## Connecting Literature and Math – A Component of STEM Curriculum

#6: The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear by Don and Audrey Wood, illustrated by Don Wood

## Introduction

In this story that has been a favorite of children since 1984, discover all the strategies the little mouse uses in order to save his strawberry from the big hungry Bear, a bear that never appears in the book.

## **Teacher Notes about STEM**

- Early Childhood Educators are now linking together science, technology, engineering, and math into what is called STEM curriculum.
- CLAM focuses on Math, one of the components of a STEM curriculum.
- CLAM was developed to give preschool children foundations of mathematical understanding through concrete experiences; a foundation for life-long learning and school success in math.

# Arkansas Child Development and Early Learning Standards: Birth through 60 Months

Domain of Development and Learning: Mathematical Thinking Domain Component: Number Concepts and Operations Learning Goal:

MT1.2 Explores combining and separating groups (numerical operations) (early division and fractions)

Learning Goals and strands will be identified for all activities in the guide.

#### Materials to Collect and Make

- Create magnetic or felt figures for the story. See Attachment: The Little Mouse, the Red Ripe Strawberry and the Big Hungry Bear
- Print on cardstock, laminate and cut out Ways We Eat Strawberries Picture Cards (See Attachment: Ways We Eat Strawberries Cards)
- Print on cardstock, laminate and cut out Recipe Cards (See Attachment: Recipe Cards)

# **Story Presentation**

- **CD2.1 Focuses and sustains attention** (attention and engagement)
- CD2.4 Holds and manipulates information in memory (short-term and working memory)
- LD1.1 Understands and responds to language (in child's home language) (vocabulary and language comprehension)
- LD2.1 Uses increasingly complex vocabulary, grammar, and sentence structure (in child's home language) (expressive vocabulary)
- **EL1.1 Shows interest in literacy experiences** (engagement in literacy experiences)
- EL1.2 Engages in read-alouds and conversation about books and stories
- **EL3.1** Responds to features of books and print (book knowledge, print knowledge)

**Book:** The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear by Audrey and Don Wood, illustrated by Don Wood

## First Reading of

- Be familiar with the book, The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear.
- Show the cover, give title, authors and illustrator. (Explain that the authors are the persons who write the words and the illustrator is the person who draws the pictures.)
- Invite children to look at the cover and discuss what they think the little mouse is going to do with the red, ripe strawberry. Accept all answers, then say, "Let's read and find out."
- Read the story so all children can see the pictures in the book.
- Read the first page and ask the children what they think the little mouse is doing. Accept all answers.
- Continue reading the story. When you come to the page with these words, "or how it is disguised," invite children to look at the illustration and discuss what they think the word disguised means. (Changing the way you look so people won't recognize you).
- Give prompts if necessary. For example, at Halloween, what do you do when you go trick or treating?
   Do you wear a mask, or disguise, so people won't know who you are? How are the little mouse and the red ripe strawberry trying to disguise themselves?
- Ask the children if they think the big hungry bear would recognize the little mouse and the red ripe strawberry.
- Continue reading the story until the end.
- Follow up the reading by showing the appropriate pages and invite children to discuss how the little
  mouse tried to keep the big hungry Bear from getting the red ripe strawberry. (hiding it, guarding it,
  disguising it, cutting it in half and sharing it)
- Involve children in discussing who they think the little mouse shared the strawberry with. Accept all answers.

Second Reading of The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear

- Show the cover, give title, authors and illustrator.
- Read the story so all children can see the illustrations in the book.
- Follow up the reading by showing the pages where the little mouse is obviously showing specific feelings and emotions and invite children to discuss how they think the little mouse is feeling and why. For example, on the second page he seems to be happy/smiling.

On the third page his face seems to show surprise and perhaps fear as he hears about the big hungry Bear.

On the next couple of pages he seems to still be showing fear of the Bear.

Continue with pages you think show specific feelings and emotions.

On the page that reads, "and we'll both eat it up. YUM!" ask children how they think the little mouse is feeling as he is eating the strawberry.

Ask children if they ever saw the Bear in the story. If they cannot remember, show the pages and ask
them to look for the Bear. Guide them to conclude that there is no bear in the story and to discuss
why. Accept all answers

## **Additional Learning Goal:**

**CD3.2** Engages in symbolic and abstract thinking (abstract thinking)

Third Reading of The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear

- Show the cover and ask children to recall the title of the book.
- Give the authors and illustrator and ask children if they remember what each does. Give them prompts if necessary.
- Read the story so all children can see the pictures in the book.
- Follow up by inviting children to help you read the story.
- For example, on the second page, run your hand under the words "red, ripe strawberry", pause before you say the word "strawberry", allowing children to complete the sentence.

On the third page, pause after "big" and allow children to say "hungry Bear."

Continue this process on pages where it seems appropriate, especially where there are words that are repeated.

• Thank children for helping you read the story.

**Teacher Note:** Pausing to allow children to complete a phrase or sentence is called the cloze technique.

## Additional Learning Goal:

SE2.2 Interprets and responds to feelings of others (emotional understanding)

# **Additional Language and Literacy Activities**

## **Learning Goals:**

- **LD1.1 Understands and responds to language (in child's home language)** (vocabulary and language comprehension)
- **EL1.1 Shows interest in literacy experiences**
- EL1.2 Engages in read-alouds and conversations about books and stories
- MT1.1 Demonstrates number sense and an understanding of quantity (comparison of quantity)
- MT1.2 Explores combining and separating groups (numerical operations) (early division and fractions)

Activity: The Little Mouse, the Red Ripe Strawberry and the Big Hungry Bear Storytelling Figures

Materials: magnetic or felt storytelling figures and a magnetic or felt board, the book

#### **Directions:**

- Show the book to the children and invite them to recall the name of the story.
- Explain to children that you are going to present the story in a different way.
- Use the storytelling figures to tell and present the story to a group of children.
- Follow up by inviting children to tell the story as you place the figures on the board.
- Follow up by giving one of the following storytelling figures to 5 different children: strawberry on plant, hidden, locked up, disguised and cut in half. Ask children to put their figure on the board as you describe it.
- Involve children in counting the figures where the strawberry is whole (4) and the figure where the strawberry is cut in half (1) and ask which group has the most.
- Invite children to discuss why there is no figure of the big, hungry Bear.

## **Learning Goals:**

- **LD1.1** Understands and responds to language (in child's home language) (vocabulary and language comprehension)
- LD2.1 Uses increasingly complex vocabulary, grammar, and sentence structure (in child's home language) (expressive vocabulary)
- **EL3.1** Responds to features of books and print (print knowledge)
- MT1.1 Demonstrates number sense and an understanding of quantity (connection of number, numeral and quantity)

**Activity: How Many Ways Can We Eat Strawberries?** 

**Materials:** pictures of strawberries in different forms: whole, pies, cakes, preserves, gelatin, popsicles, fruit salad, ice cream, strawberry shortcake, pop tarts, chart sheet or marker board and marker pen

#### Directions:

- Write on the chart sheet or marker board the following: Ways We Can Eat Strawberries.
- Involve children in discussing the different ways we can eat strawberries and list the items on the chart sheet or marker board.
- Guide children to add additional food items that they may not have listed.
- Read with the children the items listed.
- Distribute the pictures of strawberries in different forms. As you read a food item from the list, invite the child to hold up his/her picture.
- Count with the children the number of food items on the list and write at the bottom of the list the following sentence: We can eat strawberries 6 (or the correct number) different ways.
- Post the chart sheet or place the marker board in the Dramatic Play area.



## **Food/Nutrition Activities**

## **Learning Goals:**

- CD3.1 Uses reasoning and planning ahead to solve problems and reach goals (problem solving)
- PH3.1 Demonstrates interest in engaging in healthy eating habits and making nutritious food choices (exploration of food experiences)
- LD1.1 Understands and responds to language (in child's home language)
- MT1.2 Explores combining and separating groups (numerical operations) (early division and fractions)

## **Activity: Apples and Sandwiches**

#### **Directions:**

- Provide enough apples and sandwiches so that each child has the required amount for snack.
- Recall with children that the little mouse cut the strawberry in half in the story, *The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear.* Show the appropriate page in the book to the children.
- Invite children to think of other foods that can be cut in half. (apples, oranges, bananas, sandwiches, for example)
- Say to children, "Suppose there is only one apple and two people. How can we make sure each person has an equal part of the apple?" Allow children to respond. Then cut the apple in half and say what you are doing: "I'm cutting the apple in 1/2."
- Continue by saying, "Suppose we have four people and only one apple. How can we make sure each person has an equal part of the apple?" Allow the children to respond, then cut the apple in fourths and say what you are doing: "I'm cutting the apple in 1/4s."
- Repeat this process with one of the sandwiches.
- Show picture of a whole pizza, cake, or pie. Ask children how we can make sure that each person has an equal amount of the food item. How many slices or sections do they think the pizza or cake or pie can be cut into?
- Continue cutting the apples and sandwiches into required number of pieces and enjoy the snack together.

## Extension: Activity: Make a Sandwich Sharing Mat

- On the mat, include outlines of sandwiches (3 outlines in a row). Under sandwich #1 silhouette of 1 child, under sandwich #2 silhouettes of 2 children and under sandwich #3 silhouettes of 4 children
- Use the same outline of the sandwiches and make more sandwiches out of cardstock: 1 whole sandwich (not real sandwich), 1 sandwich cut in half and 1 sandwich cut in 4 (1/4)
- Invite one or 2 children to join you in the Sandwich Sorting activity, to place the correct parts of sandwiches on the mat with the number of children that would share the sandwich.

#### **Activity: Fruit Salad**

- Involve children in making a fruit salad for snack.
- Place in 3 bowls: strawberries cut in half, grapes cut in half, and mandarin orange sections. Provide a serving spoon for each bowl.
- Provide for each child a small bowl, spoon, crackers, and a napkin.
- Invite children in turn to take a spoonful of each fruit.
- Invite them to name the fruits that are cut in half and the one that is in sections.
- Enjoy the snack together.

**Teacher Note**: Be aware of children with food allergies. Are any allergic to strawberries? If so, substitute another fruit that can be cut in half.

## **Group Time**

## **Learning Goals:**

- SE3.1 Shows awareness of self as unique individual ()preferences)
- PH3.1 Demonstrates interest in engaging in healthy eating habits and making nutritious food choices (exploration of food experiences, food knowledge)
- **EL3.1** Responds to features of books and print (print knowledge)
- MT2.1 Uses classification and patterning skills (classification)
- MT3.1 Participates in exploratory measurement activities and compares objects (comparison)

## **Activity: Graphing Our Favorite Berry**

#### Directions:

- Provide three kinds of berries for tasting: strawberries, blueberries and raspberries, for example.
- Provide a small plate and napkin for each child in the group.
- Name each berry and explain to children that berries are fruit.
- Sit at the table with the children and involve them in selecting and eating the berries.
- Enjoy the berries.
- Invite children to discuss and compare the characteristics of the berries: size, color, texture, and taste, for example.
- Follow up the snack by completing a graph about the children's favorite berry.
- Prepare a graph with a column for each berry. Use a picture or drawing of the berries with the name written on it.

## **Our Favorite Berry**

7			
6			
5	Peyton		
4	Beckett	Mary Elizabeth	
3	Kennedi	Sarah	James
2	Sam	Maria	Ashley
1	Taylor	Lucy	Robert
		80	
	Strawberry	Blueberry	Raspberry

Write a summary story.

#### Our Favorite Berry

Five children like Strawberries the best. Four children like Blueberries the best and three children like Raspberries the best.

Connecting Literature and Math -

# **Learning Environment**

**Teacher Note:** As children are involved in the learning centers listed here, they are engaged in activities that support the following Domains of Child Development and Early Learning:

- Language Development
- Emergent Literacy
- Mathematical Thinking
- Science and Technology
- Creative and Aesthetic

## **Dramatic Play Center**

- Add illustrated recipe cards of food items made with strawberries. (See Attachment: Recipe Cards)
- Add plastic glasses frame with fake nose attached.

#### Library

- Add storytelling figures for The Little Mouse, the Red Ripe Strawberry, and the Big Hungry Bear and a storyboard
- Observe and listen to children as they use the figures to retell the story. Do they tell the story in the correct order? Do they tell the story to each other?

#### **Art Center**

- Add red and dark blue tempera paint to the center for painting at the easel.
- Observe to see if children mix the two colors of tempera and notice that the result is purple paint.

## **Discovery/Science Center**

- Involve children in making strawberry scented playdough. Allow them to measure the ingredients.
- Involve them in discussing what is happening as the different ingredients are mixed together. Introduce words such as sticky and stiff. Ask questions such as, "What do you think we need to add to dough so it is not so sticky?"

No Cook Strawberry Playdough	Mix together the plain four, salt and	
	unsweetened strawberry drink mix.	
3 cups plain flour	Gradually add water and then oil as you	
1 cup salt	knead together to make the dough. Add	
1 pkg of unsweetened strawberry drink mix	more flour if dough is sticky or more	
¼ cup oil	water if dough is stiff. Store in an air-	
1 cup water	tight container.	

## **Transition Activities**

## Activity: Splat!

- Use a small felt board, felt strawberry plant and 2 felt strawberries.
- Say, "One little strawberry ripe and red. fell and went SPLAT on Robert's head."
   Robert transitions to the next activity.
- Or say, "Two little strawberries ripe and red, fell and went **SPLAT** on Monica's and Adam's heads." Monica and Adam transition to the next activity.

**Teacher Note:** Cup your fingers together, then open them wide as you say **SPLAT!** 

# **Family Connection and Engagement**

- Send home a note to families explaining that children will be reading a story about a red ripe strawberry. Invite them to involve their child in looking through magazines for pictures of strawberries and different food items made with strawberries and to bring them to the center. Explain that the pictures will be used in a learning activity.
- Send home the recipe for making strawberry scented playdough and suggest that families involve their child in making the playdough. Ask parents to have a certain place where children can play with the dough and provide a vinyl placemat for children to use when they are playing with the playdough. Also ask families to provide simple props for children to use as they are playing with the dough: such as small plastic knives, cookie cutters and small rolling pins or 6" lengths of a 1" dowel stick to use as a rolling pin. Keep playdough in airtight container when not in use.

## **Additional Books**

Degen, Bruce. Jamberry

## **Assessment Ideas**

Refer to page 6 in the guide: **Extension: Activity: Make a Sandwich Sharing Mat.** for an activity to assess the following concepts and benchmarks.

## **Content Standards: Number and Operation**

- Counting
- One-to-one correspondence
- Demonstrating understanding of fractions such as 1/2, 1/3 and 1/4

Domain Component: Number Concepts and Operations Learning Goal:

MT1.2 Explores combining and separating groups (numerical operations) (early division and fractions)

## To Assess:

- Invite one or 2 children to join you in the Sandwich Sorting activity, to place the correct parts of sandwiches on the mat with the number of children that would share the sandwich.
- Assess children's competence by observing them in the activity and listening to their responses as you
  ask questions and guide them in the activity.