Using approximate equivalences between metric and imperial units of capacity

National Curriculum attainment targets

- Understand and use approximate equivalences between metric units and common imperial units such as pints
- Estimate capacity [for example, using water]

Lesson objective

- Know and use approximate equivalences between metric units of capacity (litres) and common imperial units (pints), and estimate capacity

Prerequisites for learning

Pupils need to:

- read a scale marked in multiples 0·1 and 0·5

Vocabulary

metric; litre (*l*), imperial, pint, symbol, approximately equal to (≈), estimate

Success criteria

Pupils can:

- use a scale and a conversion graph to convert pints to litres and vice versa

Getting Started

- Choose an activity from Measurement (volume and capacity).

Teach

Collins Connect
Year 5, Unit 10, Week 3

- Say: **In supermarket S a container of milk costs £1.20 for 4 pints. In supermarket T a similar container of milk costs £1.20 for 2 litres of milk.**
- Ask: **What do you need to know to work out which of the two containers of milk is the better buy?** Elicit that we need to know the relationship between pints and litres.
- Display: Slide 1, showing the conversion scale for litres and pints.
- Ask: **Which supermarket offers the better buy?** (supermarket S)
- Draw children's attention to where 4 pints and 2 litres are displayed on the conversion scale.
- Ask: **About how many more millilitres of milk do you get in your container if you buy the milk at supermarket S?** (just over 200 ml) **How did you work out your answer?**
- Take feedback and establish that the scale for litres is marked in multiples of 100 ml and that the scale for pints is marked in multiples of half pints or 0·5 pints.
- Ask: **How many litres are approximately equal to 8 pints/16 pints?** (4·5 litres/9 litres)
- Say: **Tell your partner how many pints are roughly the same as 2 litres/7 litres.** (3·5 pints/12·5 pints) **How did you find the answer?**
- Ask: **How many litres are approximately equal to 6 pints?** (3·4 *l*) **Can you justify your answer?**
- Say: **An office uses 4 pints of milk each day.** Ask: **Who can estimate in litres how much milk they will use in 5 days?** (about 11 *l*)
- Say: **A 1 litre carton of milk is about half full. Would you estimate this amount of milk at more or less than 1 pint?** (less) If children are unsure, show them that on the conversion scale 500 ml is just less than 1 pint.

- Display: Slide 2 showing the pints to litres conversion graph.
- Elicit and write on the board: 1 pint ≈ 0·6 litre and 1 litre ≈ $1\frac{3}{4}$ pints. Ask: **What is the decimal equivalent of $1\frac{3}{4}$ pints?** (1·75 pints)
- Refer to the scenario of the 4 pint milk container.
- Ask: **Looking at the graph, what is the equivalent amount in litres to the nearest tenth of 1 litre for 4 pints of milk?** (just over 2·2 *l*)
- Ask: **How many pints are roughly equal to 2·4 litres?** (4·25 pints)
- Give further examples that ask the children to use the graph to convert litres to pints and vice versa.
- Ask: **How many litres, to the nearest tenth of 1 litre, are equivalent to 5 pints?** (2·8 *l*)
- Ask: **Who can explain to the class how to find the number of litres that are approximately equivalent to 25 pints**? (2·8 *l* × 5 = 14 *l*) **Who found a different way?** [(2·8 *l* × 10) ÷ 2 = 14 *l*]

Individualised Learning

Refer to Activity 2 from the Learning activities on page 406.

Pupil Book 5C: – Page 46: Converting between pints and litres

Progress Guide 5: – Extension, Year 5, Unit 10, Week 3, Lesson 2: Pints and litres card game

Resources: scissors (per child)

Plenary

- Ask the children to tell the class what they have learned about metric and imperial units of capacity.
- **Who can remember the quick way to link litres with pints?**
- Write on the board: 4·5 *l* ≈ 8 pints.
- Display: Slide 2 showing the pints to litres graph from the Teach part of the lesson.
- Ask children to come to the screen and, using the graph, find the approximate equivalences in pints for 2/3/4 litres and in litres for 2/3/5 pints to the nearest tenth of a litre.
- Say: **Jan has two jugs. The first jug has a capacity of 2 litres. The second jug can hold twice as much. Do you think that the second jug will hold more or less than 7 pints?** (more)
- Ask: **Who can tell me the name of another imperial unit of capacity?** (gallon)
- Write on the board: 8 pints = 1 gallon
- Ask: **About how many litres will equal 1 gallon?**
- Write on the board: 4·5 *l* ≈ 8 pints or ≈ 1 gallon.

Homework Guide 5

Year 5, Unit 10, Week 3, Lesson 2: Litres and pints