

# Unit 3: Length, Area, and Volume

Wednesday, June 6, 2018 10:56 AM

## 3.1: Systems of Measurement

- Imperial System (United States)
  - o 1 yard (yd) = 3 feet (ft)
  - o 1 foot (ft) = 12 inches (in)
  - o **You cannot say that 9 inches is a 0.9 of a foot because there are 12 inches in a foot.**
    - **To find this decimal, you much find what 9/12 of a foot is (9inches = 0.75 ft)**
- Systeme International (Metric) (Canada)
  - o 1 kilometre (km) = 1000 metres (m)
  - o 1 metre (m) = 100 centimetres (cm)
  - o 1 centimetre (cm) = 10 millimetres (mm)
  - o **You can have a decimal of a metre or centimetre quite easily because it works with factors of 10!**
- Be able to convert between Imperial and SI
  - o See conversions sheet
  - o Set up **proportions** to find the new units.
- Be able to calculate perimeter (circumference for circles)
  - o See equations sheet

## 3.2: Converting Measurements

- Be able to convert within a measurement system (cm to m, in to ft, etc.) and between the two systems (cm to ft, inches to m, etc)
  - o Use proportions for this
  - o With word problems **pay attention to the units given and the units being asked for as the answer!!**
    - Make sure units are the same before beginning calculations!

## 3.3: Surface Area

- The amount of space a surface takes up (units are squared:  $m^2$ ,  $cm^2$ ,  $ft^2$ ,  $in^2$ , etc)
- Be able to calculate the surface area of a 3-D shape
  - o Calculate area of each side and then add them up
  - o Make sure you know which sides are given, and if any areas should be subtracted (windows/doors)

## 3.4: Volume

- Volume is the space a 3D object takes up
  - o Units are cubed:  $m^3$ ,  $cm^3$ ,  $ft^3$ ,  $in^3$
- Be able to use formulas on formula sheet to calculate these
  - o Pay attention to units.
  - o Make sure units are the same before calculations

# Unit 4: Mass, Temperature, and Volume

Wednesday, June 6, 2018 10:56 AM

## **4.1: Temperature Conversions**

- Be able to convert between Fahrenheit and Celsius using the equations on the equation sheet
  - o Remember the BEDMAS rules for these!
  - o C= Celsius and F= Fahrenheit

## **4.2: Mass in the Imperial System**

- Convert between imperial measures (ounces, pounds, ton)
  - o Make sure units are all the same before calculations

## **4.3: Mass in the Systeme International**

- Convert between the SI measures (gram, kilogram, milligram, tonne)
  - o Make sure all units are the same before calculations!

## **4.4: Making Conversions with Mass**

- Be able to convert between Imperial mass and SI mass using conversions on conversion sheet.