

Unit 12
Measures and time, including problems

Five daily lessons

Merseyside Consultants'
Cluster Group

Year 1
Summer term

Unit Objectives
Year 1

- **Suggest suitable uniform non-standard then standard units and measuring equipment to estimate, then measure capacity** recording estimates and measurements as “about 3 beakers full” or “just under 5 litres”
- Solve simple problems involving capacity or time
- Read time to half hour on analogue clocks

Pages 70-79

Link Objectives

Foundation

Year 2

- Use language such as **more or less... to compare two quantities**, then more than two, by making direct comparisons and by filling and emptying containers.
- Begin to understand and use the vocabulary of time
- Begin to read o'clock time

- **Estimate, measure and compare capacities, using standard units (litre); suggest suitable units and equipment for such measurements.**
- **Read a simple scale to the nearest labelled division**
- Use and begin to read the vocabulary related to time
- Read the time to the hour, half hour or quarter hour on an analogue clock and a 12-hour digital clock, and understand the notation 7:30

This Unit Plan is designed to guide your teaching.

You will need to adapt it to meet the needs of your class.

Resources needed to teach this unit:

- Selection of containers including bucket
- Tray/tank over which to pour
- Jug of water
- Activity Sheet 12.1
- Litre measure
- Variety of containers with labels removed (holding about a litre, more than a litre and less than a litre)
- Sand, lentils, small pasta shapes or water.
- Activity Sheet 12.2
- Two demonstration analogue clocks
- Pupil clock faces, with moveable hands
- Activity Sheet 12.3
- Activity Sheet 12.4
- Interactive Teaching Program Tell The Time

Planning Sheet	Day 1	Unit 12: Measures and time, including problems	Term: Summer	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Suggest suitable uniform non-standard then standard units and measuring equipment to estimate, then measure capacity recording estimates and measurements as “about 3 beakers full” or “just under 5 litres”</p> <p>VOCABULARY</p> <p>full half full empty holds container</p> <p>RESOURCES</p> <p>Selection of containers including bucket Tray/tank over which to pour Jug of water Activity Sheet 12.1 Litre measure</p>	<p>Show the children a bucket and a variety of other containers. Ask the children</p> <p>Q. Which of the containers do you think we could use to fill the bucket with water?</p> <p>Ensure that the children’s responses are sensible. Encourage the children to estimate.</p> <p>Q. How many containers full of water do you think we would need to fill the bucket?</p> <p>Ask a child to demonstrate how many of the smaller container would fill the bucket. Explain how to measure accurately, i.e. container full each time and all liquid poured into the bucket.</p> <p>Continue using other containers. Stress the importance of using appropriate uniform units. Ask</p> <p>Q. Would it be sensible to use a thimble to measure how much this bucket holds? Why? Why not?</p> <p>In groups, ask pupils to complete AS12.1, encouraging them to select appropriate containers that they could use as a non-standard uniform unit to measure how much each container holds.</p>	<p>Review the activity with the pupils and ask for responses. Ask</p> <p>Q. Which unit do you think we should use to measure how much the pan holds? Is this sensible?</p> <p>Q. Before you measure, what are the most important things that you need to remember?</p> <p>Demonstrate how to measure the capacity of the pan using a sensible uniform non-standard unit.</p> <p>Introduce litre as a unit of measurement, showing the pupils the litre measure. Ask</p> <p>Q. How many litres do you think that the pan would hold. Why?</p> <p>Measure approximately how many litres the pan holds and explain to the children that it holds about e.g.3 litres Tell pupils that in the next lesson the focus will be on using litres as a unit of measurement.</p> <p>Homework: ask pupils to find items at home that hold more/less than a litre.</p>

				<p>By the end of the lesson, children should be able to: Suggest suitable uniform non-standard then standard units and measuring equipment to estimate, then measure capacity recording estimates and measurements as "about 3 beakers full" or "just under 5 litres"</p> <p>(Refer to supplement of examples, section 5, pages 70-77)</p>
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Planning Sheet	Day 2	Unit 12: Measures and time, including problems	Term: Summer	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Use standard units and measuring equipment to estimate, then measure capacity recording estimates and measurements as “just under 5 litres”</p> <p>VOCABULARY</p> <p>full half full empty holds container litre</p> <p>RESOURCES</p> <p>Litre measure Three containers (per group) with labels removed (holding about a litre, more than a litre and less than a litre) Sand, lentils, small pasta shapes or water.</p>	<p>Show the pupils a range of containers and as a class sort the containers into order by size. Revise the vocabulary full, half full, empty, etc. Discuss how to order the containers by size</p> <p>Q. Which do you think holds more/less? Why? What helps you to decide?</p> <p>Show pupils the litre measure and ask</p> <p>Q. What did you find at home that holds more or less than a litre?</p> <p>Q. How did you decide whether a container holds more or less than a litre?</p> <p>As a class, sort the containers by estimation into more than or less than a litre. Record on the board with the pupils.</p> <p>Q. How can we check if the order of our estimates is correct?</p> <p>Demonstrate how to use the litre measure to measure one of the containers (ask children to help with the counting). Show the children how to record their measurements as about a litre, more than a litre or less than a litre.</p> <p>In groups, give the children 3 containers, with the labels removed. Ask pupils to estimate whether the container would hold about a litre, more than a litre or less than a litre.</p> <p>Children then measure the capacity of each container and record their results. They then measure using the litre measure and order them according to their actual capacities.</p>	<p>Q. Where your estimates correct? Why? Why Not?</p> <p>Look for other items in the room and estimate, as a class, whether they would hold more than, less than or about a litre. Choose a selection of containers and ask</p> <p>Q. Which container holds most/least water? How could you check?</p> <p>Check how many litres each container would hold, by using the litre measure. Finish the session by posing The following problem for the pupils.</p> <p>The taller the container the more water it holds. Do you agree?</p> <p>By the end of the lesson, children should be able to: Suggest suitable standard units and measuring equipment to estimate, then measure capacity recording estimates and measurements as “just under 5 litres”</p> <p>(Refer to supplement of examples, section 5, pages 70-77)</p>

Planning Sheet	Day 3	Unit 12: Measures and time, including problems	Term: Summer	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Solve simple problems involving capacity</p> <p>VOCABULARY</p> <p>full half full empty holds container litre</p> <p>RESOURCES</p> <p>Litre measure Variety of containers (holding about a litre, more than a litre and less than a litre) Activity Sheet 12.2</p>	<p>Remind pupils of the previous two days activities and the importance of using uniform non-standard or standard units when estimating and measuring capacity. Ask</p> <p>Q. What are the important things that we need to remember when we are finding out how much a container holds?</p> <p>Recap use of litre as a standard unit for measuring capacity and look at items from previous day's lesson, which contained more or less than a litre. Ask</p> <p>Q. How can you tell that this container holds more / less than a litre?</p> <p>Using the litre container as a benchmark, demonstrate the capacity of two containers, one holding more than a litre and one holding less than a litre.</p> <p>Children then work in groups using cards from Activity Sheet 12.2. Children select a card and work though the answers together, using practical resources if appropriate.</p>	<p>Bring the class back together and select a card from the group activity. Ask</p> <p>Q. How many cups of water does a jug hold? How many cups of water would two jugs hold?</p> <p>Take responses from the children, asking them to explain their reasoning.</p> <p>Record calculations for the pupils, if appropriate.</p> <p>Repeat the activity using other cards, asking the following questions.</p> <p>Q. How did you work it out? How could we show this?</p> <p>Encourage children to give responses that include an explanation of their working.</p> <p>By the end of the lesson, children should be able to:</p> <p>Solve simple problems involving capacity (Refer to supplement of examples, section 5, pages 70-77)</p>

Planning Sheet	Day 4	Unit 12: Measures and time, including problems	Term: Summer	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Read time to half hour on analogue clocks</p> <p>VOCABULARY</p> <p>time hour o'clock half past clock watch hands</p> <p>RESOURCES</p> <p>Two demonstration analogue clocks pupil clock faces, with moveable hands Activity Sheet 12.3 Interactive Teaching Program Tell the Time</p>	<p>Using a demonstration or, if available, Interactive Teaching program "Tell the Time" clock, revise reading times to the hour. Encourage children to describe the position of the hands on each clock picture.</p> <p>Holding up a clock, invite a volunteer to show 4 o'clock. Repeat this for a variety of on-the -hour times.</p> <p>Show 3 o'clock and ask</p> <p><u>Q. Imagine it is 3 o'clock. What time will it be in one hour?</u></p> <p>Encourage children to think about how the hour hand will move around the clock and ask a volunteer to move the hour hand around the clock. Next, ask children to watch whilst the hour hand is moved backwards to show 3o'clock again. Repeat the previous step to find the time that is one hour before.</p> <p>Move the hands on the clock to show half past 3. Ask the children to talk about the difference in times between the two clocks.</p> <p><u>Q. What position are the hands on the clock when the time is half past?</u></p> <p>Repeat for other half past times.</p> <p>Children will work in pairs, one child using cards from Activity Sheet 12.3 and the other holding a clock face. Children will take it in turns to say the time indicated on the card, whilst the other child will show the time on the clock face.</p>	<p>Review the main teaching objectives and vocabulary with the children. Using individual clocks, ask the children a series of "show me" questions, such as</p> <p><u>Show me half past 5</u></p> <p>Close attention should be drawn to the position of the hands on the clocks.</p> <p>By the end of the lesson, children should be able to:</p> <p>Read time to half hour on analogue clocks (Refer to supplement of examples, section 5, pages 78-79)</p>

Planning Sheet	Day 5	Unit 12: Measures and time, including problems	Term: Summer	Year Group: 1
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Solve simple problems involving time</p> <p>VOCABULARY</p> <p>time hour o'clock half past clock watch hands</p> <p>RESOURCES</p> <p>Two demonstration analogue clocks Pupil clock faces, with moveable hands Activity Sheet 12.4 Interactive Teaching Program Tell the Time</p>	<p>Reinforce the previous day's lesson by showing the children some o'clock and half past times on a large clock face or Interactive Teaching Program "Tell the Time" and asking the pupils to say what time it is.</p> <p>Repeat activity by asking the children to show o'clock and half past times on their individual clock faces.</p> <p>Q. How do we know that the time is half past?</p> <p>Q. What position are the hands in on the clock?</p> <p>Introduce children to Activity Sheet 12.4 and select a problem for the children.</p> <p>Ask</p> <p>Q. If it is now 4 o'clock, what time will it be in 2 hours?</p> <p>The children will work through Activity Sheet 12.4 using clock faces to help solve the problems. Children will be encouraged to record their findings, by filling the correct times on the clocks. Children should support all answers with explanations.</p>	<p>Revisit some of the questions from Activity Sheet 12.4, ensuring that pupils understand the positioning of the hands for o'clock and half past times.</p> <p>Extend questioning by asking</p> <p>Q. How long is it from 2 o'clock to 6 o'clock?</p> <p>Ask pupils to support their answers with explanations.</p> <p>Q. It is now half past seven. What time was it two hours ago?</p> <p>End the session by reviewing the main points from the previous two day's lessons.</p> <p>By the end of the lesson, children should be able to: Solve simple problems involving capacity or time (Refer to supplement of examples, section 5, pages 78-79)</p>