

# AG IN THE OUTFIELD

83

**GRADE:** 4-6

**SUBJECT:** Math

**STUDENT SKILL:** The student will develop and test strategies to solve practical, everyday problems which may have single or multiple answers.

## STEP-BY-STEP INSTRUCTIONS

1. Hold a brainstorming session with the class on things that are associated with baseball. Have a class member record all reasonable ideas. Bring to class and display some of the equipment used in a baseball game. Allow students to touch items and try to decide what they are made from. Ask if any of the items are made from an agricultural product.
2. Share the background material.
3. Hand out the student worksheet, and have students complete the math problems.

## BACKGROUND

The ancient Romans played a game similar to the game we know as baseball with balls made from strips of animal hide wrapped around reeds or wild grasses. An official baseball used in the major leagues today has a core made from four long strands of high quality wool. The core is surrounded by rubber or cork and covered with two pieces of white horse or cow hide, which is stitched together with exactly 216 stitches. Lower quality baseballs have cores made from cotton yarn.

The first bats used in the game were simply sturdy wooden sticks. Today an official bat is a smooth round stick made of one piece of solid wood. It must be no more than 2 3/4 inches in diameter at the thickest part and no more than 42 inches long. The best bats cost about \$25 and are made from the wood of northern ash trees. In recent years some manufacturers have started using maple, due to a shortage of the preferred northern ash. Bats break very easily near the handle or near the bat's trademark. There are no official records, but Bo Jackson may hold the record for bats broken intentionally.

Mitts vary according to the size of a player's hand or the position he or she plays. Quality mitts can cost from \$80 to \$230. The best mitts are made from natural materials, usually cow or

## MATERIALS

Miscellaneous  
baseball equipment  
for display

kangaroo hide. Lower priced mitts are made from vinyl or nylon.

### RESOURCES

Adler, David A., *Cam Jansen and the Mystery of the Babe Ruth Baseball*, Viking, 1982.

Christopher, Matt, *The Lucky Baseball Bat*, Scholastic, 1991.

Herzig, Alison Cragin, *The Boonesville Bombers*, Viking, 1991,

Miles, Betty, *The Secret Life of the Underwear Champ*, Knopf, 1981.

Mochizuki, Ken, *Baseball Saved Us*, Macmillan, 1995.

Slote, Alfred, *Finding Buck McHenry*, Harper Collins, 1991.

### EVALUATION

Answers to worksheet are as follows: 1. 37 in 2000; 2. catcher; 3. 1988; 4. 1987; 5. .270; Incavigila broke 2400 bats for a total cost of \$60,000.

### ADDITIONAL ACTIVITIES

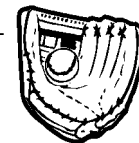
1. Obtain an old baseball and split it open. Let students examine it and identify the materials they find inside. Have them unwind the yarn core and measure its length. Is the core made from wool or cotton yarn?
2. Challenge students to design a pennant for an existing or imaginary baseball team. Traditional pennants were made from wool material and attached to small wooden dowels. They featured the name of the baseball team and its mascot. Fans would wave the pennants to show support. Display your students' creations in the library to promote books about baseball or famous players.

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Name \_\_\_\_\_



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The answers to these questions can be found on the baseball card at left.

				<b>Mike Stanley</b>
Catcher, Texas Rangers		Bat	Home	
Ht. 6'1", Wt. 185 lb.	<u>Year</u>	<u>Avg.</u>	<u>Runs</u>	<u>Hits</u>
Bats: R Throws: R	1986	.333	1	10
Born: 6/25/63	1987	.273	6	59
No. 1 catcher after being promoted from OKC 89ers in 1987.	1988	.229	3	57
Signed with Rangers out of U. of Florida. Suffered hamstring injury in 1988. Home: Ft. Lauderdale, FL	1989	.246	1	30

1. How old is Mike Stanley? \_\_\_\_\_
2. What position does he play? \_\_\_\_\_
3. What year was Stanley injured? \_\_\_\_\_
4. What year did the Rangers baseball club install Stanley as a catcher? \_\_\_\_\_
5. Calculate Mike Stanley's batting average for the years 1986-89. \_\_\_\_\_



Oklahoma State University baseball great Pete Incavigila (1982-85) is tough on bats. In one year, including games and practice, he broke 200 dozen bats. Bats cost around \$25 each.

How many bats did Incavigila break?  
Write out the math equation and solve it.

What was the cost of all the broken bats? Write out the problem and solve it.

Eat some agricultural products at the ballpark. You have \$7.50 to spend on food. Calculate what you can buy from the chart at right, and list your choices below.



\_\_\_\_\_

\_\_\_\_\_

<u>food</u>	<u>price</u>
hot dog.....	2.25
drink.....lg-1.50-xlg-2.75	
popcorn.....	2.00
peanuts .....	1.50
pretzels .....	1.50
nachos.....	2.00

Official baseballs must measure no less than 9 inches and no more than 9 1/4 inches in circumference. Find the circumference of a golf ball, basketball, soccer ball, and tennis ball. Write your answers, from smallest to largest, on the other side of this paper.

