for example- the butterfly, ladybug, and bumblebee pictures),
3. Create the AB simple pattern and read it aloud to the children. *“Ladybug, butterfly, ladybug, butterfly, ladybug, butterfly.”* Create a few more patterns as models for the children.
4. Tell the children, *“Now, it is your turn to make a pattern.”* Encourage the children to create a pattern.
5. Read the completed pattern.

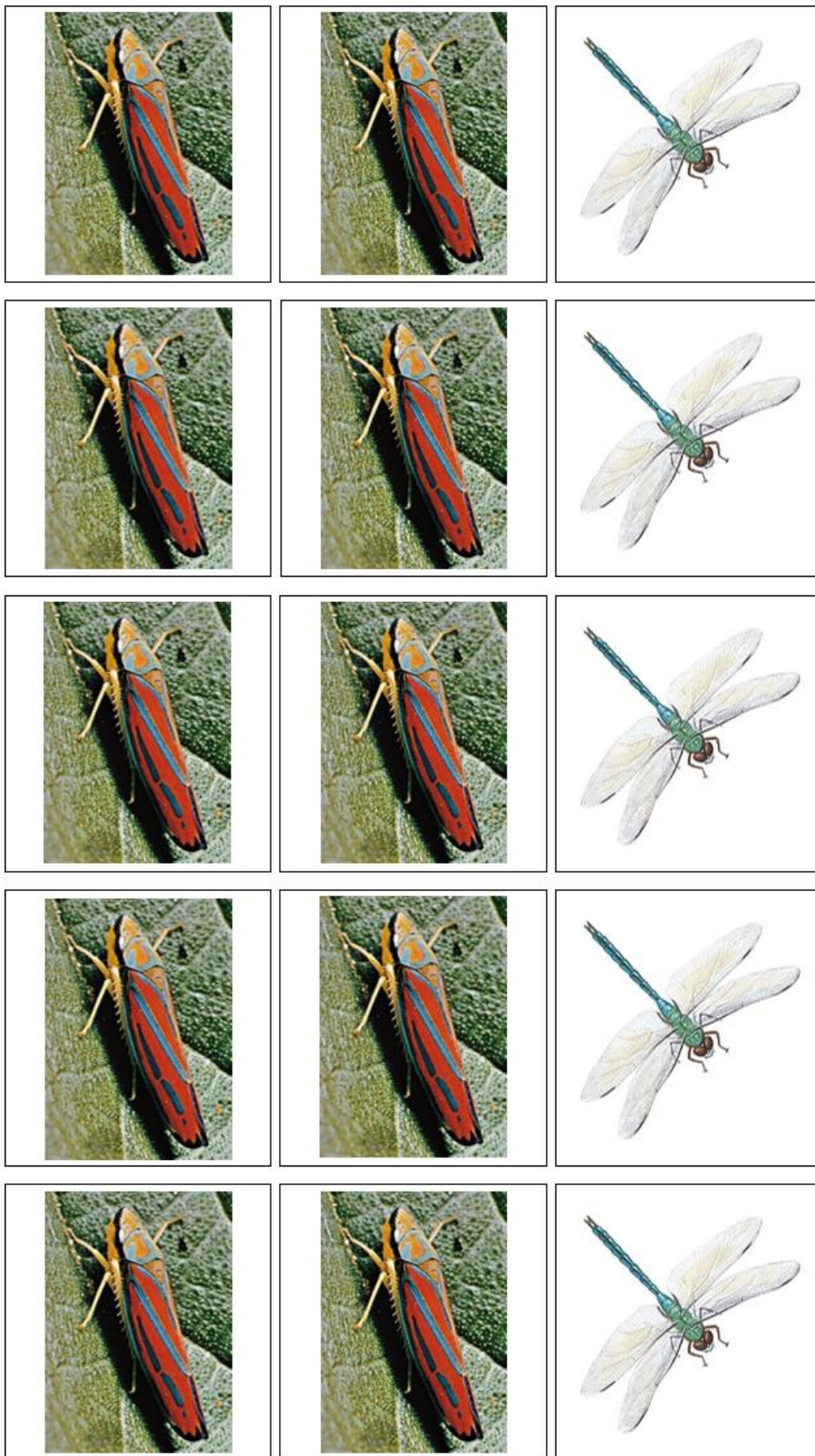
**Repeat many times, encouraging children to create more complex, but still simple, patterns. AABA or ABBA or AABB patterns are all appropriate.**

Easy- Follow the steps outlined above but move slowly. Use very simple AB patterns. Create a several patterns first before encouraging children to create their own.

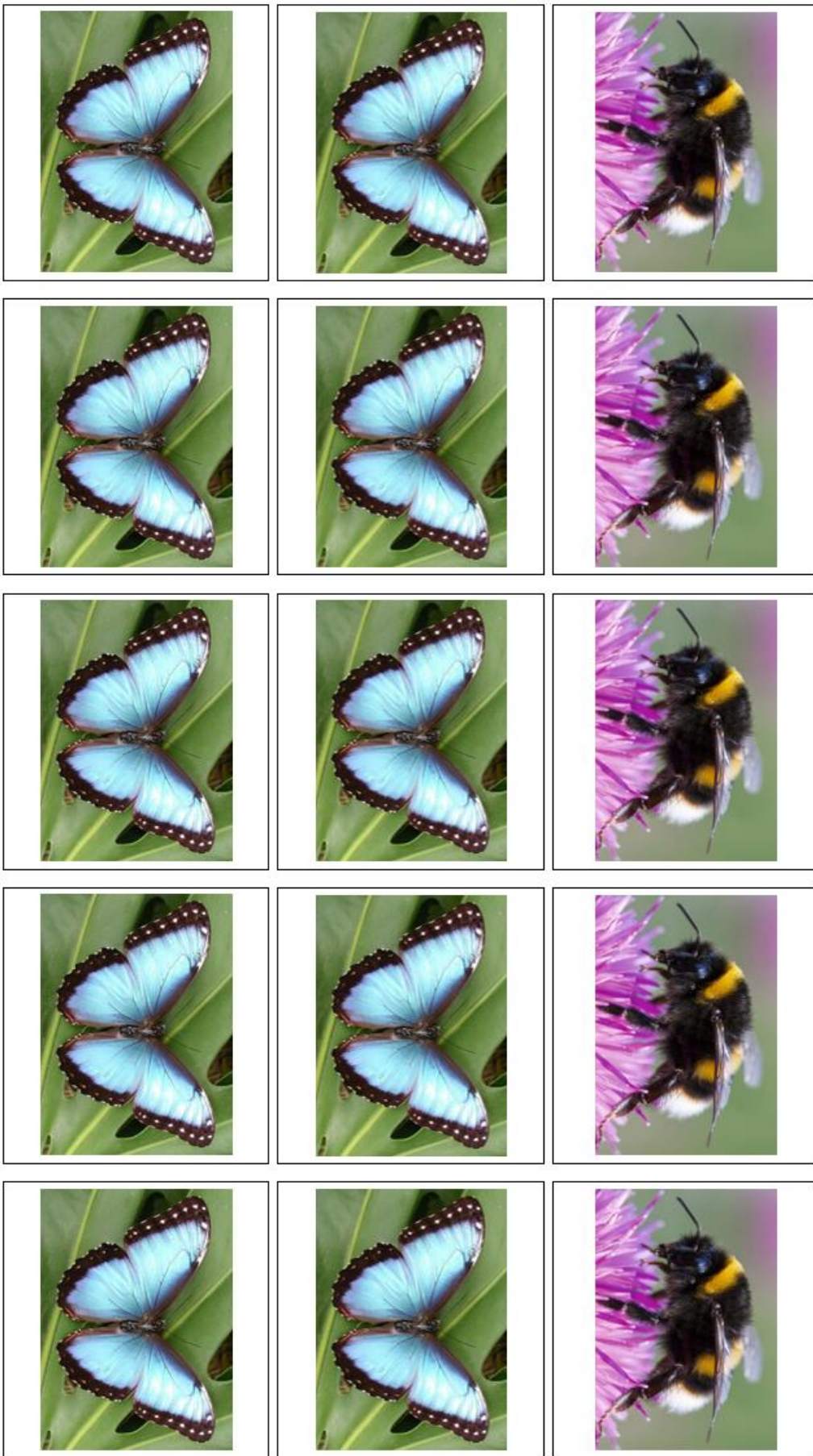
Hard- Follow the steps above in Outline (Medium) but move quickly. Create just one or two model patterns before asking children to create their own. Encourage children to use more complex patterns from the onset. Consider using a growing pattern like AB, AAB, AAAB.

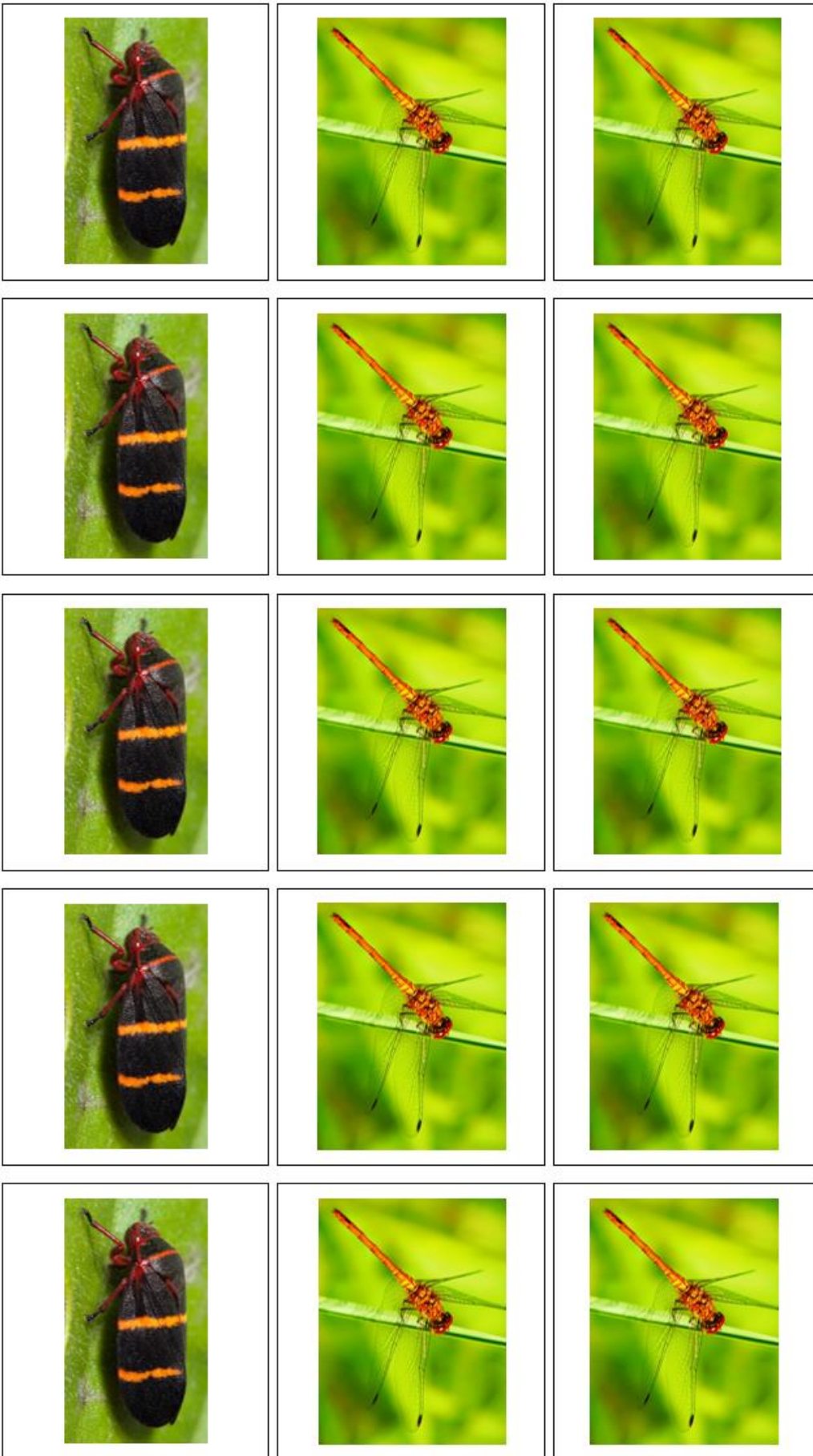
Book 17 – 100 Bugs! – Math Manipulatives





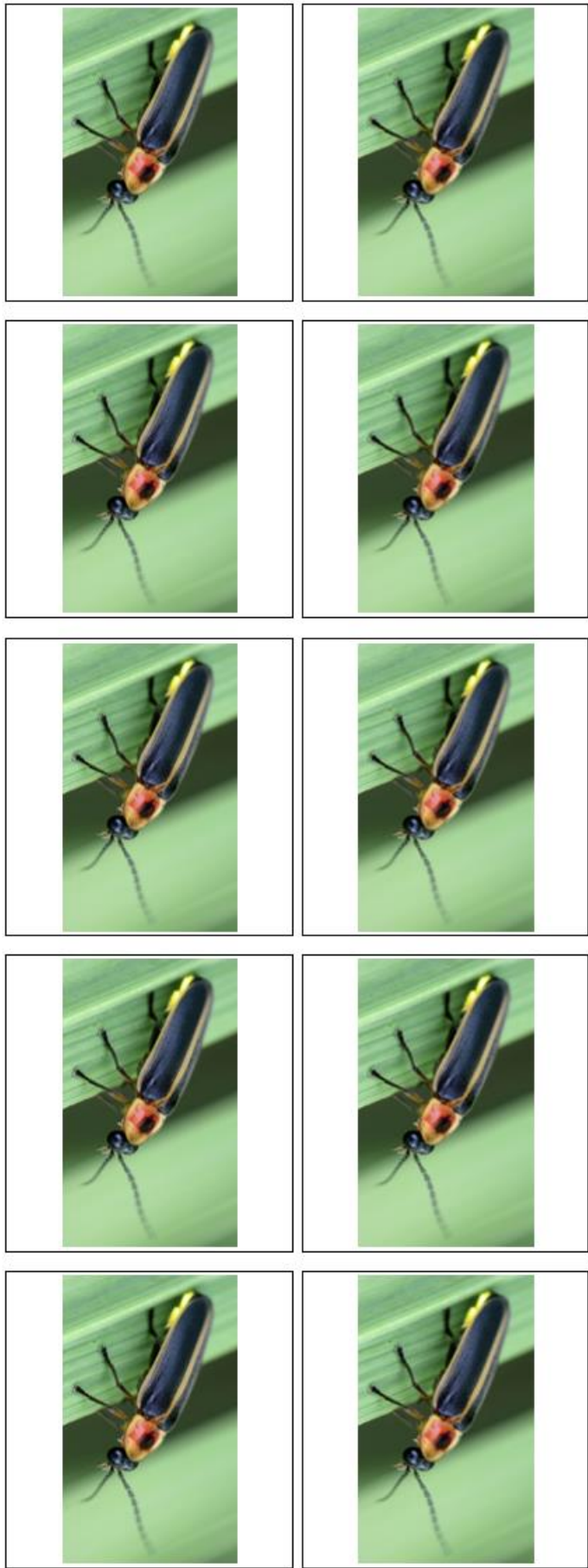












# 100 Bugs!



Walkingstick



Dragonfly



Leafhopper



Ladybug



Bumblebee



Butterfly



Damselfly



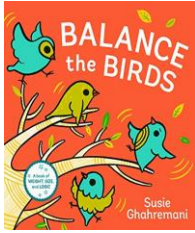
Spittlebug



Katydid



Lightning bug



**Materials:**

- Book
- Large bird and small bird counters
- Tactile Number cards
- Balance scale



## **Balance the Birds – Math Activity Cards**

Small Number Recognition without Counting

Counting & Number Recognition

More Than/Less Than/Equal To

Quantity Comparisons

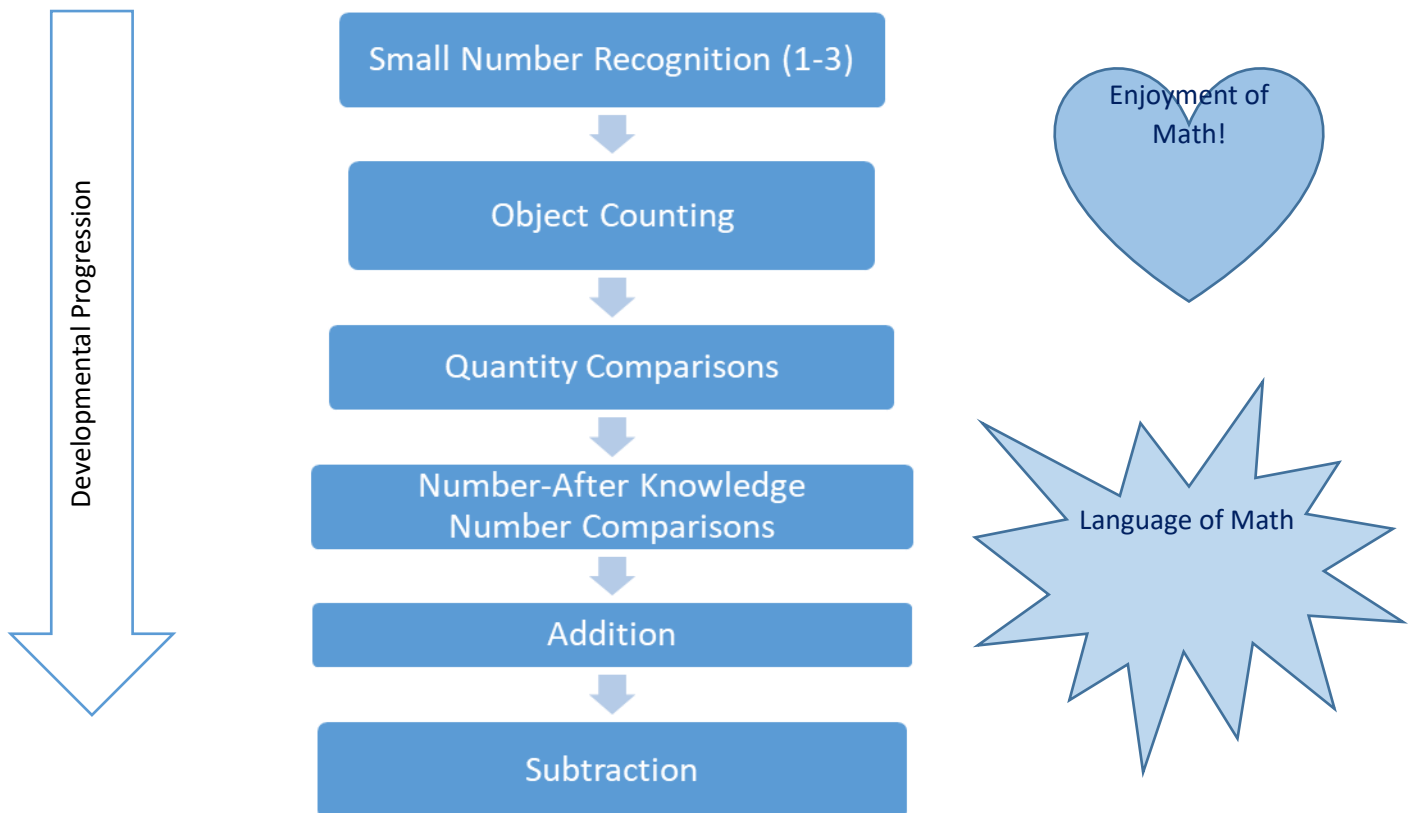
Number-After Knowledge

Addition

Subtraction

Measurement- weight

### Developmental Progression for Number Knowledge



Small Number Recognition without Counting – Quantities of 1 - 3

1. Ask the children if they remember what this book was about (show book). Remind them that there were numbers in this book. *"Numbers tell us how many there is of something."*
2. Say, *"Sometimes when there is a really small group of things, I don't even need to count them to know how many are there. I can just look and tell how many."*
3. Demonstrate by setting out a small group of 1-3 small counting birds, name the quantity and then check your work by counting the items. Add the correct number card to label the quantity.
4. Continue to set out small groups and encourage the children to quickly name the quantity without counting, check the work by counting the items together, and labeling the quantity with the number card.

Easy- Stay with 1 vs. 2 until they have this solid and without help. Start by having the children who are hesitant to repeat the number after you. Then put the same quantity down for them to state the quantity. Repeat 1 vs 2 many times so children practice saying each number multiple times.

Medium- Follow the procedure outlined above.

Hard- Move quickly and encourage the children to set out their own group to try to trick the teacher. The child sets out a small group of 1-3, the teacher names the quantity (sometimes correctly, sometimes not) and the child tells if the teacher is correct. Once they can do this, move on to larger quantities of 4-6.

Counting and Number Recognition

1. Ask the children if they remember what this book was about. Remind them that there were numbers in this book. Say, *"Numbers tell us how many."* Show them your number cards and say *I have some number cards right here. As we read the book, I will put out the number card to match the numbers talked about in the book.*
2. Read the book again (or just look for the numbers on each page) emphasizing the numbers written in the book. Lay out the appropriate number card for each page. \*Note- there are not many numbers in this book and they don't sequentially. Count the birds in the pictures for more opportunities with number naming than the text provides.
3. Set out the small bird counters and tell them: *We are going to play a game where we will count these birds and then find the number card that tells how many birds there are in each group. Let's start with this many birds.* Put 3 birds out, count them together, and match the correct number card 3.
4. Repeat with different amounts of birds.

For extra guidance: Encourage the child to count with you. For a challenge: Encourage the child to count alone.

Easy- Follow above procedure using numeral cards 1-5 and manipulatives in groups of 1-5.

Medium- Follow above procedure using numeral cards 1-10 and manipulatives in groups of 1-10.

Hard- Follow above procedure using numeral cards 10-20 and manipulatives in groups of 10-20.

## More Than, Less Than, Equal To

1. Ask the children if they remember what this book was about. Have a brief discussion.
  2. Set out two groups of small counting birds (1-10) one clearly smaller (2) and one clearly bigger (5 birds)
  3. Explain. *"Today we are going to play a game with groups of birds called more than, less than, and equal to. We will say more than for the group that has more—the bigger group, less for the group that is smallest (has less) and equal to means the groups are the same—they have the same number of birds"*
  4. Count each group of birds.
  5. Point out which group is biggest and smallest. *The group that has 5 birds is bigger, it has more than the group that has 2 birds. Which group is the bigger group? Let's say this group with 5 (point) has more birds than this group 3 (point). 5 is more than 3."*
  6. Repeat this many times, encouraging children to tell which group has more than the other and which has less than the other. Be sure to create equal groups as well and explain that we say "equal" when the groups have the same number. Encourage the children to say the sentence: This group is greater than/less than/equal to this group.
- Easy- Move slowly and encourage children to repeat after you (heavy modeling). Use sets with 1-5 items and start with simply asking which is bigger vs. smaller with clearly bigger and smaller items.
- Hard- Give the children the opportunity to "be the teacher" by creating two groups and telling which is greater than or less than. Use larger groups of 10-20 if children have mastered counting objects that high.

## Number-After Knowledge

### Part 1

1. Show children the Number Chart, pointing to the number list at the bottom. *"Here is a list of our numbers from 1 to 10. Let's all say them in order together 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10. Great! We all just counted to 10.* Do this a couple times until they all can do it clearly.
2. Pointing to the number 1 ask the children *what number comes next, what number comes after 1*. Point to the number 3 and ask what comes next. If they cannot tell you, start at number 1 and count up to 4 and point out 4 comes next. Do this for a variety of numbers (1-5), pointing each time as you ask. Once they have this down, ask them without pointing to the number – *what number comes after \_\_\_\_\_?* Once they can do this for 1-5 move on to part 2 and add numbers 6-10 in part 1.

### Part 2

1. Give each child a number chart and a set of 6 counters (enough to make numbers 1-3 initially).
2. Tell them *"we are going to put the number of counters to represent each number."* Point to the number 1, *How many counters do we need to show 1? Yes one. Let's place the counter above the number 1.* Have each child place one counter above the number 1. Do the same thing for numbers 2 and 3.
3. Ask them questions comparing the numbers 1 – 3. *Which number is bigger, 2 or 3? Yes, look 3 has more counters, 3 is more than/bigger than 2.*
4. Point out that each number is one more than the number before it. 2 is one more than 1, 3 is one more than 2—show this with the counters.

**As children are ready, repeat these steps with numbers 1-5 and then 4-6**

### Addition

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out two groups of birds (a group of 2 and a group of 1).
3. Explain, *"Today we are going to do addition. Addition means putting together. When we add things together they get bigger"*
4. Count each group of birds and place the matching numeral cards below the groups.
5. Say, *"Now we are going to find out how many there are altogether. We are going to add these groups."* Show the addition card. *This symbol means addition and we say plus when we read it.* Place the addition sign between the two numeral card and the equals sign after. Point to equal sign -- *This symbol means equals, the number all together.*
6. Count the groups with the children. Place the matching numeral card for the sum at the end of the equation
7. Read the whole equation, encouraging children to read with you. *"Two plus one equals three."*

**Repeat this many times with groups of varying amounts with sums of 2 - 5.**

Easy- Move slowly and encourage children to repeat after you. For example, *"This groups has 2. How many? Yes, 2. This group has 1. How many? Yes, 1. When I add them together. I get (point to each manipulative as you count) 1, 2, 3. How many? Yes, 3. Two plus one equals 3. Say that with me again."*

\*Use small groups with sums up to 5. \*Do not use numeral cards.

Hard- Use groups with sums up to 10.

### Subtraction

1. Ask the children if they remember what this book was about. Have a brief discussion.
2. Set out one group of small counting birds with up to 5 birds. Explain, *"Today we are going to do subtraction. Subtraction means taking away. When we subtract something, it gets smaller"*
3. Count the birds with the children and place the matching numeral card under the group.
4. Place the subtraction sign to the right of the numeral card and say, *"This symbol means subtraction, we say minus when we read it. Now we are going to subtract or take away."*
5. Tell the children how many you will be subtracting and place the matching numeral card to the right of the subtraction sign and the equals sign after that. *"Let's take away 2 birds."*
6. Encourage the children to count with you as you take away that amount of birds.
7. Say, *"How many are left now?"*
8. Count the remainder together and place the matching numeral card after the equals sign.
9. Read the whole equation. *Five minus two equals 3.*

**Repeat this many times with groups of varying amounts and differences up to 10.**

Easy- Move slowly and encourage children to repeat after you \*Use small groups with differences up to 5. \*Do not use numeral cards.

Hard- Use groups with differences up to 20.

### Measurement- Weight (Heavier and Lighter)

1. Ask the children if they remember what the book was about. Have a short discussion.
2. Show the children the balance scale and introduce the concept of its function. *“This is a scale. It weighs things. We can put them inside the scale and it will show us which is heavier and which is lighter. How do you think we will know which is heavier? Yes! The heavier item will go down and the lighter item will go up.”*
3. Explore the concept of heavier and lighter by placing various numbers of small counting birds in either side of the scale and watching to see which is heavier and which is lighter. Encourage children to identify each side. *“This side is heavier. This side is lighter.”*

**Repeat this many times with groups of varying amounts.**

Easy- Move slowly and encourage children to repeat after you. *“This side is heavier. This side is lighter.”*

Hard- Allow children to predict which will be heavier and which will be lighter before placing the groups into the scale.

### Measurement- Weight (Equal)

1. Ask the children if they remember what the book was about. Have a short discussion.
2. Show the children the balance scale and introduce the concept of its function. *“This is a scale. It weighs things. We can put them inside the scale and it will show us which is heavier and which is lighter. How do you think we will know which is heavier? Yes! The heavier item will go down and the lighter item will go up.”*
3. Reread the book and really emphasize the question on the last page. *“How will you balance the birds?”*
4. Explain that today we will be answering this question. *“We get to balance the birds!”* Show the children the large, stuffed bird and the small bird counters. Show a picture in the book and draw the comparison between the large bird and your large bird. Do the same with the small birds and your small bird counters. Say, *“We are going to make these birds balance on our scale.”*
5. Place the large bird on one side of the balance and place small bird counters on the other side, counting as you do so. Stop periodically to watch as the scale readjusts. Ask, *“Is it balanced yet?”*
6. Once the scale is balanced. Recount the small bird counters inside and quickly review the concept. *“We balanced our little birds and big bird. We needed \_\_\_\_\_ small birds to balance our big bird. That means \_\_\_\_\_ small birds are the same weight as the big bird.”*

Easy- Move slowly and encourage children to count with you.

Hard- Allow children to predict how many small birds will be needed to balance the big bird before. Allow children to readjust their predictions as the activity progresses.