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Year 2

Small Steps Guidance and Examples

Block 3 – Measurement: Time

White Rose Maths

Year 2 – Yearly Overview

	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Autumn	Number: Place value			Number: Addition and Subtraction				Measurement: Money		Number: <u>Multiplication and Division</u>		
Spring	Number: <u>Multiplication and Division</u>		Statistics		Geometry: Properties of Shape			Number: Fractions		Measurement: length and height	Consolidation	
Summer	Position and direction			Problem solving and efficient methods		Measurement: Time		Measurement: Mass, Capacity and Temperature		Investigations		

Overview

Small Steps

- ▶ O'clock and half past
- ▶ Quarter past and quarter to
- ▶ Telling time to 5 minutes
- ▶ Minutes in an hour, hours in a day
- ▶ Find durations of time
- ▶ Compare durations of time

NC Objectives

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.

Compare and sequence intervals of time.

O'clock and Half Past

Notes and Guidance

Children recap telling the time to o'clock and half past from Year 1

Children should be given the opportunity to create times using individual clocks with moveable hands.

Children read and write times from given clocks.

Mathematical Talk

What do the numbers represent on the clock face?
Which is the hour hand? Which is the minute hand?

Where will the hour hand be at ____?
Where will the minute hand be at ____?
What do you notice about the minute hand at half past?

Can you show me _____?

Varied Fluency

- 1 Match the events to the approximate times they happen.
Can you show the time on your clock?

Half past 8

Lunchtime

10 o'clock

Walk to school

12 o'clock

Home time

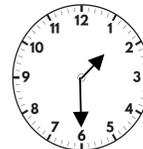
Half past 3

Playtime

- 2 Complete the table.

5 o'clock	
	
Half past 4	
1 o'clock	
	

- 3 What time is it?

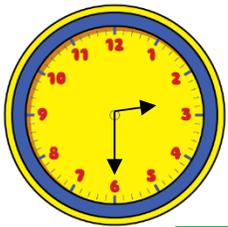


It is

past

O'clock and Half Past

Reasoning and Problem Solving



Who is telling the time correctly?



The time is half past 6

Iris

The time is half past 3



Jayant



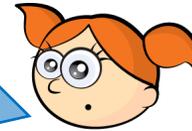
The time is half past 2

Neve

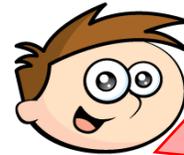
Can you spot the mistakes they've made?

Neve is correct. Iris has confused the minute hand. Jayant has not looked at the hour hand accurately.

It is half past 11 so the hour hand should be on the 11.



Is Holly correct?
Explain your reasoning.



At 12 o'clock the hour hand and the minute are pointing to the same number.

Is this the only example?
How do you know?

Holly is incorrect. If the time is half past 11 the hour hand should be half way between the 11 and 12.

When thinking about o'clock and half past the children should also find half past 6. Children may recognise that there are other times but these are not times that they know. For example: 20 past 4.

Quarter Past & Quarter To

Notes and Guidance

Children read and draw the time to quarter to and quarter past. Children use their knowledge of fractions and turns to identify quarter past and quarter to.

Children should recognise that the hour hand also moves as the minute hand does. Therefore when the time is quarter past the hour, the hour hand will be just past the hour number and when the time is quarter to, the hour hand will be just before the hour number.

Mathematical Talk

Where are the hands pointing to?

Can we divide the clock face into four equal parts? Can we link this to fractions?

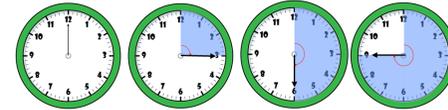
If the minute hand is pointing at 3, how many minutes have past the hour?

If the minute hand is pointing at 9, how many minutes until the next hour?

Show me quarter past/to....

Varied Fluency

1



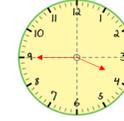
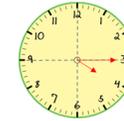
Look at the clocks. Discuss how the minute hand has travelled. Identify the time is quarter past the hour and quarter to the hour. Give the children individual clocks with moveable hands and ask them to make quarter to/past times.

2

Match the clocks to the correct time.



Quarter to four
Quarter past four
Quarter to three
Quarter past three



3

Complete the table.

The minute hand is pointing to ____ The hour hand is just after ____ The time is <i>quarter</i> ____ <i>seven</i>		The minute hand is pointing to three. The hour hand is just after six. The time is <i>quarter past six</i> .	
The minute hand is pointing to ____ The hour hand is just before ____. The time is <i>quarter</i> ____ <i>two</i> .		The minute hand is pointing to nine. The hour hand is just ____ twelve. The time is <i>quarter to twelve</i> .	

Quarter Past & Quarter To

Reasoning and Problem Solving



Quarter past is a later time than quarter to because the time has already gone past the hour.

Do you agree with Joseph?
Explain why.

How many quarters of an hour are between 7 o'clock and 9 o'clock.

Explain how you found the answer.

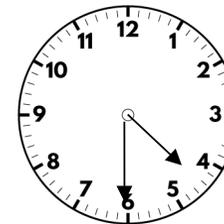
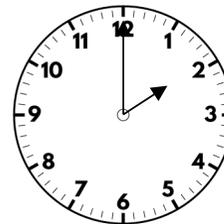
It depends on the hour of the times given.

For example:
quarter to 12 is later than quarter past 11

There are 8 quarter of an hours between 7 o'clock and 8 o'clock.

The train to Blackpool leaves at quarter past and quarter to every hour.

Make a list of the trains Oliver can catch if he gets to the train station between 2 o'clock and half past 4.



Oliver could catch the following trains:

- Quarter past 2
- Quarter to 3
- Quarter past 3
- Quarter to 4
- Quarter past 4

Telling Time to 5 Minutes

Notes and Guidance

Children read and show analogue time to 5 minute intervals. Children should be confident at counting in steps of 5 from 0 to 60 so they can then apply this to counting around the clock in fives and use this method to work out what time is shown.

Children need to recognise that once the minute hand gets past 6 the time becomes ‘to’ the next hour, rather than ‘past’ the hour.

Mathematical Talk

Can we count in 5s?

What does each number on the clock represent?

How can we count round the clock?

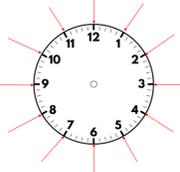
Are there any other way to say 15 past/to and 30 past/to?

Where will the minute hand be at ____? Where will the hour hand be at ____?

How do we know whether it is a ‘past’ or a ‘to’ time?

Can you show ____ past/to ____?

Varied Fluency

- Use the counting stick to count in fives.  Label each division with multiples of 5. Link the counting stick to numbers around a clock. Add new labels to the stick to show minutes ‘past’ and ‘to’ the hour. Label each number on the clock to show how Many minutes are represented by each number. 

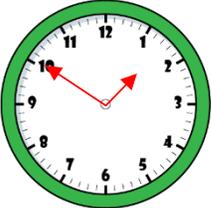
- Show the children times to 5 minute intervals on a large clock. Ask the children to identify what time is being shown. Give the children individual clocks with moveable hands. Ask the children to make times to 5 minute intervals.

- Match the times to the correct clock.

20 past 6		5 to 9	
10 to 2		20 to 11	
25 to 3		10 past 1	

Telling Time to 5 Minutes

Reasoning and Problem Solving



Sarah says: "It is ten to one."

Brett says: "It is ten past ten."

Kitty says: "It is ten to two."

Who is correct? Explain your answer.

Kitty is correct. Sarah has said the hour before not the next hour. Brett has confused his minute and hour hands.

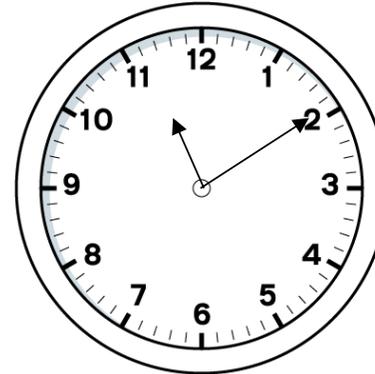


Mollie says: "Five lots of 5 minutes is the same as half an hour."

Do you agree with Molly? Explain why..

Mollie is incorrect. Six 5 minutes are the same as half an hour.

Sophia starts her Maths questions at 10 past 11



Each question takes her 5 minutes to complete. She completes 7 questions.

What time does Sophia finish her Maths questions? Explain how you found the answer.

Sophia finishes her Maths questions at quarter to 12

Children may use a clock to count round seven 5 minutes.

Children may do $5 \times 7 = 35$ and count 35 minutes round the clock.

Hours and Days

Notes and Guidance

Children learn there are 24 hours in a day and 60 minutes in an hour.

Children use clocks to convert minutes to hours and minutes and vice versa.

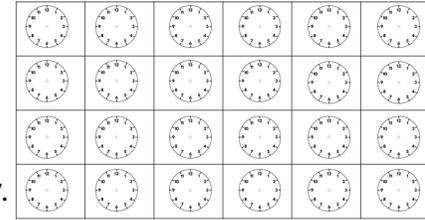
Children should be encouraged to use their knowledge of counting in fives to help them convert.

Mathematical Talk

- What are the hours of the day? How many are there?
- Are there more or less hours in the morning than the afternoon?
- How can you find out how many minutes are in an hour/half an hour/quarter of an hour?
- Are there more/less minutes in _____ than _____?
- How many hours make up _____ minutes?
- What is the most efficient way to count minutes in hours and vice versa? What times table can you use to help you?

Varied Fluency

- Starting from midnight show every hour on the clocks for a full day.



There are hours in a day.

- Use a clock to show how many minutes there are in 1 hour.

1 hour = _____ minutes

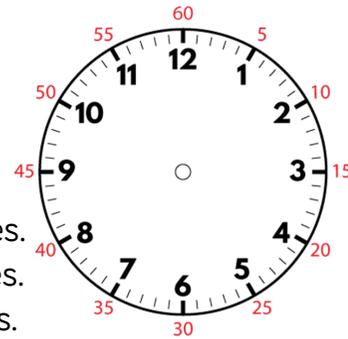
Can you use two clocks to help you complete the sentences?

1 hour and 10 minutes = _____ minutes.

1 hour and 15 minutes = _____ minutes.

____ hour and 30 minutes = 90 minutes.

What other times can you record in the same way?



- Convert the activity times from minutes into hours and minutes.

Activity	Duration in minutes	Duration in hours and minutes
Football	75 minutes	
Hockey	100 minutes	
Netball	90 minutes	
Tennis	120 minutes	

Hours and Days

Reasoning and Problem Solving



Kas

There must be 12 hours in a day because we start from midnight and go up to 12 o'clock then start again from 1

Do you agree with Kas? Explain why.

I disagree because there there are 12 hours in a morning and 12 hours in an afternoon therefore equaling 24 hours in a day.

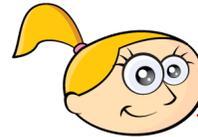


If you are looking at a clock and adding 3 hours on, the minutes do not change.

Do you agree? Prove it.

I agree. The hour hand will change but the minutes will stay the same.

Lily and Matthew have found two different methods for working out how many hours are in a day.



Lily

I counted in 2s for every hour of the day.

I did $12 + 12$



Matthew

Explain why Lily and Matthew chose the methods they did?

Whose method is most efficient? Why?

Lily knows there are two of each hours 0-12 in a day so she has counted each hour twice in 2s.

Matthew knows there are 12 hours in a morning and 12 hours in an afternoon.

Matthew's method is most efficient because it is quicker and there is less opportunity for error.

Find Durations of Time

Notes and Guidance

Children identify when an event starts and when an event finishes. They use these times to work out how long an event lasted. Children should be confident in explaining what ‘duration’ means. Children use individual clocks and number lines to help them work out the duration of an event.

Mathematical Talk

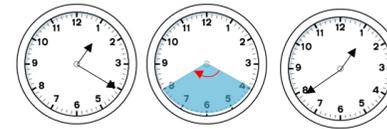
What is the start time? What is the end time? How can we show this on the clock? How long did the event last?

How did you work out the duration? Are there any other methods for working out duration?

Varied Fluency

1 How much time has passed from the start to end time?

Start Duration End



2 Complete the table.

Start	End	Time passed	Duration
			___ minutes
			___ minutes
5 past 2 	5 to 3 		___ minutes

3 Iqbal leaves school at quarter past 3
He arrives home at five to 4
How long was Iqbal’s journey?

Find Durations of Time

Reasoning and Problem Solving

Beth is going to the cinema.
She needs to be in Leeds for 4 o'clock.
She can either:

- Get the twenty past three bus that takes half an hour.
- Get the half past three train that takes 30 minutes.

Should Beth catch the bus or the train?
Explain why.

Beth should catch the twenty past three bus because she will get to Leeds at ten to four. The train will arrive at 4

Kassie records the time every half an hour.

Her sequence looks like this:

Quarter past 11, Quarter to 12, Quarter past 12, Quarter to 1

What do you notice?

Can you explain why this happens?

Kassie's sequence is going up by 30 minutes each time. It will either be quarter past or quarter to and the hour goes up every second time.

Aimee is planning her birthday. She wants to plan something to do from 9am to 5pm.

Here are the things she wants to do:

- Visit the zoo (3 hours)
- Go to Pizza Palace (1 hour and a half)
- Have breakfast (half an hour)
- Play party games (1 hour)
- Watch a film (2 hours)

Create a timetable for Aimee's day.
Compare it to your friends – is it the same?

There are 8 hours in Aimee's day so children could create different combinations for Aimee's day and recognize she will have half an hour spare.

Compare Durations of Time

Notes and Guidance

Children compare times using 'longer' and 'shorter'. They order times from longest to shortest and vice versa.

Children then compare durations of time taken by particular events or tasks given the start and end times.

They explore ways to work out durations of time most efficiently.

Mathematical Talk

Which is longer 1 minute or 1 hour? If you know this, what else do you know? How can you order the times?

How many minutes does each TV show last?

How can we count the minutes efficiently?

How much longer is Pop World than Animal Patrol?

How can we efficiently work out the length of time each person works?

Varied Fluency

- 1 Circle the longest time.

1 hour

40 minutes

Half an hour

55 minutes

Three quarters
of an hour

35 minutes

Can you order the times from longest to shortest?

- 2 Use the table to complete the sentences.

TV Show	Starts	Ends
Pop World	3 o' clock	Twenty to 4
Animal Patrol	Half past 6	Five to 7
Super Cars	Quarter past 8	Five past 9

_____ is the shortest TV show.

Pop World is longer than _____.

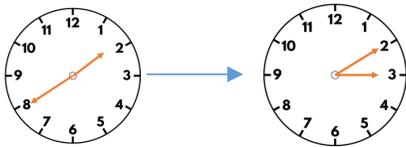
_____ is longer than _____ and _____.

- 3 Joe works from half past 10 until 3 o' clock.
Emma works from 9 o' clock until half past 12.
Who works the longest amount of time?

Compare Durations of Time

Reasoning and Problem Solving

The clocks show the start and end time of the film Super Dog.



The film Crazy Cat starts at quarter past 1 and ends at quarter to 3

Jamie says,



Super Dog must be the longest film, because it ends the latest.

Do you agree with Jamie?
Explain why.

I do not agree with Jamie, because both films last exactly the same length of time - 1 hour and 30 minutes.

Always, Sometimes, Never

If an activity finishes at the same time, they must have lasted for the same duration.

Rosie has an hour for her lunch break. Does she have enough time to complete all of the playground activities?

Activity	Duration
Skipping	7 minutes
Ball skills	10 minutes
Treasure hunt	21 minutes
Trim trail	19 minutes

How do you know?

Sometimes. It depends on what time the activities started. If they started and ended at the same time they would have lasted for the same duration.

Rosie does have time to complete all of the activities. Completing all of the activities would take 57 minutes and 57 minutes is less time than one hour.