

AFRICAN INSTITUTE FOR MATHEMATICAL SCIENCES SCHOOLS ENRICHMENT CENTRE (AIMSSEC)

AIMING HIGH

HOW HEAVY?



In your kitchen or in a supermarket, look at the information on labels on unopened packages and discover how heavy the items are. Some small items may be labelled in grams and other items will be labelled in kilograms.

A hen's egg, a pen, a new born baby and a glass of water.

How heavy do you think these things are?

Can you arrange these things in order from the lightest to the heaviest?

Here are their masses in grams:

440 grams; 6 grams; 60 grams; 4000 grams (or 4 kilograms).

Can you match the correct mass to each one?

Now find some other objects, weigh them if you have scales and compare their masses with these four things.

How heavy are you? How much has your mass increased since you were a small baby?

HELP

Work with a partner. Find 3 objects that can be weighed such as a stone, a pencil, a brick, a book or anything else you have around. Try to find a light object, a heavy one and one that is in-between.





Any sort of scales can be used.



You could make your own scales with a coathanger and two bags to put objects in. Then to weigh an object you need to balance it against known masses.

Handle the objects and try to estimate the masses. Then actually weigh them. Check your estimates. Ask for help in reading the scales if you need it. How close were your estimates?

NEXT

1. What is the approximate weight of an average man, a family car, a cow, a South African taxi, and a double decker bus?



1000 milligrams = 1 gram 1000 grams = 1 kilogram 1000 kilograms = 1 metric tonne

1 litre of water weighs 1 kilogram A medicine spoon holds 5 millilitres or 5 milligrams

RECIPE FOR SOUP FOR 8 PEOPLE

1 tablespoon olive oil 1 large onion, finely diced 4 celery stick, finely diced 3 carrots, peeled and cubed 1 large potato, peeled and cubed 150 g or 1 cup cubed butternut squash 1 teaspoon salt 1 teaspoon dried thyme or other seasoning 1.4 litres or 6 cups hot chicken stock (broth) 900 g chicken meat 3-4 tablespoon tomato paste 1 zucchini (courgette), cubed 150 g or 1 cup sweet corn 150 g or 1/2 cup pasta 1 tablespoon lemon juice 2 tablespoon parsley, chopped, plus extra to serve Salt and pepper to season A little graded cheese to serve (optional)

Suppose you have to make enough soup to feed 120 people and you can get most of these ingredients but perhaps not all of them.

What would you put in your soup? Make a list of the ingredients you would use and the quantities of each one.