



MEASURING BALANCE 2.0

TEACHING AID



#1279

36 PCS

5+

LEARN THROUGH PLAY



Table of Contents

Product Description

Everyone has seen modern digital scales, but sometimes the old ways are the best! This measuring balance introduces children to the idea of balance and equality, and is also a gateway to larger mathematical and scientific concepts.

Teach, learn and play with:

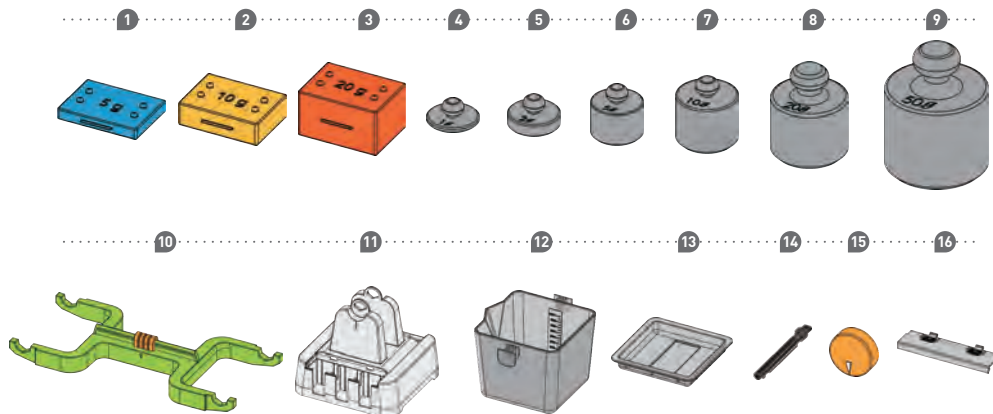
Inequalities, Weight and mass, Volume, Gravity, and Differences between solids and liquids.

The set includes 11 metal weights, 14 plastic weights and 2 water boxes.

Children can learn about the relationship between the volume and weight of an object through hands-on experimentation and interaction.

Kit Contents

What's inside your experiment kit:

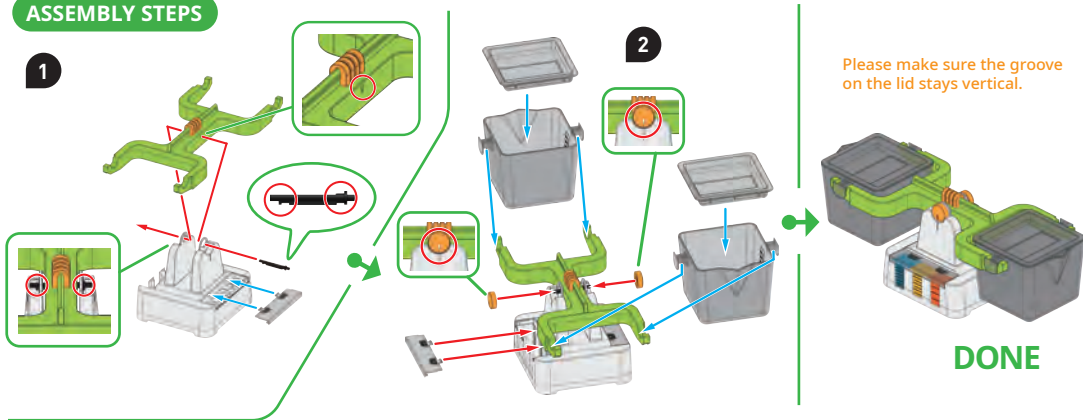


NO.	ITEM NO.	DESCRIPTION	QTY.
○ 1	1054-W10-I1B	O-PLASTIC WEIGHT (5 g)	8
○ 2	1054-W10-J1Y	O-PLASTIC WEIGHT (10 g)	4
○ 3	1054-W10-K1O	O-PLASTIC WEIGHT (20 g)	2
○ 4	M10#1054-1-Z	O-METAL WEIGHT (1 g)	2
○ 5	M10#1054-2-Z	O-METAL WEIGHT (2 g)	2
○ 6	M10#1054-3-Z	O-METAL WEIGHT (5 g)	2
○ 7	M10#1054-4-Z	O-METAL WEIGHT (10 g)	2
○ 8	M10#1054-5-Z	O-METAL WEIGHT (20 g)	2
○ 9	M10#1054-6-Z	O-METAL WEIGHT (50 g)	1

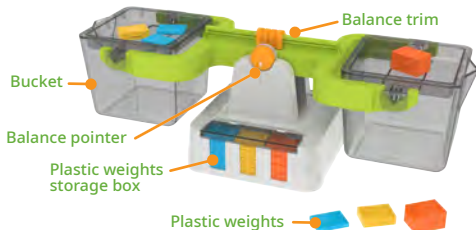
NO.	ITEM NO.	DESCRIPTION	QTY.
○ 10	1054-W10-B1G	O-BALANCE BEAM	1
	1054-W10-E1O	O-BALANCE TRIM	
○ 11	1279-W10-A1S	O-BALANCE BASE	1
○ 12	1054-W10-C1TD	O-BUCKET	2
○ 13	1054-W10-D1TD	O-BUCKET LID	2
○ 14	1054-W10-F1D	O-BALANCE AXIS	1
○ 15	1054-W26-G1O	O-BALANCE POINTER	2
○ 16	1054-W10-H1TD	O-WEIGHT STORAGE LID	2

Measuring Balance Introduction

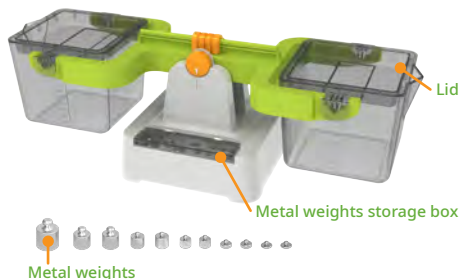
ASSEMBLY STEPS



The front of the measuring balance



The back of the measuring balance



TRANSPARENT BOX, EASY TO FILL, EASY TO SEE

The bucket on either arm of the scale can hold liquids, rice, sand or other solid objects. If you're teaching children using liquids, then don't forget you can use the lids to keep things neat and tidy!

PERFECT THE BALANCE

Not all forces can be equalized perfectly, but that's what the "trim" slider is for. Move the little orange balance trim left and right to find the right balance point.

A HANDY DANDY STORAGE AREA

No more losing pieces for your favorite learning or teaching tool. Make sure you return all the balance items to the sorting areas after use. Keep the 14 stackable weights and 11 metal weights stored safely on either side of the measuring balance.

SEE EVERYTHING AT A GLANCE

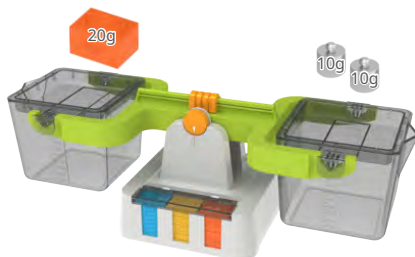
We made the measuring balance to be as user friendly as possible. The hook-shaped bucket is easy to carry, the measurement scales on the sides of the bucket are clearly marked in 100 ml increments.

Balance the Scales

- Put a 20-gram metal weight on each side of the measuring balance. Does it balance? Where should the balance pointer point when the scales are "in equilibrium"?



- Now try putting a 20-gram plastic weight on one side of the balance, and put two 10-gram metal weights on the other side of the balance. Does the scale balance? Can you make it balance?



Brain Twisters

What weight should you put on the right-hand side of the scales to make it balance?
How many different combinations of weights can you find?



1. $20g + 20g + 10g$

2. $20g + 20g + 5g + 5g$

3. $20g + 10g + 10g + 5g + 2g + 2g + 1g$

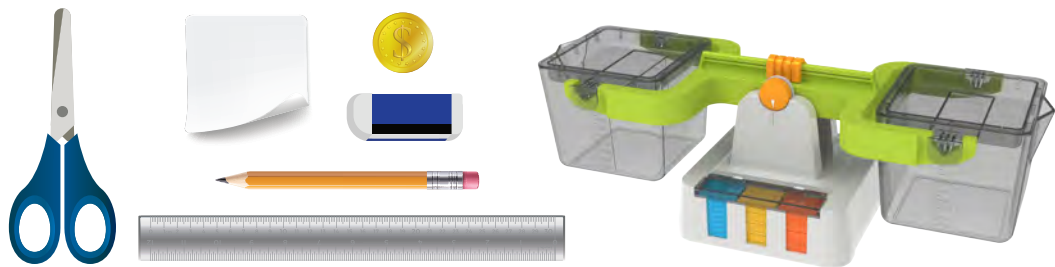
Example



Measuring Weight

Weight Comparison

Now look around you and see what objects you have nearby. Try using some simple objects such as pencils, erasers, rulers, paper or coins to balance each other. Is it possible to balance one item with other items? When the balance is not in equilibrium, make a note of which side/item is heavier.

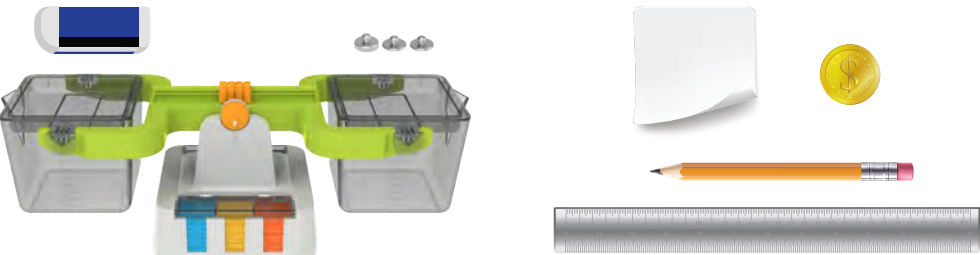


Brain Twisters

- These are inequality symbols, "<" and ">", which means less than or greater than.
 - Try using these symbols to complete the inequality statements below.
- 1 pencil ____ 1 pair of scissors • 1 sheet of paper ____ 1 ruler • 1 eraser ____ 1 coin

Measuring Weight

Using your collection of objects from before, try to balance an object using weights. What weights did you have to use? How many of each type did you use? Now calculate the weight of an object and record it.



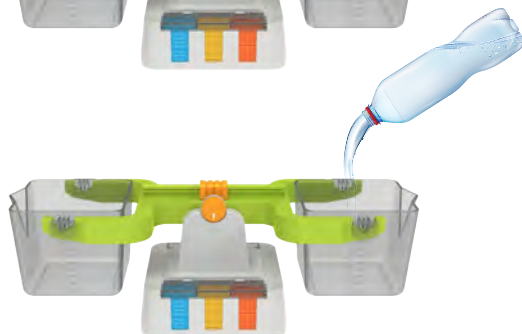
Object	Weight	Object	Weight
Pencil		Scissors	
Eraser		Paper	
Ruler		Coin	

Estimate Volume and Capacity

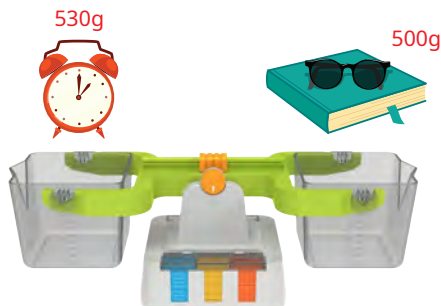
- Each side of the scales can hold up to 500 ml of liquid. If you fill one side with 500 ml of water, how much water would you need to put in the bucket on the other side to make it balance? (If you are having trouble seeing the level of the liquid, remember you can add some food coloring to see the water level more easily.)



- If you put 200 ml of water on one side, and 500 ml on the other side, will the scales balance? What can be done to make the scales balance? Which side has the greater mass? Which has the greater weight?



The handbag weighs_____g.



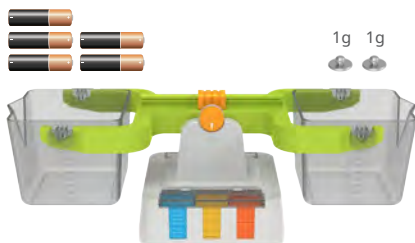
The weight of the glasses is_____g.



Previous question, the toy car weighs_____g.

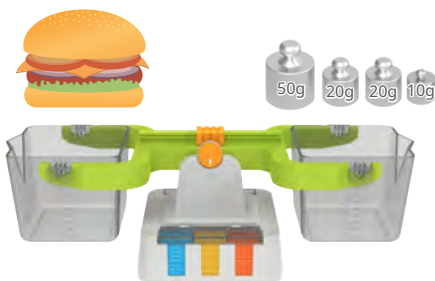
Brain Twisters

1. Is a larger object always heavier than a smaller one? What is something that is small and heavy?
Can you make a long inequality statement showing your objects in order of increasing weight?
2. Look for some objects of the same size and shape, but made of different materials, then measure their weight. Which ones are heavier?
For example, you can compare a plastic ruler with a metal ruler.
3. Place five batteries on one side of the balance, and put weights on the other side determine the weight of the batteries. Can you use the weight of the five batteries, to work out how much one battery weighs?
Remember to write down your estimate.



Brain Twisters

Calculate the weight of the following objects in the picture.



The burger weighs _____g.



The weight of the empty plastic bottle is _____g.



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