

Unit 12
Measures including problems- Capacity
Year 2
Summer term

Five daily lessons

Unit Objectives
Year 2

- **Read a simple scale to the nearest labelled division** recording estimates and measurements using standard units of capacity
- Understand and use the vocabulary related to capacity
- Solve simple word problems involving measures and explain how the problem was solved.
- Use and begin to read the vocabulary related to time. Use units of time and know the relationships between them

Link Objectives

Year 1

- Understand and use the vocabulary related to capacity.
- Measure using uniform non-standard units
- Use mental methods to solve problems

Year 3

- Read and begin to use the vocabulary related capacity. Measure and compare using standard units. Know the relationships between Kilograms and grams. Begin to use decimal notation for Kilograms and grams.
- Solve simple word problems involving measures and explain how the problem was solved.

Resources needed to teach this unit:

I.T.P (scale & clock)
Variety of plastic bottles and measuring containers, fruit juice cartons and drinks cans.
Large and small buckets
1 litre measuring jug or cylinder calibrated in mls
Large geared clock & small clock faces

Resource sheet 12.3 (i) – 3 (v) (capacity)
Resource sheet 12. 4 (time)
Resource sheet 12.5 (time)

(Key objectives in bold)

Planning Sheet	Day One	Unit Measures - Capacity	Term: 3 Summer	Year Group: 2
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>To begin to use vocabulary of capacity.</p> <p>To use non-standard units to measure capacity.</p> <p>To begin to use standard units.</p> <p><u>Vocabulary</u> capacity contains litre</p> <p><u>Resources</u> Small bucket Larger bucket Yoghurt pots Beakers Margarine tubs Jugs Selection of containers which all hold 1 litre (juice carton, jug, litre bottle) 1 litre calibrated measuring cylinder/jug.</p>	<p>Hold up the small bucket and explain that you are going to find out how much water the bucket holds.</p> <p>Q What can we do to find out?</p> <p>Q Could we use these beakers, yoghurt pots, jugs?</p> <p>Let children find out with your assistance how many jugs are needed to fill the bucket.</p> <p>Q How many jugs do we need?</p> <p>Q How many yoghurt pots will we need?</p> <p>Q Will we need more or less yoghurt pots?</p> <p>TASK Over the next few days let the children find out how many cups, beakers, yoghurt pots it takes to fill the bucket. (small groups with L.S.A.)</p>	<p><u>Plenary</u> Show children a selection of containers which all hold one litre.</p> <p>Q Which one holds the most?</p> <p>Q Why do you think this?</p> <p>Show children that the containers hold the same amount (litre jug, litre juice carton, litre bottle).</p> <p>Show a measuring cylinder marked with mls and discuss how many into make 1 litre.</p> <p>By the end of the lesson the children will have begun to use standard units to find capacities.</p>

Planning sheet		Day Two	Unit Measures - Capacity	Term: Summer	Year Group: 2
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions	
		<p>To begin to use the vocabulary of capacity.</p> <p>To read a simple scale, recording estimates.</p> <p>To solve simple problems related to capacity.</p> <p><u>Vocabulary</u> Litre Capacity Contains Millilitre</p> <p><u>Resources</u> I.T.P. decimal Number line Various containers holding less than 1 litre e.g. fizzy drink can, sauce bottle, water bottle Wall Number line marked in 100s to 1000</p>	<p>Count in 100s to 1000. Use counting stick.</p> <p>Recap Day One using milk containers.</p> <p>Q How do we measure liquids?</p> <p>Q How much milk is in this container? (1 litre)</p> <p>Q How much milk is there in the others?</p> <p>Q Can anyone remember how many ml are in 1 litre?</p> <p>Use I.T.P. Decimal Number line.</p> <p>Set line to 1000, in 100s. Use line to count in hundreds. Ask children how many mls in half a litre. Establish where half way is.</p> <p>Look at one of the containers e.g. drinks can 330 ml.</p> <p>Ask one child how much it holds.</p> <p>Q Can anyone point to where 330 ml is on this line.</p> <p>Mark 330 ml on line</p> <p>Repeat using other containers with less than one litre.</p> <p>Lay number line on work top and ask children to place the bottles in the appropriate place for their measurement. Leave on display</p>	<p><u>Plenary</u></p> <p>Tell the children that we should drink about 2 litres each day.</p> <p>Ask questions such as</p> <p>Q How much is that in 2 days, 10 days, 5 days, a week?</p> <p>Q How much will all the people in your family drink in one day?</p> <p>By the end of the lesson the children will be able to</p> <ul style="list-style-type: none"> • use the words litre and millilitre in context. • Read a simple scale. 	

Planning Sheet	Day Three	Unit Measures - Capacity		Term: Summer	Year Group: 2
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions	
		<p>Begin to use vocabulary of capacity.</p> <p>Solve simple problems involving capacity.</p> <p><u>Vocabulary</u> Capacity Litre Millilitre Half Quarter</p> <p><u>Resources</u> Several 2 litre milk containers Other milk containers Beakers with capacity 250 ml I.T.P. Decimal number line</p>	<p>Recap Day 2.</p> <div data-bbox="816 367 1467 444" style="border: 1px solid black; padding: 5px;"> <p>Q Does anyone remember how many litres we should drink each day.</p> </div> <p>Establish 2 litres.</p> <p>Show a variety of milk containers.</p> <div data-bbox="816 605 1467 651" style="border: 1px solid black; padding: 5px;"> <p>Q Which container hold 2 litres?</p> </div> <div data-bbox="816 683 1467 761" style="border: 1px solid black; padding: 5px;"> <p>Q How many beakers do you think we need to drink to drink 2 litres.</p> </div> <p>Take some estimates.</p> <div data-bbox="816 842 1467 904" style="border: 1px solid black; padding: 5px;"> <p>Q How could we find out?</p> </div> <p>Take ideas then either work as a class filling beakers from the 2 litre container <u>or</u> filling the container using a beaker.</p> <p>(This could also be done in groups with T.A.)</p> <p>The children should then work in pairs on R.S. 12:3(i) – (v) to solve problems.</p>	<p><u>Plenary</u> Discuss how much fluid will be drunk by various size groups.</p> <div data-bbox="1535 428 1980 540" style="border: 1px solid black; padding: 5px;"> <p>Q How many litres for a family of 4, 5? etc.</p> </div> <div data-bbox="1535 573 1980 685" style="border: 1px solid black; padding: 5px;"> <p>Q How many litres will your Table drink?</p> </div> <div data-bbox="1560 1063 1957 1365" style="border: 1px solid black; padding: 5px;"> <p>By the end of the lesson the children will be able to</p> <ul style="list-style-type: none"> • Solve simple problems involving capacity. • Use the related vocabulary. </div>	

Planning sheet	Day Four	Unit 12 Measures Time	Term: summer	Year Group: 2
Oral and Mental		Main Teaching		Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/Focus Questions
		<p>Use and begin to read the vocabulary related to time.</p> <p>Use units of time and know the relationships between them (second, minute, hour, day, week).</p> <p>Large clock with minute hand.</p> <p><u>Vocabulary</u> minute second hour digital analogue</p> <p><u>Resources</u> 1 minute sand time clock with minute hand R.S. 12.4</p>	<p>Remind children of previous work on sequence of events; What we do during the day; get up; get washed and dressed, go to school; have break; have lunch etc.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Q How many seconds in a minute? Look at the minute hand of the clock and count to 60.</p> </div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Q. What kind of things does it take a minute to do?</p> </div> <p>Give children one minute to carry out tasks e.g. read for one minute, write for one minute, talk for one minute.</p> <div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p>Q. What kind of tasks does it take 2 minutes to do?</p> </div> <p>Children work with a partner; estimate how long you think it takes for your partner to do a task. If appropriate, then time the task to see how near your estimate is (See R.S. 12.4)</p> <p>Some tasks can only be timed when appropriate e.g. lining up or running in P.E. This will encourage children to use measurement of time in all areas of the curriculum. Encourage children to think of their own tasks.</p>	<p>Discuss the estimates that the children have done and compare the actual times taken to do the task where appropriate.</p> <p>Ask children to look at what things will take an hour to do at home.</p> <p>Ask them to look for different types of clock faces at home</p> <div style="border: 1px solid black; padding: 10px; margin-top: 20px;"> <p>By the end of this lesson children should be able to know and use the units of time and the relationship between 60 seconds and 1 minute.</p> </div>

Planning sheet		Day Five	Unit 12 Measures Time	Term: Summer	Year Group: 2
Oral and Mental		Main Teaching			Plenary
Objectives and Vocabulary	Teaching Activities	Objectives and Vocabulary	Teaching Activities	Teaching Activities/ Focus Questions	
		<p>Use and begin to read the vocabulary related to time. Use units of time and know the relationships between them (second, minute, hour, day, week).</p> <p>Read a simple time-table</p> <p><u>Resources</u> I.T.P (clock) Small clocks Resources sheet 12.5</p> <p><u>Vocabulary</u> second minute clock analogue digital hour later earlier</p>	<p>Take feedback on tasks that children have found that it takes them one hour to do at home.</p> <p>Q. Did you watch a T.V. programme for one hour?</p> <p>Q. What kind of things does it take one hour to do at school? (e.g. lessons) Q. How many minutes is an hour?</p> <p>Ask children if they have a watch; look at the different types of watches. Discuss the different types of clock faces they see at home.</p> <p>Q. Why is there so many different types of clock and watch faces? Q. What kind of face does your alarm clock have?</p> <p>Explain that we have different types of clocks today as we have digital clocks e.g. video clock.</p> <p>Use I.T.P. (analogue clock) set the clock to say 1 o'clock ask children to set their small clocks to 1 hour later, 1 hour earlier, half an hour earlier or later etc.</p> <p>Repeat activity using digital clock next to the analogue. Show children T.V. listing from local paper, or (R.S. 12.5)ask them to choose a programme and write down how long it is on for.</p>	<p>Call out a T.V. programme and ask children how long it is on for?</p> <p>Q How many minutes is that?</p> <p>Q. What programme is on for the longest length of time? Q What programme is on for the shortest length of time?</p> <p>By the end of this lesson children should be able to: Know and use the units of time and the relationships between 60 seconds and 1 minute, 60 minutes and an hour.</p>	

How long does it take to fill a litre container with water?

How long does it take to write your name?

How long does it take to run around the hall once?

How long does it take to change your shoes?

How long does it take to get changed for P.E.?

How long does it take to line up after break?

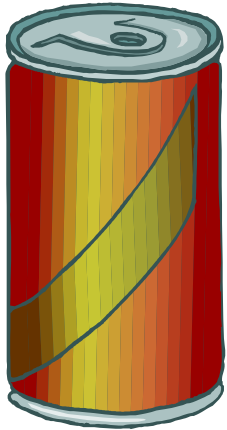
How long does it take to walk to school?

How long is your favourite programme on T.V.?

T.V.Listings



Start Time	Finish Time	Programme
10:00	11:30	Tweenies
11:00	11:30	Scooby-Do
1:15	1:30	Weather report
2:30	3:00	World Snooker Championship
5:00	5:25	Blue Peter
4:15	4:30	Rug Rats
6:15	7:15	The Simpsons
7:00	7:30	Coronation Street
8:00	9:30	Match of the day



Tom drinks a can of juice every day.
The can contains half a litre of juice.

Tom drinkslitres of juice each week.

Jane has 1 glass of orange every day. (250 ml) ($\frac{1}{4}$ litre)

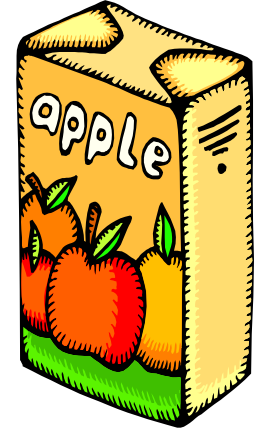
Jane drinks litres of orange every day.



Mum has fruit juice every day for breakfast.

Her glass holds half a litre of juice.

Mum drinks of juice in a week.



Baby Emma drinks half a litre of milk every day.

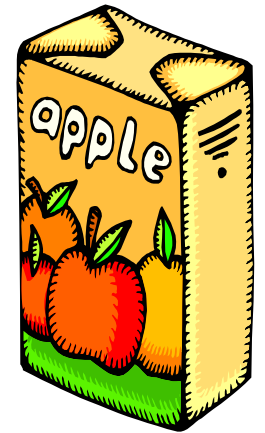
Emma drinks litres of milk in a week

Fruit Juice

Dad has fruit juice every day for breakfast.

His glass holds half a litre of juice.

Dad drinks of juice in a week.





Half
litre



Half
litre

Tom and Jane take a bottle of water to school every day. They do not fill up the bottle at school. They finish the whole bottle each day. Their bottle holds **half a litre** of water.

They also have a bottle of water each on Saturday and Sunday

Tom drinks litres of water in a week.

Jane drinks litres of water in a week.