

# Math-Literacy Connection

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# Why connect math and literacy?

- Help students acquire the language of mathematics, including the specialized vocabulary
- Develop communication and reasoning skills
- Provide meaningful context for mathematics
- Motivate and interest students through books

The presentation will focus on specific activities used with some of the children's books listed in the bibliography. A few of the activities have been included in this handout:

- coloring page to go with *Pattern Fish*
- trucks with addition sentence to go with *Animals on Board*
- doubles trains and double dominoes to go with *Double the Ducks*
- instructions for a take-home tote to go with the Biscuit books

## Number

Coats, L. (2000). *Neil's Numberless World*. New York: Dorling Kindersley Publishing, Inc.  
ISBN#: 0-7894-5616-8

Leedy, L. (2008). *Missing Math: A Number Mystery*. New York: Marshall Cavendish Corporation.  
ISBN#: 978-0-7614-5385-7

Schwartz, D. (1985). *How Much is a Million?* New York: Scholastic, Inc.  
ISBN#: 0-590-43614-7

## Counting Books

Gorbachev, V. (2008). *Christopher Counting*. New York: The Penguin Group.  
ISBN#: 978-0-399-24629-6

Crews, D. (1986). *Ten Black Dots*. New York: Scholastic Inc.  
ISBN#: 0-590-46479-5

Stihler, C. (2008). *Polar Bear Polka: Counting Polar Bears in Alaska*. Seattle: Sasquatch Books.  
ISBN#: 978-1-57061-520-7

Walsh, E. (1991). *Mouse Count*. Orlando: Harcourt Brace and Company.  
ISBN#: 0-15-200223-5

Holub, J. and Lichtenheld, T. (2012). *Zero the Hero*. New York: Henry Holt and Company.  
ISBN#: 978-0-8050-9384-1

Pallotta, J. and Masiello, R. (1992). *The Icky Bug Counting Book*. Watertown: Charlesbridge.  
ISBN#: 978-0-88106-496-4

Ross, T. (2002). *Centipede's 100 Shoes*. New York: Henry Holt and Company.  
ISBN#: 978-0-8050-7298-3

Murphy, S. (2004). *100 Days of Cool*. New York: Harper Collins Publishers.  
ISBN#: 0-06-000123-2

Ulmer, W. (2010). *Zero, Zilch, Nada: Counting to None*. Ann Arbor: Sleeping Bear Press.  
ISBN#: 978-1-58536-461-9

Murphy, S. (2004). *Tally O'Malley*. New York: Harper Collins Publishers.  
ISBN#: 0-06-053164-9

Friedman, A. (1994). *The King's Commissioners*. New York: Scholastic Inc.  
ISBN#: 0-590-48989-5

Murphy, S. (1999). *Henry the Fourth*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446719-8

Dahl, M. (2005). *Eggs and Legs: Counting by Twos*. Mankato: Picture Window Books.  
ISBN#: 978-1-4048-1114-0

Murphy, S. (1997). *Betcha!*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446707-4

Pilegard, V. (2001). *The Warlord's Beads: A Mathematical Adventure*. Gretna: Pelican Publishing Company, Inc.  
ISBN#: 978-1-56554-863-3

Dahl, M. (2005). *Lots of Ladybugs!: Counting by Fives*. Mankato: Picture Window Books.  
ISBN#: 978-1-4048-1118-8

Murphy, S. (2005). *Leaping Lizards*. New York: Harper Collins Publishers.  
ISBN#: 0-06-000132-1

Tang, G. (2001). *The Grapes of Math*. New York: Scholastic Inc.  
ISBN#: 0-439-21033-X

## **Sorting and Classifying**

Reid, M. (1990). *The Button Box*. New York: Puffin Unicorn Books.  
ISBN#: 0-14-055495-5

Murphy, S. (2003). *3 Little Firefighters*. New York: Harper Collins Publishers.  
ISBN#: 0-06-000120-8

Murphy, S. (2001). *Seaweed Soup*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446736-8

## **Patterns**

Murphy, S. (2000). *Beep Beep, Vroom Vroom!*. New York: Harper Collins Publishers.  
ISBN#: 0-06-028017-4

Harris, T. (2001). *Pattern Bugs*. Minneapolis: Millbrook Press.  
ISBN#: 978-0-7613-2107-1

Harris, T. (2000). *Pattern Fish*. Minneapolis: Millbrook Press.  
ISBN#: 978-0-7613-1712-8

## Comparison

Murphy, S. (1997). *Just Enough Carrots*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446711-2

Murphy, S. (2005). *More or Less*. New York: Harper Collins Publishers.  
ISBN#: 0-06-053167-3

## Addition and Subtraction

Murphy, S. (1998). *Animals on Board*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446716-3

Murphy, S. (2003). *Double the Ducks*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446249-8

Sturges, P. (1995). *Ten Flashing Fireflies*. New York: NorthSouth Books, Inc.  
ISBN#: 978-1-55858

Merriam, E. (1993). *12 Ways to Get to 11*. New York: First Aladdin Paperbacks.  
ISBN#: 0-689-80892-5

Murphy, S. (2000). *Monster Musical Chairs*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446730-9

Murphy, S. (2001). *Shark Swimathon*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446735-X

Murphy, S. (1998). *A Fair Bear Share*. New York: Harper Collins Publishers.  
ISBN#: 978-0-06-446714-8

Rochelle, D. (2010). *1 + 1 = 5 and Other Unlikely Additions*. New York: Sterling Publishing Company  
ISBN#: 978-1-4027-5995-6

## Multiplication and Division

Burns, M. (1997). *Spaghetti and Meatballs for All!: A Mathematical Story*. New York: Scholastic Inc.  
ISBN#: 0-590-94459-2

Pinczes, E. (1993). *One Hundred Hungry Ants*. New York: Houghton Mifflin Company.  
ISBN#: 0-395-63116-5

Hutchins, P. (1986). *The Doorbell Rang*. New York: William Morrow & Company, Inc.  
ISBN#: 0-688-09234-9

Hulme, J. (1991). *Sea Squares*. New York: Hyperion Books for Children.  
ISBN#: 1-56282-520-8

Pinczes, E. (1995). *A Remainder of One*. New York: Houghton Mifflin Company.  
ISBN#: 0-618-25077-8

Murphy, S. (1997). *Divide and Ride*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446710-4

Hong, L. (1993). *Two of Everything*. China: Albert Whitman and Company.  
ISBN#: 978-0-8075-8157-5

Sayre, A. and Sayre, J. (2006). *One Is a Snail, Two Is a Crab: A Counting by Feet Book*.  
Somerville: Candlewick Press.  
ISBN#: 978-0-7636-2631-0

## **Geometry**

Murphy, S. (2006). *Jack the Builder*. New York: Harper Collins Publishers.  
ISBN#: 0-06-055774-5

Murphy, S. (2000). *Let's Fly a Kite*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446737-6

Pilegard, V. (2000). *The Warlord's Puzzle: A Mathematical Adventure*. Gretna: Pelican  
Publishing Company, Inc.  
ISBN#: 978-1-56554-495-6

Pallotta, J. (2003). *Icky Bug Shapes*. New York: Scholastic Inc.  
ISBN#: 0-439-38918-6

Walsh, E. (2007). *Mouse Shapes*. Orlando: Harcourt Brace and Company.  
ISBN#: 978-0-15-206091-6

Tompert, A. (1990). *Grandfather Tang's Story: A Tale Told with Tangrams*. New York:  
Crown Publishers.  
ISBN#: 0-517-57272-9

Paul, A. (1991). *Eight Hands Round: A Patchwork Alphabet*. New York: Harper Collins  
Publishers.  
ISBN#: 0-06-443464-8

Flournoy, V. (1985). *The Patchwork Quilt*. New York: Penguin Books USA Inc.  
ISBN#: 0-8037-0097-0

Burns, M. (1994). *The Greedy Triangle*. New York: Scholastic Inc.  
ISBN#: 0-590-48991-7

Aboff, M. (2010). *If You Were a Polygon*. North Mankato: Picture Window Books.  
ISBN#: 978-1-4048-5692-9

## **Time and Money**

Creighton, J. and Pariseau, P. (1995). *8 O'Clock*. New York: Scholastic Inc.  
ISBN#: 0-590-93568-2

Gray, K. (2003). *Cluck O'Clock*. USA: Holiday House, Inc.  
ISBN#: 0-8234-1809-X

Harris, T. (2009). *The Clock Struck One: A Time-Telling Tale*. Minneapolis: Millbrook Press.  
ISBN#: 978-0-8225-9067-5

Hutchins, H. (2004). *A Second is a Hiccup: A Child's Book of Time*. New York: Scholastic Inc.  
ISBN#: 978-0-439-83106-2

Glass, J. (2000). *A Dollar for Penny*. Step into Reading Level 2. New York: Random House, Inc.  
ISBN#: 0-679-98973-0

Murphy, S. (1998). *The Penny Pot*. New York: Harper Collins Publishers.  
ISBN#: 978-06-446717-9

Axelrod, A. (1997). *Pigs Will Be Pigs: Fun with Math and Money*. New York: Aladdin Paperbacks.  
ISBN#: 0-689-81219-1

Schwartz, D. (1989). *If You Made a Million*. New York: Scholastic, Inc.  
ISBN#: 0-590-43608-2

## **Graphing**

Leedy, L. (2005). *The Great Graph Contest*. Dongguan City, China: Kwong Fat Offset Printing Co.  
ISBN#: 0-8234-1710-7

Murphy, S. (1998). *Lemonade for Sale*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446715-5

## **Measurement**

Lionni, L. (1960). *Inch by Inch*. New York: HarperCollins Publishers.  
ISBN#: 0-688-13283-9

Pinczes, E. (2001). *Inchworm and a Half*. New York: Houghton-Mifflin Company.  
ISBN#: 0-618-31101-7

Leedy, L. (1997). *Measuring Penny*. New York: Square Fish.  
ISBN#: 978-0-8050-6572-5

Schwartz, D. (1999). *If You Hopped Like a Frog*. New York: Scholastic Inc.  
ISBN#: 0-590-09857-8

Axelrod, A. (1997). *Pigs in the Pantry: Fun with Math and Cooking*. New York: Aladdin Paperbacks.  
ISBN#: 0-689-82555-2

Myller, R. (1990). *How Big is a Foot?*. New York: Dell Yearling.  
ISBN#: 0-440-40495-9

Murphy, S. (1999). *Super Sand Castle Saturday*. New York: Harper Collins Publishers.  
ISBN#: 0-06-446720-1

## **Biscuit Books for Tote**

Capucilli, A. (1998). *Bathtime for Biscuit*. New York: HarperCollins Publishers.  
ISBN#: 0-06-027937-0

Capucilli, A. (2001). *Biscuit Wants to Play*. New York: HarperCollins Publishers.  
ISBN#: 0-06-028069-7

Capucilli, A. (2002). *Biscuit Goes to School*. New York: HarperCollins Publishers.  
ISBN#: 0-06-028682-2

## **Resource Books/Websites**

*Tangramables*. Learning Resources (1990).

*Mouse Count Game*. [www.makinglearningfun.com](http://www.makinglearningfun.com)

*Quilt Design Masters*. Dale Seymour Publications (1996).

Duck Erasers- Oriental Trading Company



## **NCTM Resources**

*Exploring Mathematics through Literature: Articles and Lessons for Prekindergarten through Grade 8* (2004)

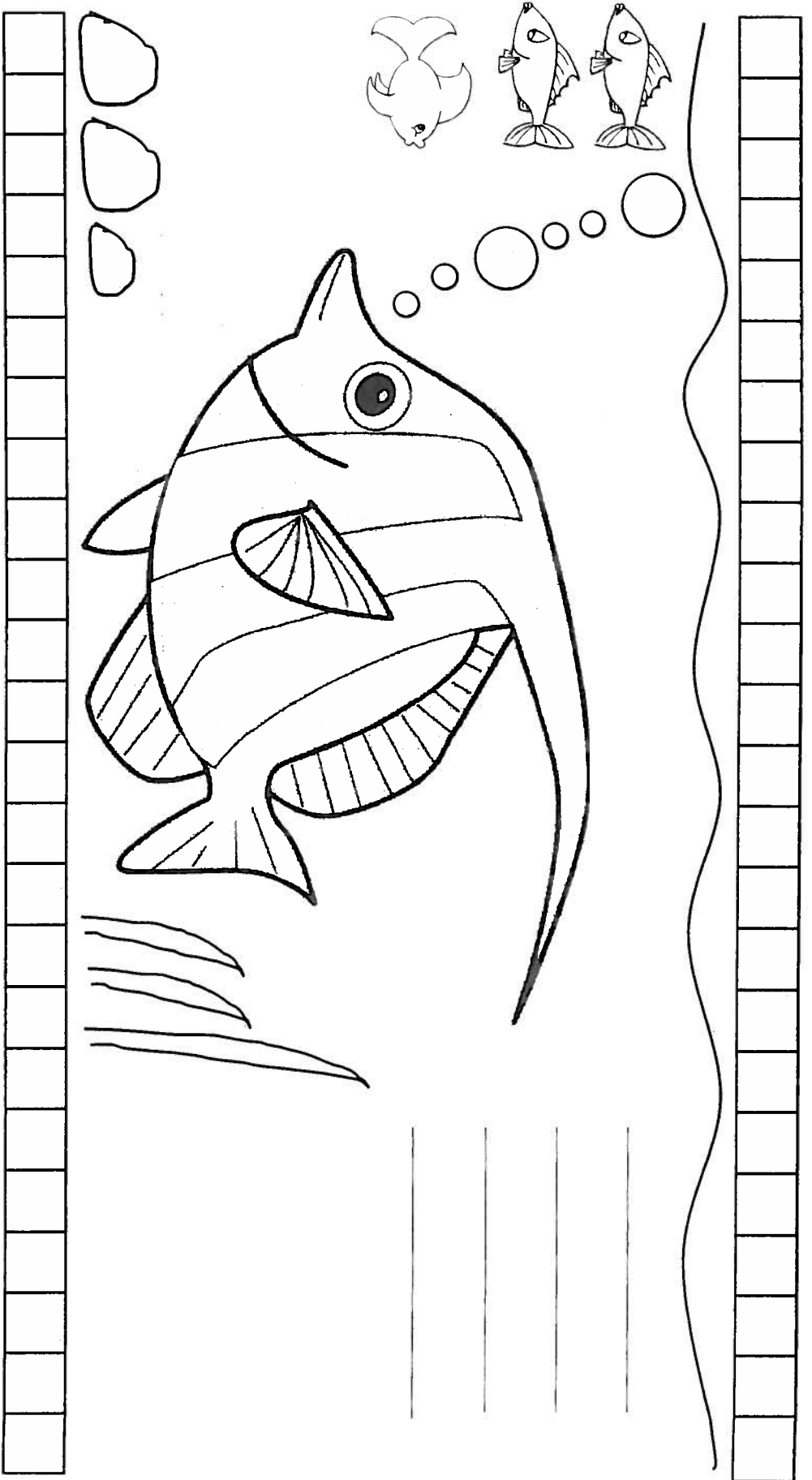
ISBN#: 978-0-87353-553-3

*Numbers and Stories: Using Children's Literature to Teach Young Children Number Sense* (2014)

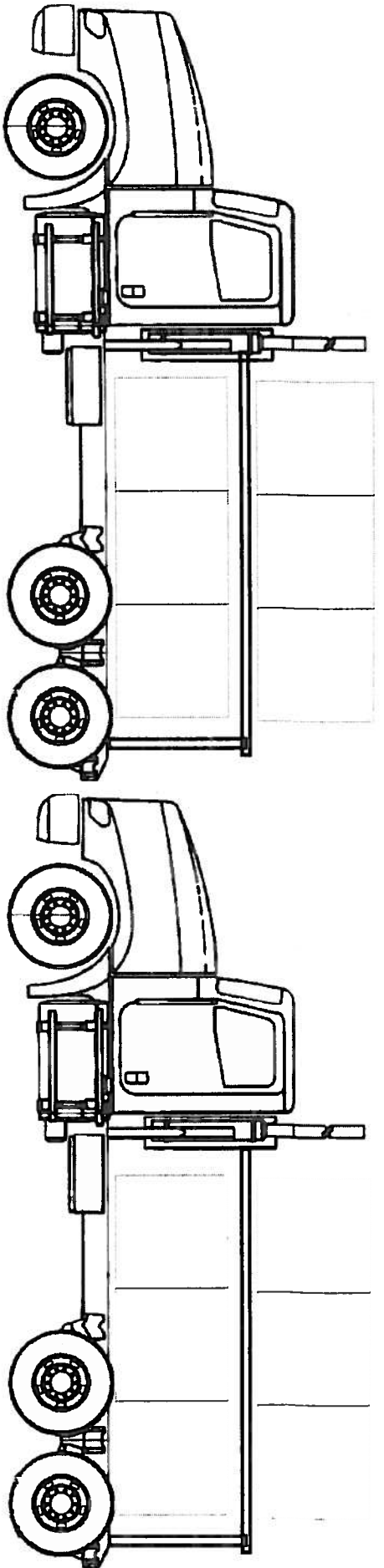
ISBN#: 978-1-48333-094-5

*The Wonderful World of Mathematics* (1992, 1998)

ISBN#: 0-87353-439-5



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Name \_\_\_\_\_

## Train Doubles

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Double \_\_\_\_\_ is \_\_\_\_\_

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

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Double \_\_\_\_\_ is \_\_\_\_\_

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

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Double \_\_\_\_\_ is \_\_\_\_\_

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Double \_\_\_\_\_ is \_\_\_\_\_

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Name \_\_\_\_\_

## Domino Doubles

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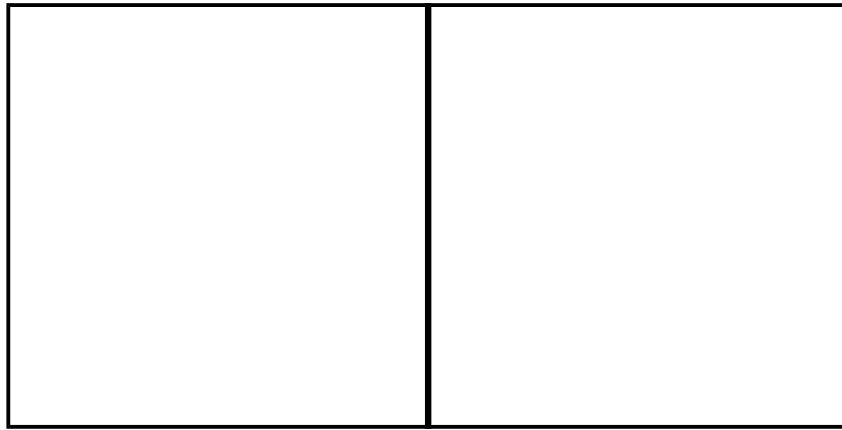
Double \_\_\_\_\_ is \_\_\_\_\_

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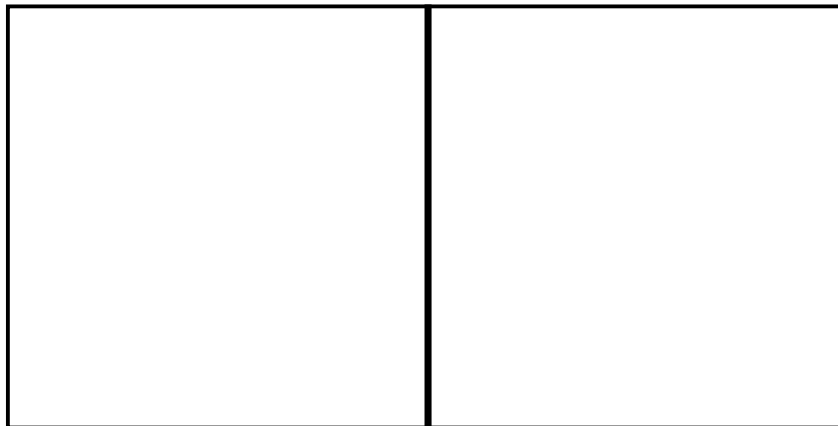
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Double \_\_\_\_\_ is \_\_\_\_\_

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



Double \_\_\_\_\_ is \_\_\_\_\_

$$\underline{\hspace{2cm}} + \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

# BISCUIT THE DOG TOTE BAG

## Suggested Activities:

- Read some or all of the Biscuit adventures.
- Reread looking for brain words such as it, is, the...
- Write a story or journal entry and illustrate it
- Play one of the Dog Bones games. Make sure you do lots of counting!

## Materials in bag:

Biscuit plush toy

Biscuit books: Biscuit

wants to play, Biscuit goes to School, Bath Time for Biscuit

Bag of dog bones, bowls, dice, worksheets






Name \_\_\_\_\_

# TRADITIONAL DOG BONES GAME RULES...

- 1) Give each player a bowl. Put bones in center.
- 2) Take turns rolling 1 die. Take that many bones and put in bowl.
- 3) If you roll a 6 - put 2 bones back. Boo Hoo, put back two!
- 4) Play until all bones are taken.
- 5) Estimate how many bones you might have.
- 6) Now count - most bones wins the game!