

**National Curriculum Reference:** Key Stage 2; Using & Applying Mathematics Ma2 4a, 4b (Block E, unit 2)

**Aim:** To encourage pupils to develop understanding and strategies to solve 'real life problems'.

**Objectives:** To choose and use appropriate number operations and ways of calculating to solve problems.  
To solve simple word problems set 'in real life' contexts and explain how the problem was solved.  
To use all four operations to solve word problems.

**Assessment/Success Criteria:** Most pupils will use one-step or two-step operations to solve problems. Others will choose a range of strategies to solve problems using whole numbers, decimals and include use of calculator. Some children will need more support to identify patterns and relationships in order to solve the problem.

**Teacher Notes:** There are five problems to solve here from a simple single step to more complex problems which require the pupils to combine different operations. Laminate and cut up the attached worksheets to use in the intro session.

**Resources:** Internet access to [www.rnli.org.uk/Shorething/Adults/Downloadable\\_Resources/default.aspx](http://www.rnli.org.uk/Shorething/Adults/Downloadable_Resources/default.aspx)

Worksheet: **What operation?**

Worksheet: **Symbols**

**Key Vocabulary:**

Symbol	Calculation
Information	Solution
Operation	Talking partner

**Lesson Plan:**

Timing	Section	Activity
10 mins	Introduction	How quickly can pupils recognise the correct operation to make each statement true? Discourage calling out by asking them to hold up the appropriate symbol - see worksheet.
Activity 1 10-15 mins	Whole class/ partner work	Start with examples of one-step operations e.g. I think of a number, then subtract 14. The answer is 22. What was my number? Ask how they worked out the answer and ask some volunteers to come out and explain what they did. Repeat this activity until you feel they have grasped the concept. Now give some examples of two step operations e.g. There are 17 books on the top shelf and 34 on the bottom shelf. 24 of the books are removed. How many books are left on the shelves? Younger children may work with a talking partner to find the solution. As before ask volunteers to explain how they reached their answer. Encourage pupils to spend a short time with their talking partner to write their own problem. Volunteers can offer to share their ideas and ask others to explain how to work it out.
Activity 2 10 mins		Gather the pupils around the whiteboard, ask them to sit next to their talking partner. Open the problem solving whiteboard activity. Depending on their age and ability either start with the first problem and ask them to work with their talking partner and decide upon a strategy to work it out. Give them a few minutes to get their answer and then ask for a few to tell their answer. Check if everybody has the same, then ask for volunteers to share the strategies they used.
Activity 3 15 mins		Group or paired work activity
10 mins	Plenary	Assess how pupils choose the correct calculation by looking at different problems e.g. Lisa buys 4 cornets costing £1.25 each. She pays with a £20 note. How much change does she get? Which calculation will you do to solve this problem? $20 \times 5$ $20 + 5$ $20 \div 5$ $20 - 5$

What operation? Problem solving

$$18 * 22 = 40$$

$$72 * 29 = 43$$

$$80 * 6 = 480$$

$$228 * 38 = 6$$

$$377 * 58 = 435$$

$$228 * 139 = 89$$

$$72 * 29 = 2088$$

Symbols

