

Math Is CAtegorical®



# On the Scale, a Weighty Tale



by Brian P. Cleary  
illustrated by Brian Gable



For all the patient math teachers  
I had growing up.  
—B.P.C.



**A note about weight:**

People in the United States and Canada have two systems to measure weight. One is called the English system, or the U.S. customary system. It uses ounces, pounds, and tons. The other system is called the metric system, or International System of Units. It uses grams, kilograms, and metric tons. People in many countries use only the metric system.



A heavy backpack filled with books,



a teeny paper kite



a friend named Kate,  
who just turned eight—

these all weigh something, right?





Weighing things is how we find  
the heaviness of stuff—



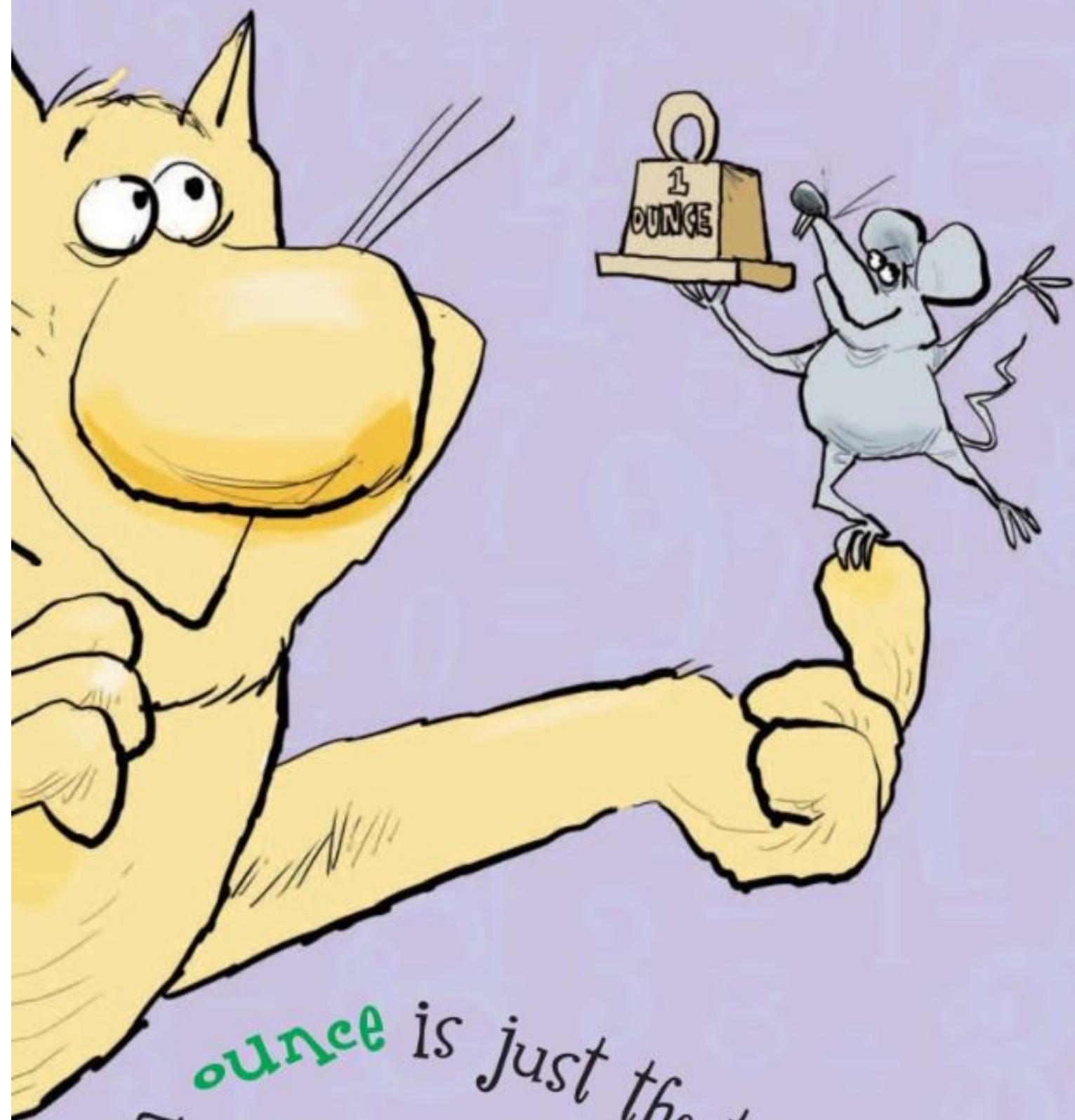


a soccer ball,  
great-grandma's shawl,



and bags of pillow fluff.





An **ounce** is just the thing to use  
for very light amounts.



That slice of bread  
you've just been fed?



It weighs about **1 ounce.**



16 ounces make 1 pound,



so picture sixteen slices.

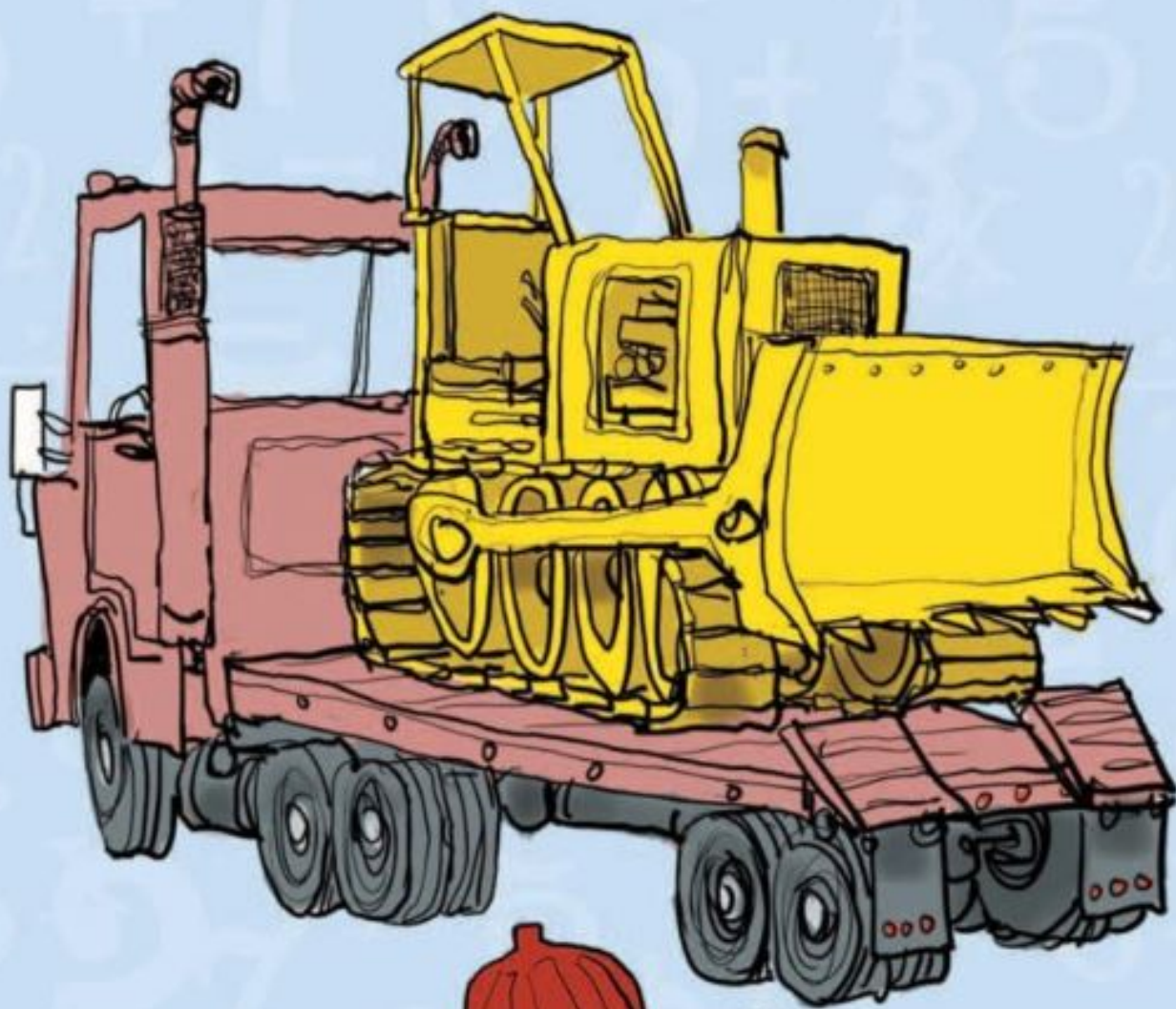
They'd weigh around  
↑ single pound,



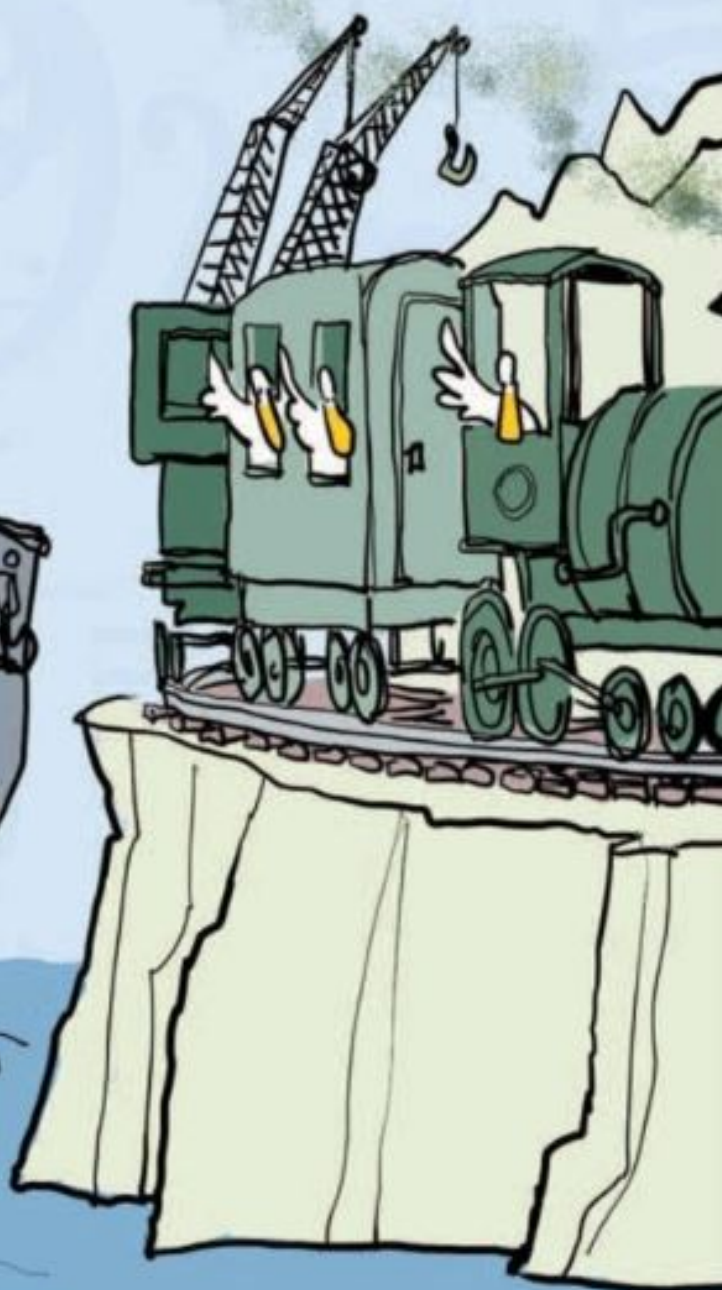
no matter what the price is.



The very heaviest of things  
we talk about in **tons**.



Like trucks and trains  
of ducks and cranes  
or freighters filled with buns.





A **ton** is huge—



it takes **2,000 pounds**  
to make just **1**.

cars and whales upon the scales  
are measured by the **ton**.





A scale is the tool we use  
to **weigh** things  
small and large.



Scales can measure  
a trunk filled with treasure,



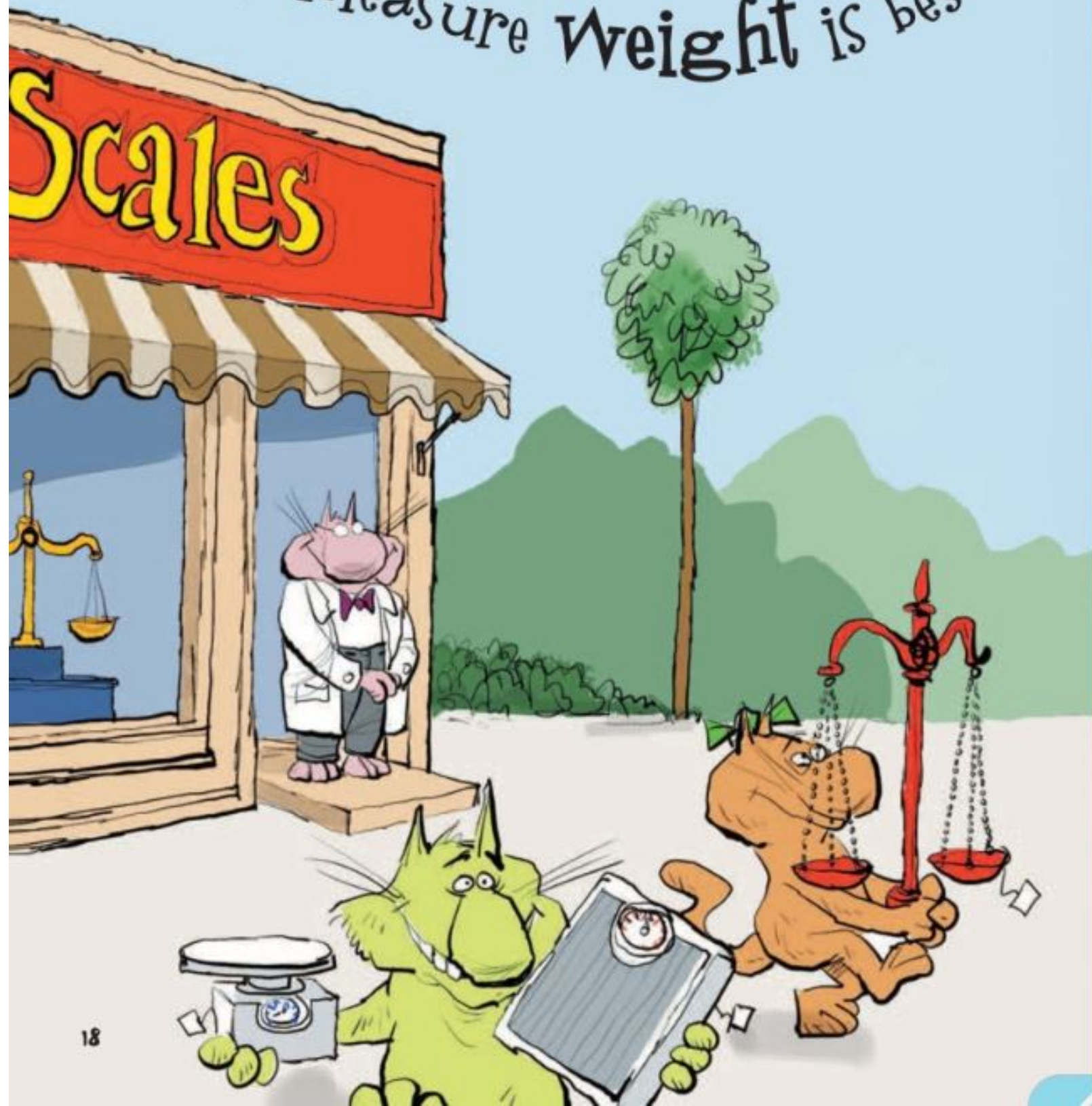
a crate  
or some bait

or a barge.





Having more than just one way  
to measure weight is best.





So memorize each metric size,  
and you'll pass any test!



A **gram** is not a cracker,



and it's not your parents' mothers.



*It's a weight,  
so get this straight—*

*it's smaller than most others.*



A dollar bill or paper clip



Weigh near **1 gram**, you know.

1  
OUNCE  
EQUALS  
28.35  
GRAMS



Inside 1 ounce, you can announce,  
there's 28 or so.



Take **1,000** of these **grams**,



and **kilogram**'s the name.

A quart of milk, 2 pounds of silk,



each weigh about the same.



1,000 kilograms are what  
make up 1 metric ton



about as heavy as a Chevy



(at least a smaller one).





You've picked up lots of "heavy" words,  
and now you know enough

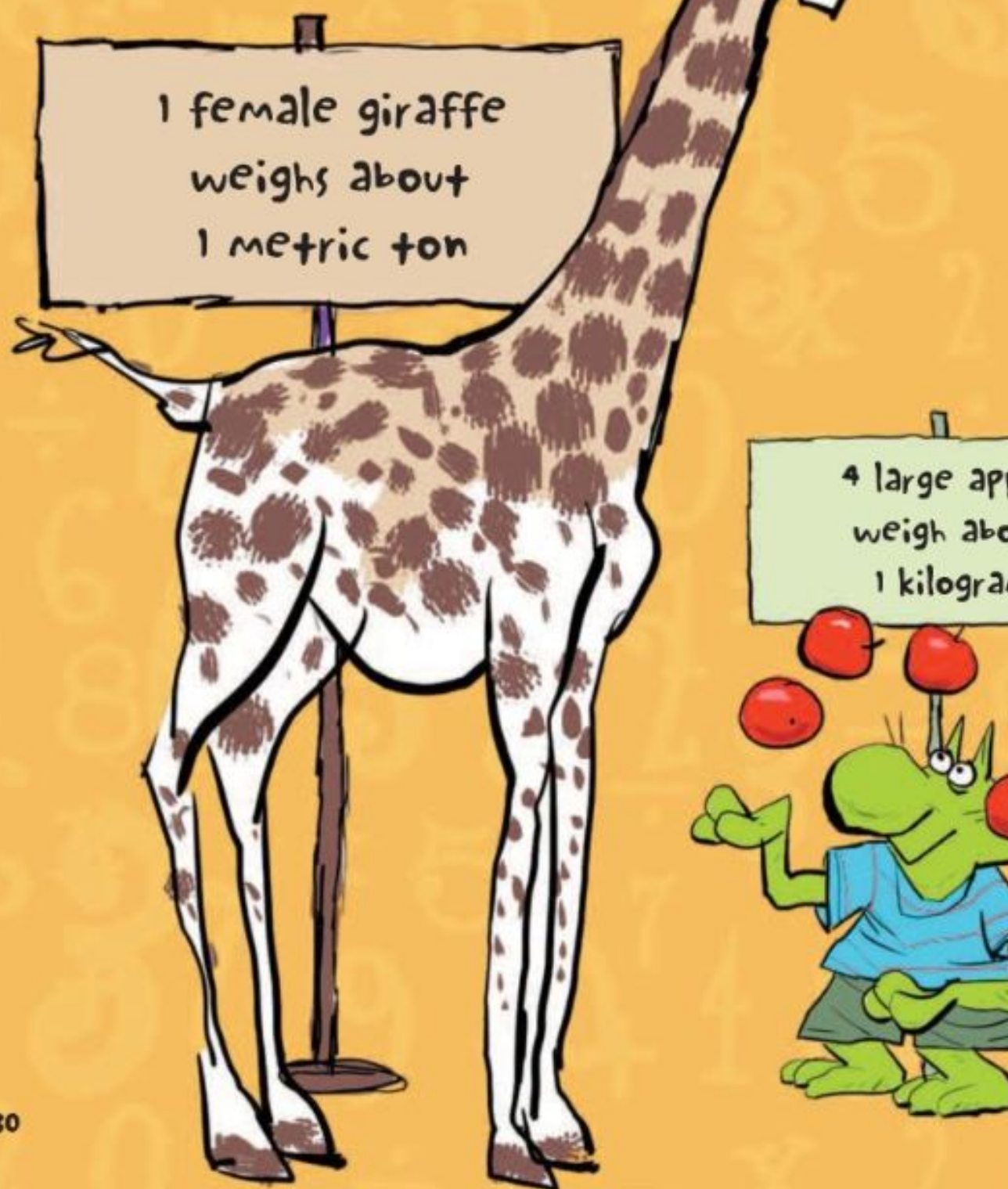




to teach a class, because—alas—  
you've learned a **TON** of stuff.



So, what is weight?  
Do you know?



4 large apples  
weigh about  
1 kilogram







1 paper clip weighs  
about 1 gram



1 slice of bread  
weighs  
about 1 ounce



2 pears weigh  
about 1 pound

### English Weight Measurements

1 pound = 16 ounces

1 ton = 2,000 pounds = 32,000 ounces

### Metric Weight Measurements

1 kilogram = 1,000 grams

1 metric ton = 1,000 kilograms, = 1,000,000 grams

1 female walrus weighs  
about 1 ton

