

THE BARTON SERIES

# HAPPY DAYS WITH BARTON



BY

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(Ages 8 and over)

# HAPPY DAYS WITH BARTON

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## MY WAY TO WEIGH

It was a cloudy Saturday morning and little Barton had just eaten his fill of breakfast. Though it was not a school day, the little boy was an early riser. His feathered friends ensured that he was. On this morning, he had risen from bed at the same time that he usually did on the days of school. Today, though, was a relaxing day for him and he wondered about the various ways in which he could spend it.



The young Barton shifted the drapes and peeked outside through the windows. He saw several huge, dark clouds closing in on each other as they gradually covered the blue skies. They promised much rain soon. The young boy felt slightly disappointed as he realised that playing outdoors either by himself or with his friends was no longer his first choice.

He began to think of other ways to enjoy and amuse himself on this Saturday morning. His homework was all done since the evening before. Much time was spent on revision, thinking and working the questions on weights which he had got in mathematics class. He felt quite sure that these and all his other assignments were altogether well-done. Barton now had the entire weekend days of both Saturday and Sunday to do much as he wished.

However, it was only when Mom invited her little son to accompany her on her trip to the supermarket that the little boy thought about a great opportunity to do something which had bothered him for some time. It involved a bit of the homework which he had completed the evening before and which was based on the topic of weights studied during the last week.

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Barton felt certain that the numerous items being sold at the supermarket could give him the answers to some puzzling thoughts that toyed with his young and active mind. Indeed, he thought to himself, a trip to the supermarket with Mom was a great opportunity to solve this mystery rather simply.

The supermarket was only about two kilometres away from home, and so it was not too long after Mom's invitation was accepted that both mother and son began to walk along the aisles of the huge supermarket.



Barton helped Mom to push the large grocery cart along the aisles and he looked at the wide variety of items stacked neatly and in great numbers upon the strong, sturdy shelves. The cans of foodstuff clothed in their beautifully coloured labels looked quite picturesque.

In mathematics classes, Barton had learned that a gram was a small measure of weight. He was taught that a thousand of such grams is equivalent to the weight of one kilogram. He learned to convert a weight expressed in kilograms into grams, by multiplying the number of kilograms by one thousand. Likewise, he would divide any number of grams by one thousand to convert a weight expressed in grams into its measure in kilograms.

However, Barton had little idea of what the weight of one gram or the weight of one kilogram felt like.

Little Barton, though, wanted to be able to identify the weights of items. He wanted, for example, to be able to lift a box or a can or a package and be able to say that it weighed about two or three or four kilograms. He wanted to be able to identify a bag of sweets as weighing about a half of a kilogram or a pack of spices from Mom's kitchen as weighing one-quarter of a kilogram. The trip to the supermarket ought to help him to be able to do this. Barton smiled to himself as he looked at the packed shelves and he knew exactly what he wanted to do.

Mom cast a curious glance at him and knew that he was in deep thought. She realised that some plan was forming in his head. However, she continued along with the family shopping, and Barton persevered with his thinking.

"I'll lift the packs of groceries and place them in the shopping cart, Mom," said Barton.





“Place a package of salt in the cart,” said Mom.

Barton picked up the pack of salt and he read on the label: **Salt - Weight one kilogram.**

Barton held the pack in his hand for a brief moment, to become familiar with the weight of one kilogram. Then he placed the package in the cart.

“I want to be able to estimate the weight of things,” he said to Mom, as she looked at his actions.

Mom just smiled but said nothing.

“I need two kilograms of sugar and a pack of flour,” she said, pointing to the items on the shelf.

The flour was sold in packs that weighed two kilograms each and the sugar in packs that weighed one kilogram each. Barton reached for **two** packs of sugar. Each pack weighed the same and felt the same as the single pack of salt. Together, though, their weight was **twice** as heavy as the single pack of salt.



Whilst Mom looked closely at some other products, Barton lifted the two packs of sugar in one hand and the pack of flour in the other. As expected, they felt the same in weight. Barton smiled to himself as he began to become familiar with the weight of one kilogram and that of two kilograms.

Mom handed Barton a large pack of powdered milk upon his request. As Barton lifted it he felt it was heavier than the one-kilogram packs of salt and sugar. However, it did not seem as heavy as the two-kilogram pack of flour. He looked at the weight before placing it in the shopping cart. It read: **Weight: 1½ kilograms.**



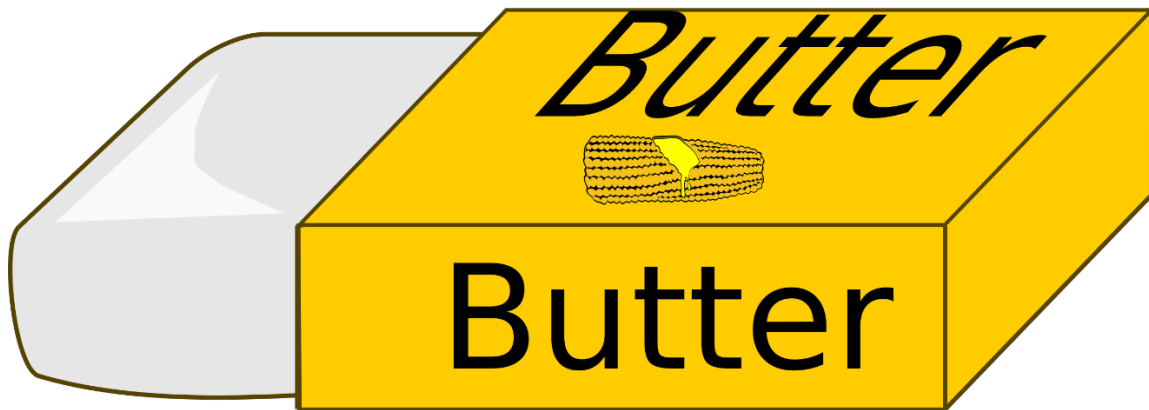
“Just as I thought,” said Barton to himself.

“This weight is more than one kilogram but less than two kilograms. The weight is exactly between one and two kilograms.”

Barton knew that there could be many different weights that are between one kilogram and two kilograms.



As little Barton and Mom walked from aisle to aisle and bought more items, Barton would occasionally lift the cans and packs of butter and cheese. He held the bags of beans and the boxes of soap in his hands for a while before placing them in the shopping cart. He was very careful with the crate of eggs. As he placed them securely in the shopping cart, he tried to estimate the weight of each product. He compared them to the weight of the one-kilogram pack of sugar and salt, and also the two-kilogram pack of flour. Barton was now familiar with both these weights.



At last, Barton felt that he was not only able to convert grams into kilograms and kilograms to grams, but he had a good idea of how much a kilogram felt like when it was lifted.

Barton hopped around the aisles as he thought a funny thought.

“Mom,” he said, “I weigh eighteen kilograms. If I sat on a large scale pan and we put eighteen packs of salt, each weighing one kilogram, on the other scale pan, then the scales would balance.”

“Sure, they would,” said Mom. “As long as the weight on one side is the same as that on the other side, the scales would balance.”

“Mom,” said Barton again, “if I sat on the scale pan, then we need to place **nine** packs of flour to balance them since each pack weighs two kilograms.”

“Yes, that is quite correct,” agreed Mom. “Now, if you had to compare the weights of the pack of flour, the pack of salt, the pack of powdered milk, and

then you place them in order of size starting with the heaviest, what would you get?"

"That's easy, Mom," replied Barton, feeling unchallenged.

"First, it would be me, as I weigh eighteen (18) kilograms, then the pack of flour which weighs two kilograms, followed by the pack of powdered milk, which weighs one and one half ( $1 \frac{1}{2}$ ) kilograms, and last would be the pack of salt which weighs one (1) kilogram."

"Well," said Mom as she picked up a box of teabags, "this box weighs only one-half ( $\frac{1}{2}$ ) of a kilogram. I wonder how many of these would be required to be placed on a scale pan to balance with you on the other side."

"I can do that," said Barton. "There are two halves of any whole. Therefore, two boxes of tea bags will make up one kilogram."



Barton looked at Mom, smiling as she listened to his reasoning.

“Well,” he continued, “since I weigh eighteen kilograms, then I shall times or multiply the numbers 18 by 2 to get 36. So 36 boxes of tea bags placed on one side of a large scale pan will weigh the same as me sitting on the other side.”

“That is absolutely wonderful,” said Mom as she gave Barton a little hug.

“Mom,” said Barton as he snuggled up to Mrs Sandiford, “if I were to eat all my food and fresh fruits and exercise and do all the things that shall make me healthy, then I shall grow and weigh more, won’t I?”

“You most certainly shall,” replied Mom.

“Then, Mom,” said the thoughtful Barton, “we shall need more tea bags to balance with me on the other side, won’t we?”

Mom agreed.

“When that time comes, we shall sit and calculate the number of tea bags that we must have. But, we can do something even more.”

Mom pointed Barton to a small box of paper towels on a nearby shelf.



“Look at this box, Barton, its weight is  $\frac{1}{4}$  of a kilogram. We can even see how many boxes of these boxes of paper towels will be needed to balance with you.”

“I know how many will be needed now,” laughed the amused Barton. “It will be 72 and I found this answer by multiplying 18 by 4.”

Mom laughed and was proud of her son’s reasoning.

“Mom,” said Barton, looking a bit serious, “when we drive into the town, there is a large building with a blindfolded, female statue holding a huge scale in front of it. Why is there such a statue in front of a building? What is she weighing and why would she be blindfolded and not be able to see what she is weighing?”