

The fact we need to remember today: **How many grams are in a kilogram?**

1000

L.O. To convert grams to kilograms and vice versa.

- To convert kilograms to grams, we multiply by 1000.
- To convert grams to kilograms, we divide by 1000.

The only tricky part is to know when to multiply and when to divide by 1000!

These phrases might help you to remember what to do when!

Changing Units

⊗ There are 2 ways to change units multiply & divide

⊗ Remember this:

Best Soccer Mom
↓ ↓ ↓
Big Unit → Small unit → multiply

Silly Babies Dancing
↓ ↓ ↓
Small unit → Big unit → divide

- **To convert:** kilograms to grams
- **Think:** BIG unit to SSMALL unit

Remember:

Best

Soccer

Mum

- So we MULTIPLY by 1000

- **To convert:** grams to kilograms

- **Think:** SMALL unit to BIG unit

Remember:

Silly

Babies

Dancing

- So we DIVIDE by 1000

Who can remember how to multiply by 10?

- Move all the digits one place to the left, and add a zero as a placeholder.

TH	H	T	U
		6	2
	6	2	0

$$62 \times 10 = 620$$

Who can remember how to multiply by 100?

- Move all the digits two places to the left, and add zeroes as placeholders.

TH	H	T	U
		3	8
3	8	0	0

$$38 \times 100 = 3800$$

Use your brains Year 5!

- So to multiply by 10 you move everything one space to the left,
- And to multiply by 100 you move everything two spaces to the left..
- What do you think you do to multiply by 1000?

To convert kilograms to grams, multiply by 1000.

- (kg to g - big to small – best soccer **M**um – **m**ultiply)
- Move all the digits three places to the left, and add zeroes as placeholders.

TH	H	T	U
			9
9	0	0	0

$$9\text{kg} \times 1000 = 9000\text{g}$$

To convert kilograms to grams, multiply by 1000.

- Move all the digits three places to the left, and add zeroes as placeholders.

Hth	Tth	Th	H	T	U
				1	7
	1	7	0	0	0

$$17\text{kg} \times 1000 = 17,000\text{g}$$

To convert kilograms to grams, multiply by 1000.

- Move all the digits three places to the left, and add zeroes as placeholders.

Hth	Tth	Th	H	T	U
			1	2	8
1	2	8	0	0	0

$$128\text{kg} \times 1000 = 128,000\text{g}$$

To convert grams to kilograms, simply do it the other way.

- (Small to big – silly babies **D**ancing – **d**ivide)
- Move all the digits three places to the right and see what you're left with.

Hth	Tth	Th	H	T	U
		6	0	0	0
					6

$$6000\text{g} \div 1000 = 6\text{kg}$$

To convert grams to kilograms, divide by 1000.

- (Small to big – silly babies **D**ancing – **d**ivide)
- Move all the digits three places to the right and see what you're left with.

Hth	Tth	Th	H	T	U
	5	8	0	0	0
				5	8

$$58,000\text{g} \div 1000 = 58\text{kg}$$

To convert grams to kilograms, divide by 1000.

- (Small to big – silly babies **D**ancing – **d**ivide)
- Move all the digits three places to the right and see what you're left with.

Hth	Tth	Th	H	T	U
1	2	3	0	0	0
			1	2	3

$$123,000\text{g} \div 1000 = 123\text{kg}$$

Convert 1.5kg to grams... Hang on! This one's got a decimal.

- **Big to small – best soccer mum – multiply.**
Do the same thing. Just don't move the decimal point!

	Th	H	T	U	● Tenths
				1	● 5
	1	5	0	0	● 0

$$1.5\text{kg} \times 1000 = 1500\text{kg}$$

Convert 14.3kg to grams.

- Big to small – best soccer mum – multiply.
Just don't move the decimal point!

	Th	H	T	U	• Tenths
			1	4	• 3
1	4	3	0	0	• 0

$$14.3\text{kg} \times 1000 = 14,300\text{kg}$$

Convert 1900g to kilograms.

- small to big – silly babies dancing – divide.
Just don't move the decimal point!

	Th	H	T	U	• Tenths
	1	9	0	0	•0
				1	•9

$$1900\text{g} \div 1000 = 1.9\text{kg}$$