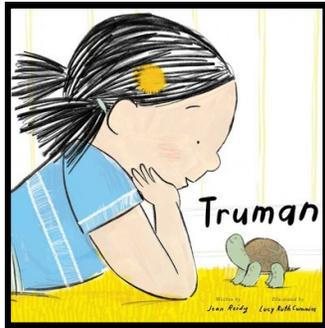


Primary Tasks: Spatial Reasoning

Spatial reasoning plays a role in :
arithmetic word problems measurement



Truman by Jean Reidy
Illustrated Lucy Ruth Cummings

Before Reading

Invite students to have a thorough look at the front cover and the inside pages. Hmmmm....what math might live here.....???

The inside wallpaper & inside title page can be explored for the math.

How many? How do you know?

Spatial discussion with the tortoise/donut title page....who's bigger? What size is/can a donut be?

Comparing/scaling/visualizing.

During Reading

Pause to read the extra bits in the amazing illustration in the text. They are exquisite. Wonderful new vocabulary will need exploring within the context of the story, during the first read.

pensive vast particularly uncharted
boarding unsettling afraid

After Reading

Endless mathematical opportunities with this lovely book.

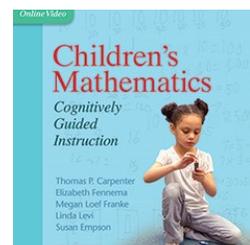
Ideas below found in a teacher guide created by Natalie Lorenzi

Crunching the Numbers: "Sarah placed seven green beans in Truman's dish—two more than usual!" Give students seven green paper strips to represent the green beans and guide them in figuring out how many green beans Sarah usually serves to Truman. Ask students to share the strategies they used to determine the amount. Children can work in pairs and be invited to make up their own "green bean" word problems.

Cognitive Guided Instruction CGI ~ There were some beans, Sarah placed 2 beans in Truman's dish. He now has 7.

$$\text{Start unknown} + 2 \text{ beans} = 7$$

Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart and comparing with unknowns in all positions, e/g/ by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.



Tortoise Math: Share the illustration of 32 tortoises in Sarah's backpack. Ask students how Truman might have used estimation to come up with the quantity of 32. Reinforce the idea that the goal of estimation is not to arrive at a "correct" answer or to randomly guess, but to get a "ballpark" idea of quantity. How many tortoises might fit on a piece of paper? A placemat? On a table?

Donut Data: Bring in plastic Ziploc bags of different sizes and mini-donuts. Hold up the smallest plastic Ziploc and ask students to estimate how many donuts might fit. Introduce larger bags asking students to estimate how many in this bag? Repeat with all Ziploc sizes and compare actual numbers with estimates. Estimation stations can be set up. Play with the idea of a **too high** and a **too low** estimate rather than exact. You'll be surprised at how this careful wording supports number sense and a range of possibilities rather than a 'specific answer'.

Spatial Sensibilities: Paying attention to how Truman stacks (the illustrator labels) the rocks within the confines of his little aquarium. His home. How will Sarah ensure he's safe for ever more.

Consider south and what the direction of the bus means in this story? Which way is south anyway?!?!?

Consider the **pink endless** carpet page. What is this word? Can a carpet be endless? Whose perspective? Why did the author choose the word endless not large/big/huge?...*through that opening barely the size of a small tortoise....*

