Counting on Frank

How many Franks would fit in your classroom?

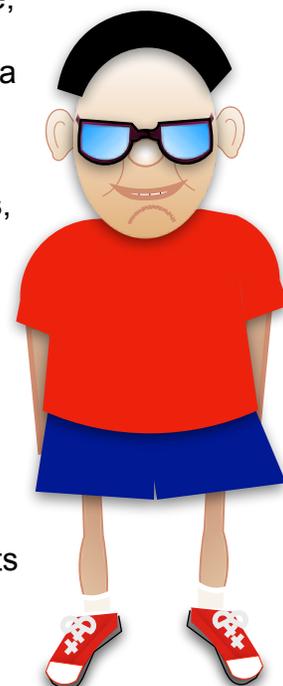**Topics:** measurement, volume, estimation, multiplication, rate of growth

Math Connections: Use *Counting on Frank* to introduce the idea of estimation. This book is a hilarious take on an old contest idea: Guess how many jelly beans are in the jar. The boy in the story is always calculating how many of something would fit in a huge space. For example, how many of his dog Frank would fit in his room? How many Humpback whales would fit in his entire house?

After reading the story with your child, go back to a couple of scenarios and talk about how your child thinks the boy figured out how many would fit. For example, the scenario with the peas - how do you think he figured the peas would be table-top height? What are some things to take into consideration? Does it matter the size of the room? Does it matter how big the peas are?

Ask your child how long they think it will take to fill one cup of water from the faucet, then time it to see how close they were. From that measurement, ask your child to figure out how long it would take to fill the largest pan you have with water from the faucet. Time it to see how close their calculations were.

Extension Questions:

1. See if you and your child can make some "calculations" just as the boy in the story did. For example, how many boxes of cereal will fit in a cabinet? How many gallons of water are in a swimming pool? What questions can your child come up with?

2. Determine how old you are in months, days, hours, and minutes. How many seconds old will you be when you are 50 years old? Estimate the number and then calculate the actual number of seconds. How close was your estimate?

3. If you dropped 15 peas on the floor every night, since you were born, how long would it take for the peas to reach the ceiling? Talk with your child about the measurements they will need and the mathematical operations they will use to estimate the answer to this problem.

AUTHOR:

Rod Clement

This is the story of a boy who sees the world a little differently than most people. He is always calculating how many of something will fit into a large space. How many of his dog Frank will fit into his bedroom? How long would it take to fill the entire bathroom with water?

Ages: 5 to 9 years

Interest Level: Kindergarten to 4th Grade

ATOS Reading Level: 3.8

Lexile: 780L

ISBN: 9780836803587

Copyright: 1991

Genre: Fiction

Classification: Picture Story Book

Early Math Project

Vocabulary for Building Math Concepts	as big as, average, calculate, even, forty-five minutes, four million times bigger, hours, nine feet tall, one-tenth, seven thousand feet, six feet wide, speed
Vocabulary for Extending Math Concepts	measurement, scale, volume, estimation
Vocabulary for Reading Comprehension	aircraft, childish, endanger, humpback whale, jumbo jet

Spanish Title: Not available

Also available in: Braille and Hebrew

Related Books: *How Much is a Million*? by David M. Schwartz; *How Big Is a Foot?* by Rolf Myller; *Betcha* by Stuart J. Murphy

Find this book at your local library: https:// www.worldcat.org/ title/counting-on-frank/ oclc/ 1089908553&referer= brief_results

Early Math Project Resources:

Contain Your Estimation: https://bit.ly/34R2tpb (English)

Contain Your Estimation (Spanish)

Online Resources:

Counting Frank Resources from NZMaths: https://bit.ly/31VSLQr

Age/Grade Level	Related Preschool Foundations and CA State Standards
Grades K-3	**California Common Core State Math Standards** https://bit.ly/31No7bP
Kindergarten	**Counting and Cardinality K.CC.1, K.CC.2** Know number names and the count sequence. **K.CC.4, K.CC.5** Count to tell the number of objects. **Operations and Algebraic Thinking K.OA.1, K.OA.2** Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from. **Measurement and Data K.MD 1, K.MD 2** Describe and compare measurable attributes.
Grade 1	**Number and Operations in Base Ten 1.NBT.1** Extend the counting sequence. **Measurement and Data 1.MD.2** Measure lengths indirectly and by iterating length units.
Grade 2	**Operations and Algebraic Thinking 2.OA.3 , 2.OA.4** Work with equal groups of objects to gain foundations for multiplication. **Number and Operations in Base Ten 2.NBT.7.1** Use estimation strategies to make reasonable estimates in problem solving. **Measurement and Data 2.MD.1 , 2.MD.2, 2.MD.3, 2.MD.4** Measure and estimate lengths in standard units.
Grade 3	**Measurement and Data 3.MD.2** Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.

Early Math Project