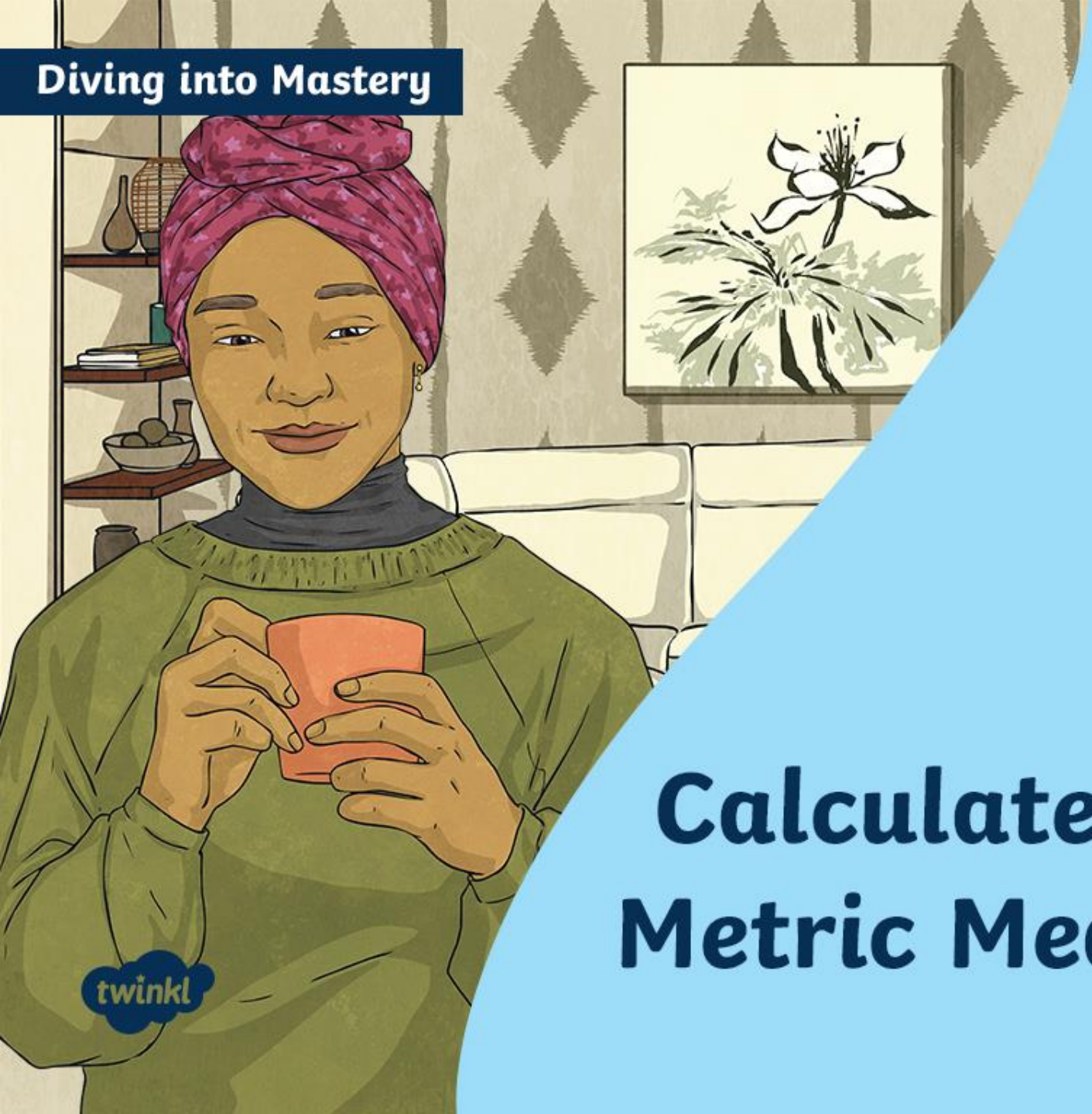
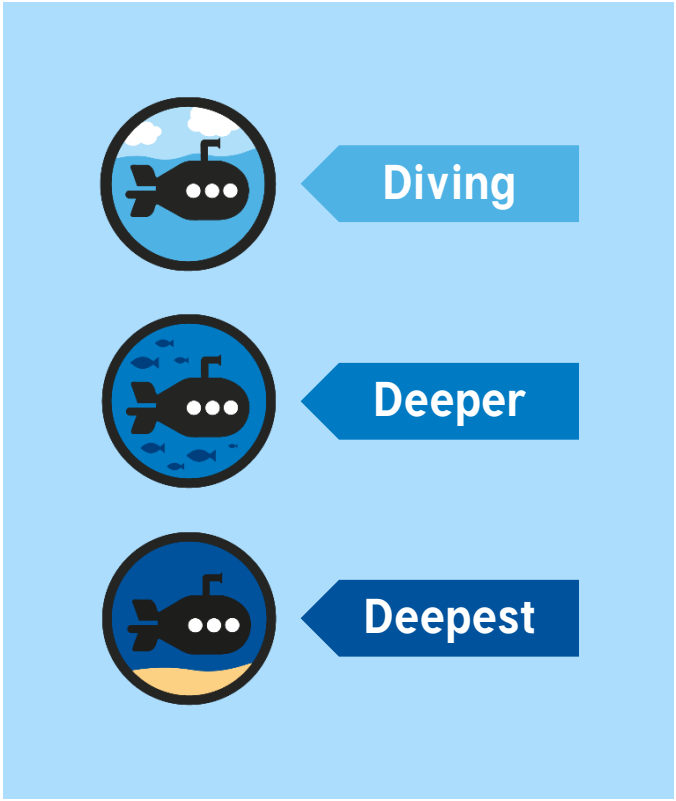
Diving into Mastery




# Calculate with Metric Measures

# Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:

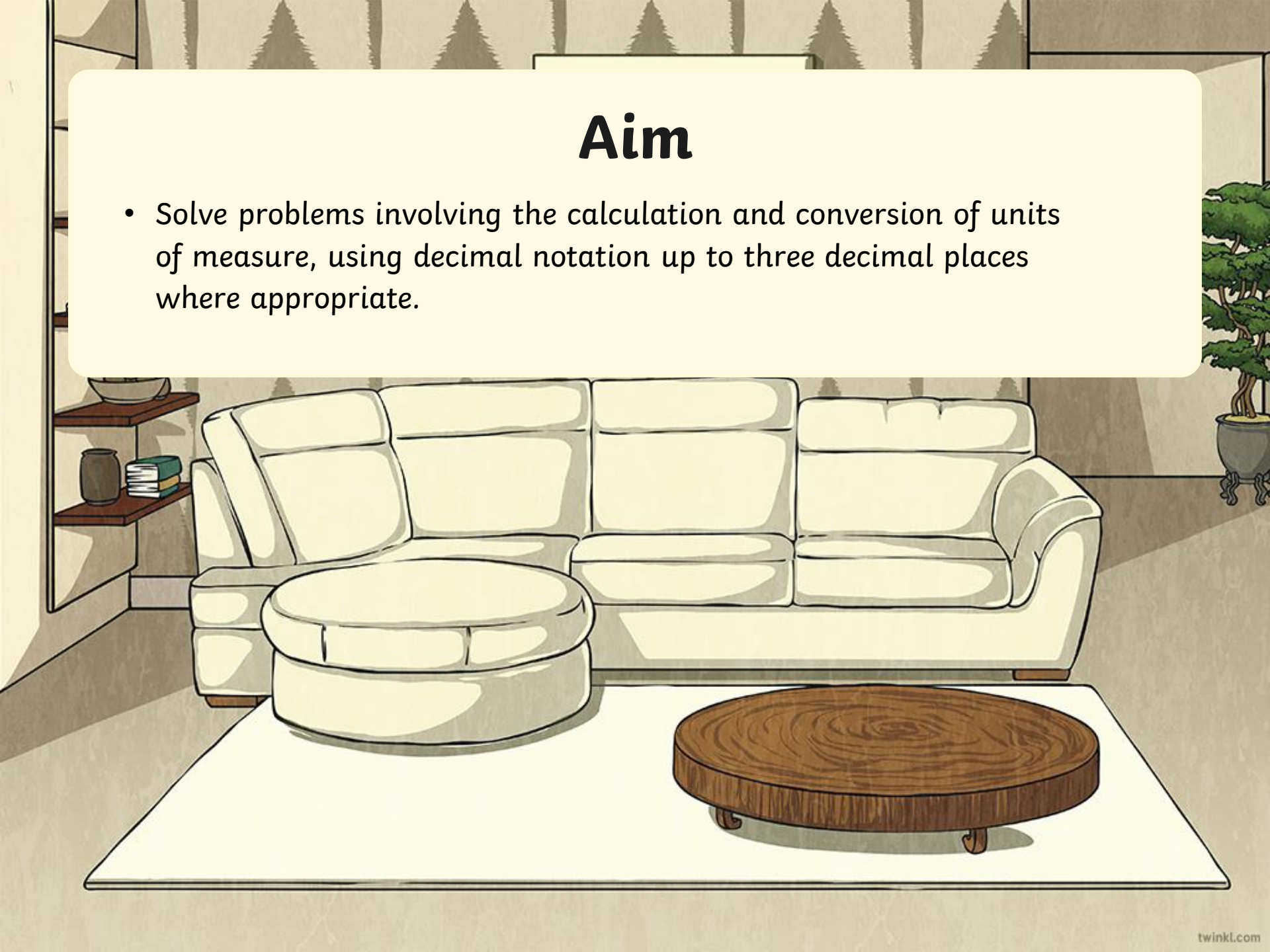



These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

# Aim

- Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.



**Calculate with Metric Measures** | **Diving**

Six 360ml cups are filled from a 2.3l flask of coffee. How much coffee is now left in the flask? Give your answer in litres.

| Flask = **2.3l** | | | | | | |
|---|---|---|---|---|---|---|
| Cup = **360ml** | Cup = **360ml** | Cup = **360ml** | Cup = **360ml** | Cup = **360ml** | Cup = **360ml** | **0.14l** |

How much is left?

## Calculate with Metric Measures

**Deeper**

Finlay has a piece of string which measures 0.9m. He cuts off a piece measuring 15cm and then cuts the remaining string into three equal pieces. How long is each piece?

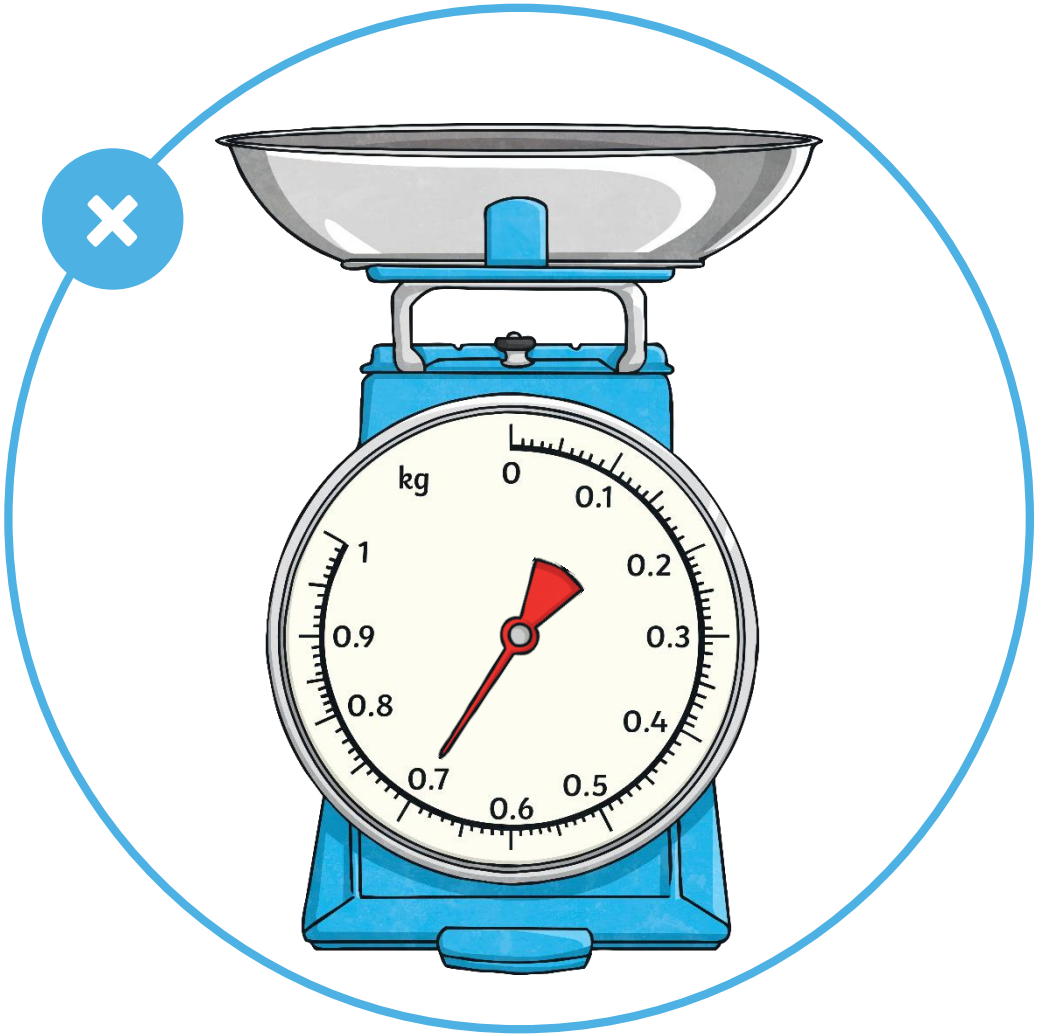
Three children record their answer to this problem:

## Calculate with Metric Measures

## Deepest

What is the total mass in kilograms of the contents of the rucksacks?

**2.78kg**



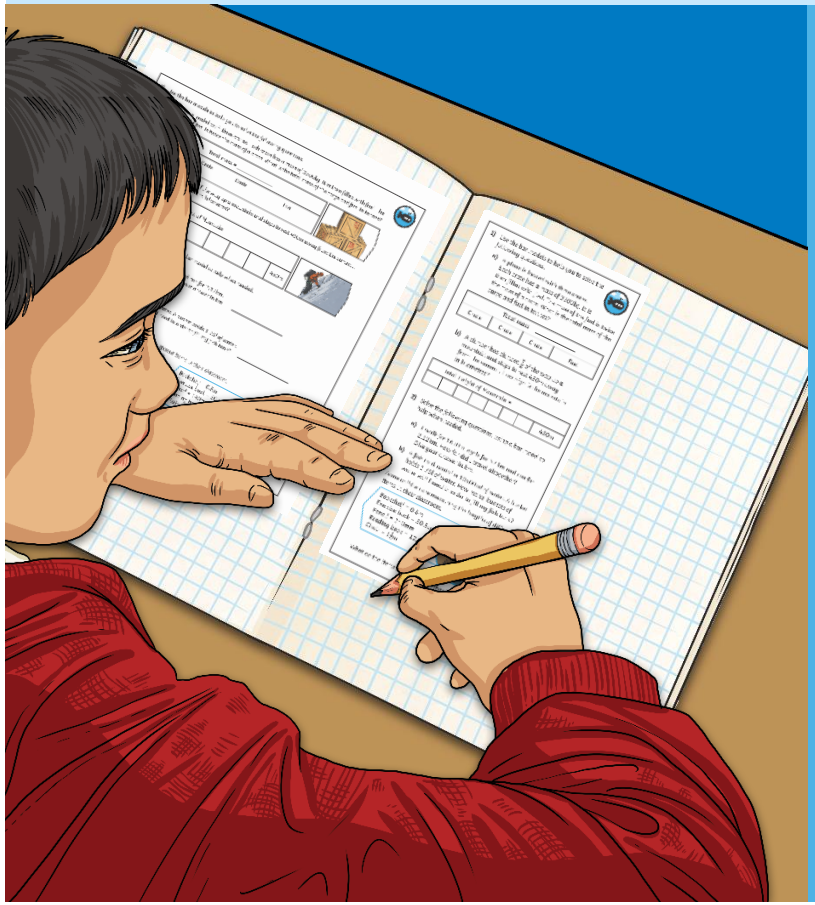

Mass of rucksack contents:

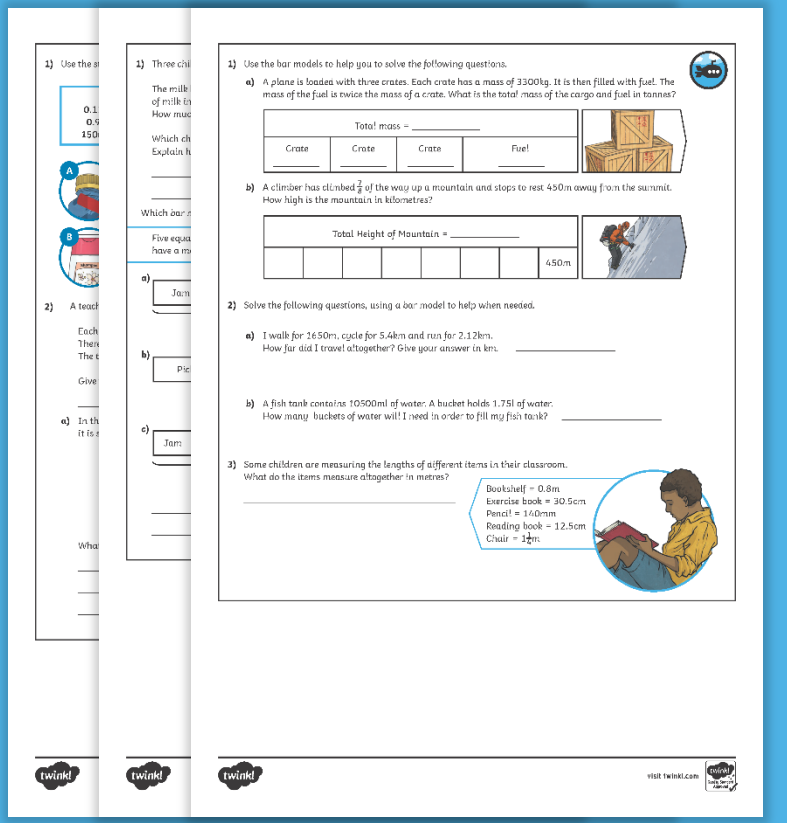
0.35kg = **Rucksack C**
0.8kg = **Rucksack A**
80g = **Rucksack B**
0.7kg = **Rucksack E**
850g = **Rucksack D**

scale

# Calculate with Metric Measures

## Dive in by completing your own activity!





1) Use the bar models to help you to solve the following questions.

a) A plane is loaded with three crates. Each crate has a mass of 3300kg. It is then filled with fuel. The mass of the fuel is twice the mass of a crate. What is the total mass of the cargo and fuel in tonnes?

Total mass = _____

| Crate | Crate | Crate | Fuel |
|---|---|---|---|
| | | | |

b) A climber has climbed $\frac{7}{8}$ of the way up a mountain and stops to rest 450m away from the summit. How high is the mountain in kilometres?

Total Height of Mountain = _____

| | | | | | | | 450m |
|---|---|---|---|---|---|---|---|
| | | | | | | | |

2) Solve the following questions, using a bar model to help when needed.

a) I walk for 1650m, cycle for 5.4km and run for 2.12km. How far did I travel altogether? Give your answer in km. _____

b) A fish tank contains 10500ml of water. A bucket holds 1.75l of water. How many buckets of water will I need in order to fill my fish tank? _____

3) Some children are measuring the lengths of different items in their classroom. What do the items measure altogether in metres?

_____

Bookshelf = 0.8m
Exercise book = 30.5cm
Pencil = 140mm
Reading book = 12.5cm
Chair = $1\frac{1}{4}$m

twinkl

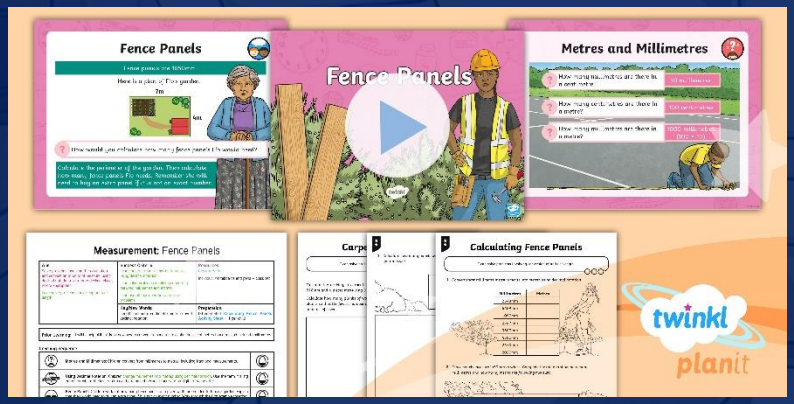
visit twinkl.com

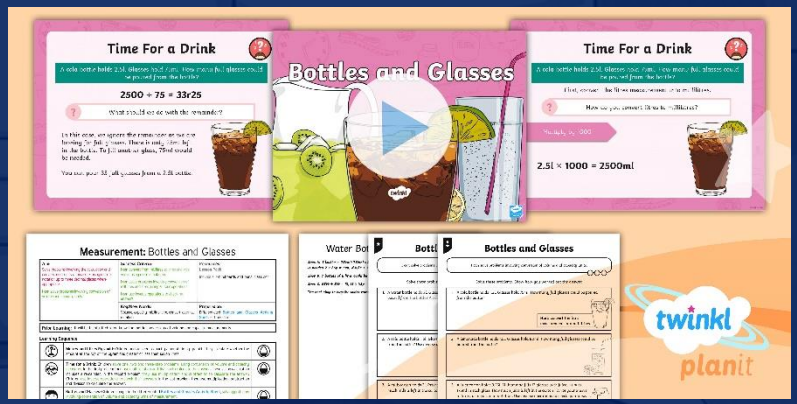
# Need Planning to Complement this Resource?

## National Curriculum Aim

**Solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places where appropriate.**

For more planning resources to support this aim, click here.




Twinkl PlanIt is our award-winning scheme of work with over 4000 resources.

twinkl planit


twinkl
twinkl
Quality Standard
Approved