

# The Nature of Science

- Making measurements
  - Metric system
  - Unit conversions

LO: Make metric unit conversions.

SLE: Meet or exceed NGSS.

# Example: unit conversion race!

Student:

convert \_\_\_\_\_ m to km

Teacher:

convert \_\_\_\_\_ yards to miles



The caffeine the students ingested would have been equal to 300 cups of coffee. **MARK DuFRENE** - TNS file

WORLD

## Misplaced decimal point leads to two students taking equivalent of 300 coffees at once



BY GREG HADLEY  
GHADLEY@MCCLATCHY.COM

## Misplaced decimal point gives extra £40,000 to worker, who spends it



Construction worker Steven Burke showed restraint by spending only £28,000 on a new car, online gambling, clothing, an e-cigarette, cocaine, a gold chain, alcohol, and hotels after his employer accidentally overpaid him £40,000, reports [The Mirror](#).

Burke normally gets a regular direct deposit of £446.60 in his bank account, but the director of the company he works for misplaced the decimal, so he received £44,660. When the error was discovered and Burke was questioned by police, he told them he thought he "had been a lucky victim of cyber crime," reports the *Mirror*.



# The Metric System:

## Length:

Base Unit: Meter  
(m)

1m = 100cm =  
1000mm  
(1cm = 10mm)

1km = 1000m

## Volume:

Base Unit: Liter (L)

1L = 1000ml = 100cl

## Mass:

Base Unit: gram (g)

1kg = 1000g

1g = 1000mg

1mt = 1000kg

# Metric Unit Conversions:

to move the decimal point, use “The Box”

	1000	100	10	Base Unit	0.1	0.01	0.001
Length	km			m		cm	mm
Volume	kL			L			mL
Mass	kg			g			mg

Practice:

$$43 \text{ cm} = \underline{\hspace{2cm}} \text{ m}$$

$$8,246 \text{ m} = \underline{\hspace{2cm}} \text{ km}$$

## Power of 10 [song]

I feel the power of 10!

I feel the power of 10!

The metric system's my friend....

I won't use gallons again!

I feel the power of 10!

I do conversions in pen!

I move the decimal when

I divide or multiply by 10!



<https://www.youtube.com/watch?v=pa2sjs54fCU>

Worksheet!

# Bonus problems for anyone who finishes early

(A) 32.5 milligrams = \_\_\_\_\_ kilograms

(B) 605 kiloliters = \_\_\_\_\_ centiliters

(C) 1 meter = 1,000,000 micrometers. How many meters is 400,000 micrometers?