

Year 5 Unit 10: Converting units of measure (2 weeks)

Before you start...

This unit focuses on the **conversion** of units of measure and there is little focus on practical measuring experiences.

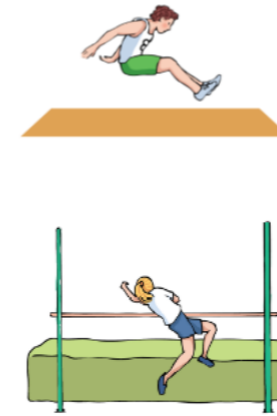
- How secure are your pupils in telling the time and measuring length/mass using numbers with up to 2 decimal places?
- How can you use Maths Meetings and cross curricular opportunities to continue to consolidate these objectives building up to the unit?

Weigh to go

Read this [article](#) for ideas about cross-curricular activities based on the history of measurement.

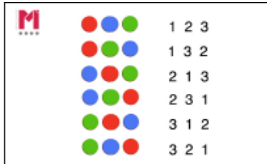
Putting it into context:

Pupils will be asked to help the planning committee of the forthcoming Olympic Games. They will need to use their skills of converting time, length and mass to help the planning committee to solve a variety of problems across the unit.



Men's long jump		
Country	Time	Rank
South Africa	8.37 m	
GB	8.29 cm	
USA	8 and a quarter metres	
USA	38 cm more than 8 m	

For many of the challenges set within lesson 5, there may be a number of possible solutions rather than one answer. Pupils should be encouraged to consider the answer they give and to look for a range of other possibilities or solutions. Add depth to the task by asking pupils to find **all** the possibilities.



Converting between units of time

- L1 Convert between seconds, minutes and hours
- L2 Convert between units of time

Pupils will review their knowledge of the relationships between units of time. They will begin by solving a range of problems that involve converting between seconds, minutes and hours, before moving on to longer units of time such as hours, days and weeks. Pupils will be calculating intervals of time, including intervals of time on a calendar.

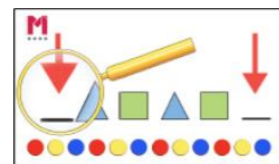
? How will you support pupils when calculating longer time intervals? What misconceptions might they have when doing this?

Converting between units of length.

- L3&L4 Convert between metric units of length
- L5 Convert between units of length in the context of perimeter
- L6 Convert between miles and kilometres

Pupils review the relationships between units of length. Pupils will first focus on problems involving converting metric units of length and then apply this to perimeter problems. Once pupils are secure with converting metric units of length, they explore imperial units, focusing on miles and kilometres.

- ? Which words in these lessons, if used, or used without care, could cause confusion? What language could create barriers to comprehension?
- ? What examples can you share with pupils to exemplify where different units of measure are used?



Can you investigate which parts of your body are proportional to each other?

Did you spot any patterns in your Independent Task today?



Could you estimate the mass of these?
What unit of measure would you use?

1 tonne = 1000 kilograms

Apply learning to conversion problems

- L9 Consolidate and apply learning

Pupils use the idea of Da Vinci's Vitruvian Man to investigate which parts of the body are proportional to each other. Throughout the lesson they will be applying knowledge from previous lessons including conversion of measure and fractions (from Unit 6).

? How will you encourage pupils to use [Mathematical Powers](#) such as conjecturing and generalising during this lesson?

Converting between units of mass

- L7 Convert between g, kg and tonnes
- L8 Understand lb and convert kg to lb

Pupils will consolidate their understanding of the relationship between units of mass, reading scales and converting between grams and kilograms. They will learn that 1 tonne = 1000 kilograms and solve related problems. Pupils will be introduced to the imperial measure of pounds (lb) and use the fact 1 kg ≈ 2.2 lb to find approximate equivalents.

? How will you support pupils with their understanding of 'pounds' as a measure for mass and connecting it with the symbol lb?

Converting to imperial units

The unit gives pupils opportunities to explore imperial units of length and mass. Explain to pupils that the conversion rates used are approximate and we therefore use the symbol ≈.

For pupils to make sense of imperial measures, try to give as many opportunities for them to apply them to their own lives and surroundings.

1 kg ≈ 2.2 lb

"One kilogram is approximately equal to two point two pounds"

This unit has nine planned lessons with Lesson 10 as a suggested consolidation lesson. This could be adapted and rearranged based on the outcomes of previous lessons.