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ILLUSTRATOR:
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Planet Toys is offering tickets to the All-Star Game to the person who guesses how many jelly beans are in the display jar. Two friends head to the toy store to try to score the tickets and practice their estimation skills along the way.
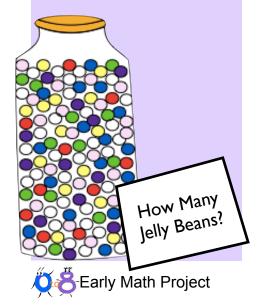
Ages: 6 to 10 years

ATOS Reading Level: 1.4

Lexile: 440L

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Betcha!

How would you estimate the number of jelly beans?

Topics: estimation, multiplication, addition, mathematical reasoning

Activities To Do Together:

Estimating is an important skill that we use all of the time. We often use estimation when cooking, shopping, traveling, or figuring out how long it will take to do something. In life, an estimated answer is sometimes all the information we need. An estimated answer is also useful because it may tell us whether a calculated answer seems reasonable.

Before you read *Betcha!* with your child:

- Talk about what it means to estimate. Discuss situations where an estimated amount or number is useful, for example, estimating about how much your groceries will cost or about how long it will take to drive to a relative's house.

- Talk about how guessing and estimating are different.

While reading the book:

- Ask your child how they would have estimated the number of people on the bus and the cost of the items for sale in the window of Planet Toys.

When you have finished reading the story, try the following:

- Talk with your child about the strategies you see the boys use in the story.

- Ask your child to tell you about the estimation strategies they have used. Ask them to teach you their favorite estimation strategy and test it out together.

- Practice estimation together while playing, running errands, at the grocery store, etc. Compare the estimated amount and the actual number. How close were you?

- Talk with your child about a time when you used estimation and how it was helpful.

- Encourage your child to ask 5 people about how they use estimation.

- Play estimating games together. How many people can ride on a bus? How many marbles will fit in a bag? Etc.

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Questions for Mathematical Thinking:

1. How would you figure out how many jelly beans could fit in a jar?

2. How do you think you could use estimation at a grocery store?

3. Do you think estimation is useful? Why or why not?

4. How is an estimated number different from an exact number? When would you use an estimated number? When would you use an exact number?

5. What strategies did the boys use to estimate?

Early Math Project Resources:

Visit Betcha! Activities (earlymathca.org/betcha)

Follow this link or visit earlymathca.org/external-resources for

additional online resources

Vocabulary

Math words found in the story: about, almost, close, counted, few, forty-five, forty-three, many, number, plus, rows, twenty-five, twenty-three, two

Related Math Words: estimating, exactly, guess

Words to Build Reading Comprehension: betcha, contest

Spanish Title: n/a

Related Books: *How Many Seeds in a Pumpkin?* by Margaret McNamara

Click this link to the World Catalog or enter https://bit.ly/44royGN to find *Betcha!* in the public library.

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Math Connections:

Estimating is a highly useful skill that involves a variety of reasoning strategies that result in an approximate answer to a mathematical question. When you estimate, you roughly calculate a number that you think is close to the actual total. Learning about estimation can help your child develop their counting, addition, subtraction, multiplication, division, and reasoning skills. It can also help them understand if an answer they've actually calculated seems reasonable.

In the book *Betcha!,* two friends use estimating strategies to find the approximate number of people riding a bus, the number of cars stopped in a traffic jam, the total cost of several items in a store's display window, and the number of jelly beans in a large jar. Tell your child about some of the ways that you use estimating and ask them to tell you about something they've estimated. This might include keeping an approximate total of the cost of items in your shopping basket, figuring out when you need to leave your home in order to get to a destination on time, or estimating how many loads of laundry you can wash with the laundry detergent remaining in the detergent box.

Talk with your child about different estimating strategies. In the book, one of the boys figures out the approximate number of people riding the bus by counting the number of rows on the bus (10) and noticing that there are about four people in each row and a few people standing up. He estimates that there are 43 people on the bus. The actual number of passengers was 45. The estimate was "pretty close." The boy uses a similar strategy to determine the number of cars in the traffic jam.

To figure out the total cost of the cool objects in the window of Planet Toys, one of the boys estimates by rounding. One of the boys rounded each cost to the nearest ten. The $39 roller skates were almost $40 and the $22 walkie talkies were almost $20. By rounding to the nearest 10, the numbers are simpler to add together.

The boy's jelly bean estimation strategy involved a combination of approaches. The jar seemed to have about 20 layers of jelly beans. The boy considered how many jelly beans were in one fourth of a single layer and decided it was about 10 and multiplied 10 by 4 to get the number of jelly beans in each layer, approximately 40 jelly beans. Twenty
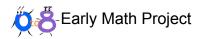
layers multiplied by 40 jelly beans told the boys that a reasonable answer would be somewhere near the number 800.

There are many different ways to think about a problem like the number of jelly beans in the jar. The boys could have estimated the number of jelly beans by considering the weight of the jar and the weight of a group of 10 jelly beans. They could have subtracted the weight of a similar jar from the weight of the display jar filled with jelly beans and considered how many groups of 10 jelly beans would equal that remaining weight. Ask your child how they would go about estimating an answer to each of the situations in the book. It can be very interesting to talk about the different ways that people come up with mathematical answers.

Encourage your child to use estimation often. There are many opportunities around the house, when running errands, and at school. Here are a few situations to estimate:

- The number of children on the playground

- The time it will take to make a recipe

- The number of pizzas needed to feed everyone at a party

- The number of steps to walk to a location

- The cost of the groceries in a shopping cart

- The weight of a pitcher of water

- The number of cars in a parking lot

- When to start cooking dinner if you want to eat at 7:00.

- The weight of a bunch of bananas

After your child has estimated, encourage them to find the exact answer to the question and compare their estimate to the actual number. Was the estimated answer close or exactly right? Ask them to tell you about how they estimated their answer.

PLANET TOYS

Age Level	Related [CA State Standards](#)
Grade 1	**Mathematical Practice 5** Use appropriate tools strategically. **Mathematical Practice 6** Attend to Precision.
Grade 2	**Mathematical Practice 5** Use appropriate tools strategically. **Mathematical Practice 6** Attend to Precision. **Number and Operations in Base Ten 2.NBT.7.1 CA** Use estimation strategies to make reasonable estimates in problem solving.
Grade 3	**Mathematical Practice 5** Use appropriate tools strategically. **Mathematical Practice 6** Attend to Precision. **Operations and Algebraic Thinking 3.OA.1** Represent and solve problems involving multiplication and division**. Measurement and Data 3.MD.1** Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects. **Number and Operations in Base Ten 3.NBT.1** Use place value understanding to round whole number to the nearest 10 or 100.

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