

Lesson -9

Weight















Let us estimate which one is lighter and which one is heavier

Instruction to the teachers: The teacher can keep a few things like a piece of paper, a piece of chalk pencil, a duster, some seeds, a piece of stone, a ruler made of bamboo, a piece of wood, a book, an exercise book, a piece of cloth, a cotton wool ball, a bar of iron etc. on the table. He/She will ask the students to come forward one by one and take two different things from the table. Then he/she will ask them to hold the things in their hands as shown in the picture and find which object is lighter and which object is heavier.



Put a tick (✓) on the heavier object

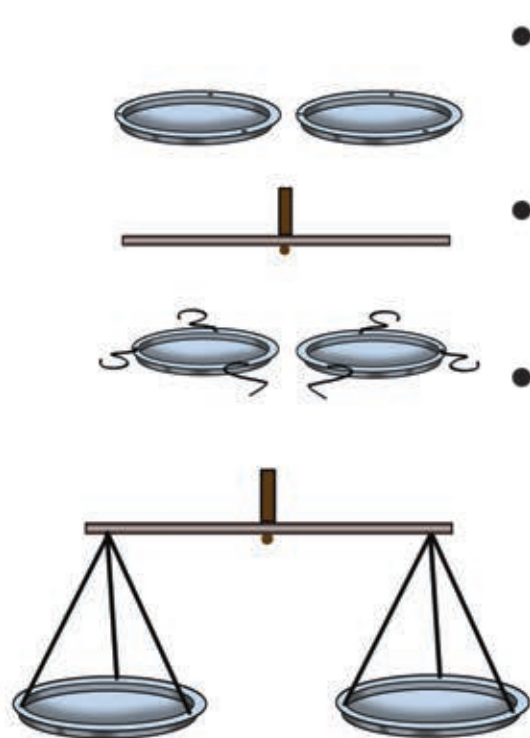
- | | | | |
|--|--|---|---|
| (a)  a chalk pencil |  a duster ✓ | (d)  a cotton wool ball |  a piece of cloth |
| (b)  a seed |  a piece of stone | (e)  a piece of wood |  a bar of iron |
| (c)  a piece of paper |  an eraser | (f)  a book |  a pen |

Estimate and tell which one is heavier and which one is lighter



Let us measure whether your estimates are correct or not

Let us first make a balance



- Take two plastic plates. Make three holes at equal distance in each plate as shown in the picture.
- Pass three strings through the holes as shown in the picture. Now tie the ends of the strings a little above the plates to make a single string.
- Now take a ruler or a stick of bamboo. Exactly at the middle of it make a loop with a string as shown in the picture.

Now take the joined strings (already made one by joining them) of one plate and tie it at one end of the ruler so that the plate hangs from it. Do the same with the other plate also. Our balance is ready.

Now keep a potato on one plate and a lady finger on the other plate of the balance. What do you observe?



The plate where the potato is goes down.

Going down of the plate where the potato is indicates that the potato is heavier than the lady finger.

In the same way let us now measure the weight of a guava and a lychee



The plate where the lychee is goes up. This means that a lychee is lighter than a guava.

Here is a picture of a common balance seen in the market



Let us know : To measure the weights of different objects we need a balance.



Let us look at some measuring machines



On a Sunday

On a Sunday Rima, Mina, Nazma, Piklu and Sangla gathered together and decided to have '*Khichri*' (a kind of food prepared with vegetables, rice and pulses together) at the backyard of Mina's garden. They prepared the following list of objects to be bought from the market.

Rice	.....	5 cups
<i>Dal (Moshur)</i>	.....	5 cups
Potato	.....	10 numbers
Salt	.....	2 spoons
Onion	.....	5 numbers
Turmeric powder	.....	1 spoon
Tomato	.....	3 numbers
Green peas (Peeled off)...		1 bowl
Ginger	.....	1 piece
Water	.....	1 bucket



After preparing the list, they showed it to Mina's mother. Mina's mother made some changes to the list. The list now looks like this

Rice	.....	1 kg
<i>Dal (lentil)</i>	.....	1 kg
Potato	.....	1 kg
Onion	.....	250 gm
Salt	.....	20 gm
Turmeric powder	.....	10 gm
Tomato	.....	500 gm
Green peas	....	200 gm
Ginger	.....	50 gm
Water	.....	20 litres

The list prepared by you should be like this.



Mina and her friends took the list from Mina's mother and went to the market. They gave the list to the shopkeeper. They noticed that the shopkeeper used the weight of 'kilogram' to measure some objects while he used the weight of 'gram' to measure some other objects.

Mina and her friends carried what they bought in 5 bags.

Mina carried rice in her bag.

Rima carried *dal* in her bag.

Nazma carried potatoes and onions in her bag.

Piklu carried salt, turmeric powder, green peas and ginger in his bag.

Sangla carried tomatoes in his bag.



Write the total weight of the objects in each bag

Weight of the objects in Mina's bag

Weight of the objects in Rima's bag

Weight of the objects in Nazma's bag

Weight of the objects in Piklu's bag

Weight of the objects in Sangla's bag



They came back home with the objects and handed them over to Kuhiram Ka (a term used to address an elder person). He prepared *khichri* with their help. All of them ate *khichri* happily. They thanked Mina's mother and Kuhiram Ka for their help.

Let us know : 1 kilogram = 1000 grams



- (a) We use the unit 'gram' to measure light objects. These are weights of gram.



10 grams



50 grams



100 grams



200 grams



500 grams

- (b) We use the unit 'kilogram' to measure heavy objects. These are weights of kilogram.



1 kilogram



2 kilograms



5 kilograms



10 kilograms



20 kilograms

Write in the box what you will use to measure the following objects- kilogram or gram





















Who is heavier?



Let us go to the shop

The shopkeeper weighs some objects and gives them to Ritul. Let us measure the total weight of those objects

 <p>Potato</p> <p>1 kilogram + 1 kilogram = 2 kilograms</p>	 
 <p>Onion</p> <p>1 kilogram + 500 grams = 1 kilogram 500 grams</p>	<p>Total weight of the objects</p> <p>Potato —</p> <p>Onion —</p>
 <p>Rice</p> <p>2 kilograms + 2 kilograms = 4 kilograms</p>	<p>Rice —</p> <p>Gram —</p>
 <p>Gram</p> <p>500 grams + 200 grams = 700 grams</p>	<p>Total weight —</p>    

Work in groups and answer the following:

- How many weights of 1 kilogram are required to weigh an object of 3 kilograms?
- How many weights of 500 grams are required to weigh an object of 2 kilograms?
- How many weights of 10 kilograms are required to weigh an object of 20 kilograms?
- How many weights of 50 grams are required to weigh an object of 250 grams?

Prepare a list of the items along with its amount used in your home for a week.

Name of the objects	Kilogram	Gram
.....	<input type="text"/>	<input type="text"/>
.....	<input type="text"/>	<input type="text"/>
.....	<input type="text"/>	<input type="text"/>
.....	<input type="text"/>	<input type="text"/>
.....	<input type="text"/>	<input type="text"/>
.....	<input type="text"/>	<input type="text"/>

● Which object is used the most in your house?

● Which object is used the least?

Let us weigh ourselves



My weight is kilograms.