



Geometry & Measurement Concepts - NCERT Chapter 8: Who is Heavier?

Students will be able to understand the relationship between weight and shape/ volume (weight conservation)

🕒 40- 50 min

⏪ PRE REQUISITES:

G3.75 Know how to solve word problems on weight measurement



TLM



Modelling clay or pottery clay
1 Beam balance
Plastic water bottle
Duster
Chalk stick



MISCONCEPTIONS

None



KEY VOCABULARY

None



PLAY



Clay as a cylinder

Clay as a ball

Change the shapes of objects and weigh



Ask a student to weigh half kg of clay using beam balance



Ask the student to roll the clay into a ball and weigh again



Call another student to roll the same piece into a cylinder and weigh it



QUESTION

Has the weight of the clay changed by making it into a cylinder?



Call another student to break the cylinder into two parts and roll the two parts into smaller balls



Ask the student to weigh both the balls together



QUESTION

Has the weight of the clay changed now?

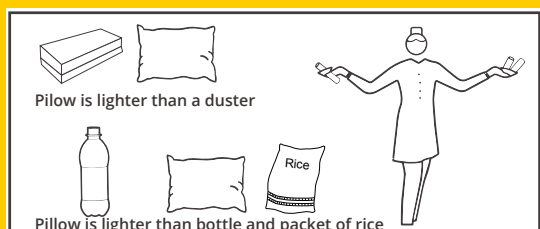


TEACHER'S NOTE

If half Kg weight bars are not available, use any solid object to measure the weight



PROCESS



Provide examples for conservation of weight



Show an empty plastic water bottle & a duster. Tell that even if the water bottle looks big, its lighter than the duster



Show a paper ball and a small stone. Ask to guess which one is heavier



Explain that weight doesn't always depend on the size of the objects. Smaller objects can be heavier than bigger objects, just as a stone is heavier than a paper ball



Tell that breaking an object into parts also doesn't change the total weight of the object



Tell that changing shapes of objects doesn't change weight, a dough ball for a chapati weighs equal to a rolled chapati



QUESTION: If your grandmother chops 1Kg brinjal will the total weight of brinjals change?



Name something that is as big as a pillow but weighs more than it



PRACTICE



Write the question on the black board and ask the students to solve



Help the students solve question 3 from the worksheet. Ask the students to look at the picture and identify the object that is heavier than a matchbox



Leaf



Piece of paper



A big stone



Point to each object and discuss its size in comparison to a match box.

Help the students solve question 4 from the worksheet. Ask to select the correct bag for the two items



1kg cotton



1 kg pumpkin



Explain that even though both objects weigh 1Kg, 1Kg cotton will require much more space than 1Kg pumpkin. This is because cotton is lighter. Emphasize that it's lighter



QUESTION

How can you change the weight of an object?



40 grams



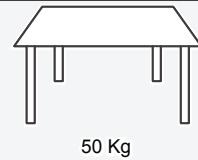
= ___ grams



G3.76 | WEIGHT CONSERVATION

WORKSHEET: GEOMETRY & MEASUREMENT CONCEPTS - NCERT CHAPTER 8: WHO IS HEAVIER?

- ① SOLVED EXAMPLE : An old 50kg wooden dining table has been broken to reuse its wood.



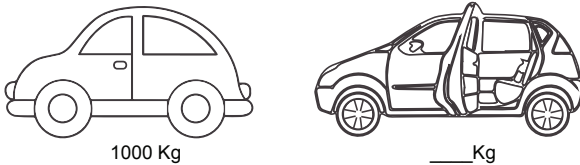
- 1a. What will be the weight of a swing made using all of the wood?



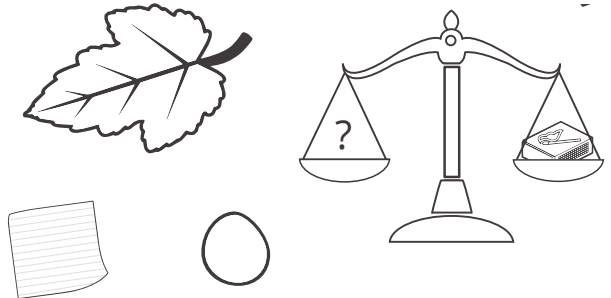
- 1b. What will be the weight of a shoe rack made using all of the wood?



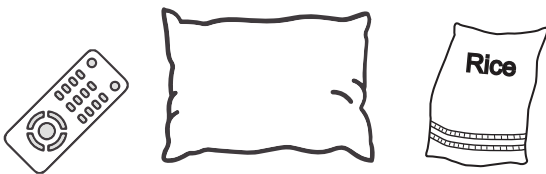
- ② A parked car weighs 1000kg. Its weight when its doors are open will be ____ kg.



- ③ Look at the picture and circle the object that is heavier than a matchbox



- ④ Number the objects according to their weight.



- ⑤ Select the correct bag for the two items.



- ⑥ Annapurna has 2 packets. One packet has 1Kg potatoes and the other has 1Kg curry leaves. Can you tell which bag has 1Kg curry leaves

