

## Planning Overview

### Year 2 Time


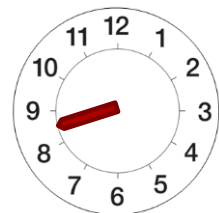
Compare and sequence intervals of time







Tell and write the time to five minutes, including quarter past/to the hour and draw the hands on a clock face to show these times

Know the number of minutes in an hour and the number of hours in a day

Read the time on a clock to the nearest 15 minutes (TAF ARE)

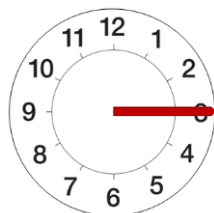
Read the time on a clock to the nearest 5 minutes (TAF GD)

	Teaching and Learning
<b>Introduction &amp; recap of analogue clocks from Year 1</b>	<p>Why do we have time? How does it help us? Real life context for time – YouTube durations etc. Is it important?</p> <p><b>Mathsticks</b> Clock jigsaws – What’s the same and what’s different about the different clocks in the puzzles?</p> <div data-bbox="438 1001 847 1218">  </div> <div data-bbox="861 1001 1436 1218"> <p><b>Clock Jigsaws</b></p> <p>Here's a set of five clock jigsaws designed to help children become more familiar with the numbers on a clock face. The clocks are all different and have been chosen to represent the diverse range of clock-faces children may see or use in the 'real world' – but with a focus on 'readability' too. Each [...]</p> </div> <p>Use discussion to establish what children remember about telling the time from year one or know from home.</p>
<b>Understand the term clockwise</b>	<p>Make sure the term clockwise is understood from Year 1 / Y2 Geometry – position &amp; direction</p> <p>Play games to reinforce what clockwise means –maypole dancing or circle games like ‘Duck, Duck, Goose’</p> <p>Make links to handwriting/number formation</p>
<b>o'clock &amp; half past with just the hour hand</b>	<p>Either remove the minute hands from your class set of clocks or print out a clock face like this (from course resources) for each child onto thin card.</p> <div data-bbox="438 1771 657 1982">  </div>

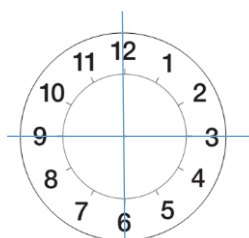
	<p>Add a short cardboard hour hand to the children's clocks with a split pin. Make sure the length is just right to point to the numbers on that inner number line.</p> <p>When the hour hand is pointing to the 1 it is 1 o'clock, when it is pointing at the 2 it is 2 o'clock etc.</p> <p>Who can point to a place halfway between 1 and 2 on their clock? Halfway between 4 and 5? Halfway between 9 and 10? Explain that this is where the hour hand points when it is half past (recap from Year 1).</p> <p>With a partner one person to choose a time e.g. half past 4, make it on their clock secretly then say it out loud. Partner to show same time on their clock. Do they match?</p> <p>Which times were the trickiest? Why? Notice how half past is below the number for numbers 12 &amp; 1 to 5 but above the number for numbers 6 to 11. Above and below not that helpful – need to think about clockwise direction of travel or a curled-up number line and look for next number to move towards.</p> <div style="display: flex; align-items: center; justify-content: space-around;"> <div style="text-align: center;">  <p>Two o'clock</p> </div> <div style="text-align: center;">  <p>Half past 8</p> </div> </div> <p>Complete the time-pairs matching cards activity from Mathsticks.</p> <p>Children could also read a time on a clock with just the hour hand and record the time in words or read the time in words and draw just the hour hand on to a clock.</p>
<p><b>Quarter past &amp; quarter to with just the hour hand</b></p>	<p>Remind children of how they found quarter of a length of string or ribbon. Imagine the curved line between 1 and 2 on the clock is a short piece of string. Who can point to the place one quarter of the way along? Three quarters of the way along?</p> <p>When it is three quarters of the way along which number is it nearer? We use this instead of using three quarters and say a quarter to.</p> <p>Practise showing quarter past and quarter to times on your clocks. Practise recording times in words to match a given picture and drawing hour hand to match times given in words. Extend to combining o'clock, half past, quarter past and quarter to – all with just the hour hand.</p> <div style="text-align: center;">  <p>Two o'clock</p>  <p>Half past 8</p>  <p>Half past 4</p>  <p>Quarter to 12</p> </div>

**o'clock half past, quarter past and quarter to with just the minute hand (Measuring in fractions of an hour)**

Remove the hour hand from the plastic or cardboard clocks and replace with just the minute hand. Make sure the hand goes out to the edge of the clock.



Recap splitting the circle into quarters with a vertical and horizontal line. Notice which numbers the lines pass through.



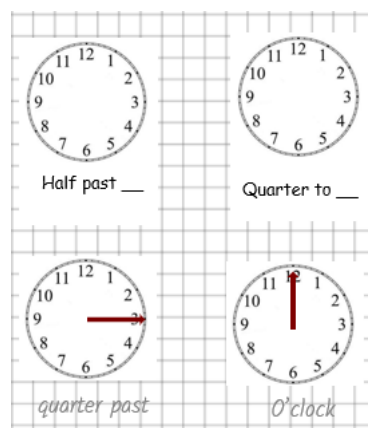
Show that in 1 hour the minute hand goes all the way around the clock. Where will it be pointing after half an hour? Make link to fractions explaining that it will have travelled halfway around the clock.

Start back at O'clock. Where will it be after a quarter of an hour? Make link to fractions – it will have travelled a quarter of the way around the clock.

Repeat for 3 quarters and remind children that we don't say three quarters past, instead we say quarter to.

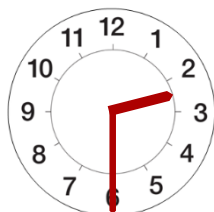
It may be helpful to recap – quarter turn clockwise and anti-clockwise from position and direction. You could chalk a large clockface for children to make the turns on, noticing which numbers they are pointing to.

Children could try to record on clocks as we did for the hour hand. Have we got more or less information with this hand? What more do we need to know?



**Telling the time on an analogue clock with both hands to the nearest 15 minutes (TAF expected)**

There is a difference between the TAF statement for time and the NC objective. To meet the expected standard in the TAF, children only need to be able to meet the objective in this section.



Children put both hands on their clocks. How can we tell which hand is which? How far does each hand move in 1 hour?

Use **Mathsticks** Stop the clock video to watch the 2 different hands. Encourage the idea that the hour hand leads and we just look at the minute hand for more detailed information. It's almost half past. It's just after half past etc.



If the time is half past 2 where will the hour hand be? Recap how to show halfway from 2 to 3. Where will the minute hand be? Recap how to show halfway around the whole clock. How do we show/use the half differently for each hand? Repeat for quarter past/to.

With a partner one person to choose a time (O'clock, half past, quarter past or quarter to), make it on their clock secretly then say it out loud. Partner to show same time on their clock. Do they match? Encourage children to position hour hand first, then minute hand.

Children to record times given in words on clocks with both hands drawn accurately – the hour hand needs to be much shorter.

Children to read time on pictures of clocks and record the times in words.

#### Mastery

Which of these clock faces shows a time between 5 o'clock and 7 o'clock?



#### Mastery with Greater Depth

Jack says, 'There isn't any point in having a minute hand on a clock because I can still tell the time without it.'

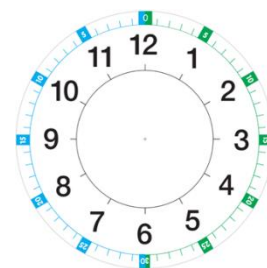
Do you agree with him?

Explain your answer.



**Telling the time on an analogue clock with both hands to the nearest 5 minutes (NC objective)**

Add a second disc behind your clock which shows the number of minutes the minute hand is measuring (in course resources) or draw attention to this number line on other clocks you are using. Count the number of spaces between 12 and 1, 1 and 2, 3 and 4. What do you notice? Does anyone make the link between known facts in the 5x table and the fact that 2 on the inner circle is lined up with 10, 3 with 15 etc.



What happens on the left-hand side of the clock? Remind children how we had to say quarter to instead of three quarters past. Practise counting anticlockwise in 5s for times to the hour.

Attach just the minute hand to the clock and practise pointing to different 5-minute intervals past and to. Point out the anomaly that we never say 15 past, 30 past or 15 to in minutes. Instead, we use fractions of the hour to say quarter past, half past and quarter to. Incorporate these anomalies into the activity. You may want to record again to the nearest 5 minutes with just the minute hand on printed clocks.








Now attach both hands to this special clock. The hour hand still uses the inner number line and still leads. The minute hand will give us more information. You may want to use Stop the Clock video from Mathsticks again.


With just the hour hand it is hard to see the difference between half past and 25 past so we need to check the minute hand.

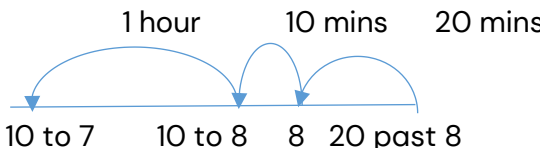
Finally, you need to remove the outer circle from the clock so that you just have the original clock with both hands. Children position the hour hand in roughly the correct place first, then count in 5s clockwise and anti-clockwise to position the minute hand accurately to show the precise time. For past the hour times encourage children to apply their 5x table knowledge.

Make sure children understand that there are 60 minutes in one hour. Some children may begin to use complements to 60 to work out time. E.g. if minute hand points to 8,  $8 \times 5$  is 40 so it is 20 minutes to the next hour.

SATS questions often use 5-minute intervals.

	<p><b>17</b> Match each clock to the time it shows.</p> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="display: flex; justify-content: space-around; width: 100%;"> <div style="text-align: center;">  <p>twenty-five past four</p> </div> <div style="text-align: center;">  <p>quarter to four</p> </div> <div style="text-align: center;">  <p>quarter past four</p> </div> </div> <p><b>31</b> Tick the clock face that shows <b>ten past twelve</b>.</p> <div style="display: grid; grid-template-columns: 1fr 1fr; gap: 10px; width: 100%;"> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> <div style="text-align: center;">  </div> </div> <div style="display: flex; justify-content: flex-end; margin-top: 10px;"> <input type="radio"/> 1 mark         </div> </div>
<p><b>Know the number of minutes in an hour</b></p>	<p>Children should know that there are 60 minutes in one hour from their work on telling the time.</p> <p>Think of something that we do for a whole hour in school e.g. an extended writing lesson in English, a science investigation, a PE lesson.</p> <p>Use a stopwatch to time that activity and watch the stopwatch counting up to 60.</p>
<p><b>Know the number of hours in a day</b></p>	<p>It is 11am now what will we do between now and this time tomorrow?</p> <p>Draw a bar marked with 12 sections of 1 hour or split a clock into 12 sections like a pie chart. Children to shade in sections and label them e.g. lunchtime, lesson time, relaxing at home, eating dinner, watching TV, sleeping. Have we got all the way back to 11am tomorrow?</p> <p>Explain that there are two 11 o'clocks every day, one in the morning and one during the night. We need to make a second bar or clock to get back to 11am. Complete the shading activity for the second 12-hour period.</p> <p>So how many hours are there in a whole day?</p> <p>Every time appears twice. Are there any times that you are awake for both of them? What are you doing at each of those times (e.g. 7am and 7pm)?</p>

<b>Compare and sequence units of time</b>	<p>Recap measuring and beginning to record time in hours/minutes/seconds from Year 1.</p> <p>Experience one minute/sixty seconds using a sand timer or online stopwatch/timer. Estimate something you could do in 1 minute/1 second and test.</p> <p>Use PE lessons to frame periods of time.</p> <p>Recap year 1 objective to recognise and use language relating to dates, including days of the week, weeks, months and years. Investigate a calendar. Where can you see one day? One week? One month? Choose a month e.g. December. What would a good picture be for this month? Is there an important event? Does anyone have a birthday? Tell me a date that is on the weekend. On a Wednesday.</p> <p>Make a birthday display with children holding the value of their date in Numicon in the correct month on the grid.</p> <p>How do we record the date on our work? Is it the same in every lesson? Show children how to write the short date to mirror the long one. What is the biggest number we can have in the first position? Why? What about the second position? Why?</p> <p>Put units of time (second, minute, hour, day, week, month, year) in order from shortest to longest and vice versa.</p>
<b>Link telling the time with time durations</b>	<p>Children show a start time for an event on a clock e.g. half past 1. If the event lasts half an hour what time will it finish?</p> <p>Play stop the clock on <b>Nrich</b> to practise adding on intervals of 15 mins, 30 mins and 45 mins. If you land on midnight you win.</p> <p><b>Approaching Midnight</b></p> <p>Press to play me</p> <p>Click Restart to try again</p> <p>15m 30m 45m 1h</p> <p>Play first Play computer</p>  <p>Repeat with harder start times and durations e.g. start time 5 to 6, duration 10 minutes. What time will it finish?</p> <p>Children to use their small clocks to count on the durations in hours/fractions of hours and/or multiples of 5 minutes.</p>

	<p>Children will need to be confident converting between minutes and <math>\frac{1}{4}</math> and <math>\frac{1}{2}</math> hours e.g. knowing that <math>\frac{1}{2}</math> an hour is 30 minutes.</p> <p>Extend to questions where the start time and finish time are known and children have to calculate the duration. E.g. Jim leaves school at quarter past 3. He gets home at ten to 4. How long did it take him to walk home?</p> <p>What if we know the duration and the finish time? Can we work out what time the event started? E.g. The film finished at 20 past 8. Jo had been watching the film for <math>1\frac{1}{2}</math> hours. What time did the film start?</p> <p>Could we work this out using an empty number line instead of a clock? What would be different to a normal number line?</p> 															
<b>Compare and sequence intervals of time</b>	<p>To enable comparison between intervals of time measured in different units e.g. minutes and hours, use appropriate calculation strategies to convert between units, e.g. <math>\frac{1}{2}</math> an hour in minutes is <math>\frac{1}{2}</math> of 60 minutes which is 30 minutes; the number of hours in 2 days is double 24 which is 48 hours</p> <p>Order these times from longest to shortest: 1 hour, 50 minutes, half an hour, 25 minutes, three quarters of an hour, <math>1\frac{1}{2}</math> hours</p> <p>Use a table showing the planned events at a party, festival, sports event or similar.</p> <table border="1" data-bbox="442 1337 1220 1534"><tr><th>Event</th><th>Start time</th><th>End time</th></tr><tr><td>Javelin</td><td>ten past 9</td><td>10 O'clock</td></tr><tr><td>Hurdles</td><td>11 O'clock</td><td>Twenty to 12</td></tr><tr><td>Discus</td><td>Half past 12</td><td>five to 1</td></tr><tr><td>Long jump</td><td>Quarter past 1</td><td>twenty past 2</td></tr></table> <p>Which event is the shortest? Longest? Which lasts longer the hurdles or the long jump?</p> <p>Children could plan their own even that lasts for 3 hours and has 6 activities and pose similar questions for a friend.</p>	Event	Start time	End time	Javelin	ten past 9	10 O'clock	Hurdles	11 O'clock	Twenty to 12	Discus	Half past 12	five to 1	Long jump	Quarter past 1	twenty past 2
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