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Tyson's gerbil is hiding under the far corner of the bed. Tyson comes up with a plan to reach his pet.

Ages: 3 to 7 years**Lexile:** AD430L**ISBN:** 9781623541644**Copyright:** 2022

Too-Small Tyson

Is Tyson really too small?

Topics: problem solving, proportional thinking, equivalency

Activities To Do Together:

Too-Small Tyson shows how an understanding of size relationships can be a problem solving tool and a way to make sense of situations. Early explorations with finding the number of small and medium tubes that are equivalent to a longer tube, doubling or tripling recipe ingredients, and finding out how much money is needed to buy five small toy cars, build young children's foundational skills for success with proportional thinking and reasoning.

Before reading the book:

- Look at a picture of Tyson and his gerbil together. Ask your child to tell you which animals they think are similar to a gerbil. In what ways are the animals similar to a gerbil?
- Notice the gerbil's cage. Ask your child to tell you what they notice about the cage.

While reading the book:

- Notice together the difference in the length of the brothers' steps. Tyson says, "I have to take way more steps to go as far as you guys." Ask your child how many of Tyson's steps they think would be equal to his tallest brother's step.
- Talk about the lengths of the gerbil cage tubes. How do the lengths of the green, red, and blue tubes compare? Ask your child how many blue tubes would equal a red tube? A green tube?

When you have finished reading the book:

- Encourage your child to build with blocks or cardboard boxes and notice the relationships between the blocks or boxes. How many small blocks or boxes are equal to the length of a large block or box?
- Help your child, only as needed, to measure the step-length of family members and friends, and create a data table with the person's name and their step-length. Encourage your child to figure out how many steps each person takes to travel twenty feet. Ask your child what they notice.
- Measure your child's height together. How tall are they? Encourage your child to make drawings showing some of the things they are the perfect size to do.

Conversations During Daily Routines with Toddlers:

1. Play Time - Look at a small groups of toys together. Compare and talk about their lengths.
2. Clean Up Time - Talk out loud and problem solve together. If an object is out of reach, think of ways to reach it safely.
3. Snack Time - Notice together how many carrot sticks are the same length as a spoon.
4. Travel Time - Look together for combinations of vehicles that are the same length as a bus.

Questions for Mathematical Thinking:

1. What do you know about Tyson? Is he determined? Does he give up easily? Why do you think so?
2. What do you think of Tyson's plan to get Swish to come out from under the bed? Why do you think it is or is not a good plan?
3. What problem-solving strategies does Tyson use in this story?
4. If Swish was your gerbil, what would you have done?
5. What do you think Tyson might be able to do better than his brothers because of his size? Why do you think that?

Early Math Project Resources:

Visit [Too-Small Tyson Activities](https://www.earlymathca.org/too-small-tyson) (earlymathca.org/too-small-tyson) (directs to the book guide and activity page for each individual page)

Follow this [link](#) or visit earlymathca.org/external-resources for additional online resources.

Vocabulary

Math words found in the story: bigger, empty, far, four, inside, little, long, medium, more, none, one, same, second, short, size, small, smaller, smallest, three, two, youngest

Related math words: equal, equivalent, proportions, ratios, unit ratios

Words to build reading comprehension:

budge, cabinets, connected, cuddles, cushions, crawls, definitely, dresser, favorite, gerbil, lend, loose, pretending, scurries, search, snaps, worry

Spanish Title: Tyson, el pequeñito

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Related Books: *Twelve Snails to One Lizard* by Susan Hightower

Click this link to the [World Catalog](#) or enter <https://bit.ly/3R1mJLm> to find *Too-Small Tyson* in the public library.

Math Connections:

Too-Small Tyson helps children build on their knowledge of quantities and sizes, and how they relate to each other. It also provides a positive model of a child making sense of a problem and persevering in solving the problem.

When reading the story with your child, point out the tubes of the gerbil cage and ask your child to tell you about the attributes of each of the tubes. How are they alike? Different? What different combinations of tubes have an equivalent length? Encourage your child to come up with their own combinations of shorter tubes that are equal in length to the largest tube.

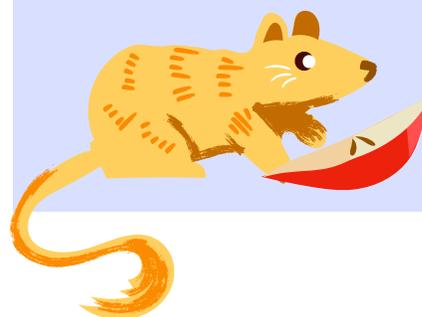
Ask your child to select a single interesting object and tell you about its length, height, weight, and appearance. Once your child is comfortable describing an object, make it a game. Take turns selecting a "secret object" and asking questions to identify the object. Ask questions about the object's shape, height, color, size, purpose, etc.

Explore situations for making height, length, and size comparisons. Follow your child's interests and find out what types of comparisons they're interested in making. Compare two objects to see which object is longer, wider, heavier, bigger, etc. For example, if your child is interested in pets, they might want to compare the heights and weights of a house cat and a dog.

Your child may be interested in exploring proportional thinking in different situations. Provide opportunities for your child to explore this concept, for example:

- While traveling, consider how far it takes to drive or walk a particular distance and then reason how far it will take to travel round trip.
- While cooking, consider how much of an ingredient you will need if you want to double or triple your recipe.
- While at the store, consider the cost of buying one zucchini. How much will it cost to buy two, three, or four zucchinis?

These types of explorations help children to visualize how one quantity is adjusted according to another quantity. Opportunities to consider the relationship between two or more things is an important first step in understanding measurements, ratios, fractions, and algebra.



Age Level	Related Infant Toddler Foundations , Preschool Foundations and CA State Standards
Infant/ Toddler	Spatial Relationships The developing understanding of how things move and fit in space.
Preschool/ TK	Measurement 1.0 Children begin to compare and order objects Mathematical Reasoning 1.0 Children use mathematical thinking to solve problems that arise in their everyday environment.
Kindergarten	Measurement and Data K.MD.1 Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. K.MD.2 Directly compare two objects with a measurable attribute in common, to see which object has “more of”/“less of” the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.
Grade 1	Measurement and Data 1.MD.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. 1.MD.2 Express the length of an object as a whole number of length units, by laying multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps.