

## Maths

Week commencing: 14.04.2020

### Lesson 1

**Learning Outcome: To read and order times in words for analogue and digital clocks.**

Digital clocks always record the number of hours passed and the number of minutes that have passed since that hour.



**Both clocks represent the same time.**

The digital clock shows seven forty-eight. The 7 is before the colon so it is telling us the hour. The 48 is after the colon so it is telling us how many minutes have passed. This means that forty-eight minutes have passed since seven o'clock.



On the analogue clock this means twelve minutes to eight. Seven forty-eight is the same as twelve minutes to eight.

#### Star Words



format

compare

earlier

later

earliest

latest

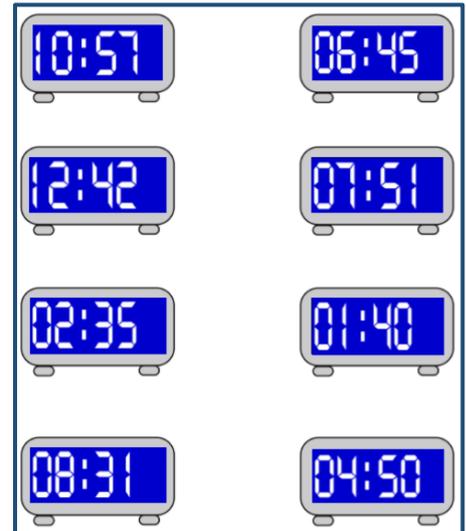
chronological order

### Task:

- Choose a clock, read the digital time and explain what the digits represent.
- State how many minutes have passed since \_\_\_\_\_ o'clock.
- Say the digital time and analogue times together and understand that they mean the same.

This is a practical activity, but here is an example of how it should be answered, similar to above:

"The digital clock shows ten fifty seven. The 10 is before the colon so it is telling us the hour. The 57 is after the colon so it is telling us how many minutes have passed. This means that fifty seven minutes have passed since ten o'clock.



### Challenge:

Here is an information board at a station. It shows when trains leave.

Train A	03:19
Train B	15:32
Train C	05:43
Train D	20:56
Train E	21:07

Put the trains in order from earliest leaving to latest leaving in the day.

**Train A, Train C, Train B, Train D, Train E**

## Lesson 2

**Learning Outcome:** To understand the units of measured time.

Here are some examples of stop clocks/watches. These are all for measuring how long an interval is, rather than showing what time of day it is. This is why the scale starts a zero.

Find an online stop watch. Think about:

- What is being measured? **Seconds and minutes**
- How many seconds are measured before the minute indicator moves to 1? **60 seconds**
- How many 'elephants' do you say in 5 seconds? 10 seconds? 20 seconds? 30 seconds? (Take this in turns to measure with a grown up or sibling. Speak at a sensible and regular speed and use the stop watch accurately.)



00:00:00

### Star Words:

measured time

second

stopwatch

stop clock

timer

estimate

time interval

## Task:

Think carefully about what you know about the length of a second, a minute and an hour. Which one would you use to measure how long the following activities might take? **The answers for this task may vary. Here is an example answer:**

1.



**I have chosen hours to measure this because depending on where you are travelling to, a plane journey can take a few hours.**

Flying to Spain for a holiday

2.



Walking to the shops with your family

3.



Writing your full name in your best writing

4.



How long you spend on computer games each day

## Challenge:

Miss Cummings and Miss Caudwell are waiting for their bus.

**Miss Cummings: "My bus took half an hour and 7 minutes to arrive."**

**Miss Caudwell: "My bus took seven lots of 5 minutes to arrive."**

Whos bus took the longest? Explain your answer. **Miss Cummings bus took longer because it took 37 minutes and Miss Caudwell's bus took 35 minutes.**

### Lesson 3

**Learning Outcome:** Measuring intervals in seconds and in minutes and seconds.

#### Why is it important to measure accurately?

If we do not measure things accurately, for example measuring ingredients to bake a cake, then this inaccurate results that are not close to the truth; measuring accurately is a useful skill to have.

With a grown up or sibling, take in turns to complete the following activities. Discuss how long you think it will take you to complete (in seconds). You will need a stop watch (you can access one online or on a phone/tablet).

**"I think it will take me 43 seconds to write my name three times".**

a) write your name neatly three times

b) sing happy birthday twice

c) list the multiples of the 4x tables (up to x12)

#### Star Words



time (as a transitive verb)

measure

compare

estimate

actual

longer

shorter

#### Task:

There are no exact answers for this task. Here is an example of how it could be answered:

Activity	Estimated Time	Actual Time
Run around your garden three times	2 minutes and 15 seconds	1 minute and 10 seconds
Count backwards from 20 to 0	0 minutes and 45 seconds	0 minutes and 12 seconds.
Do ten star jumps	1 minute and 5 seconds	0 minutes and 30 seconds
Walk to your bedroom and back	1 minutes and 10 seconds	0 minutes and 25 seconds

The shortest activity was counting backwards from 20 to 0.

It took twelve seconds.

The longest activity was running around the garden three times.

It took one minute and ten seconds.

#### Challenge:

Miss Armstrong says that in another 150 seconds, the stopwatch will show 4 minutes 70 seconds.

**00:03:20**

Miss Caudwell says that in another 150 seconds, the stopwatch will show 5 minutes 50 seconds.

Who is correct? Explain how you know.

Miss Caudwell is correct. I know this because 120 seconds is 2 minutes, which would be 5 minutes and 20 seconds, add the remaining 30 seconds and it would be 5 minutes and 50 seconds. If the stop watch showed 4 minutes and 70 seconds, this would be 110 seconds.

## Lesson 4

Learning outcome: Calculating and comparing intervals given start and finish times.

Here is a television schedule from a children's channel.

07:10	Bogus The Fungusman
07:25	Nico the Naughty
07:40	Newzbeat
07:45	Terrible Topics
08:15	Newzbeat
08:25	Stacey Tumbler



**Star Words** ★

- schedule
- timetable
- start time
- end time
- calculate
- timeline

Today you will be calculating how long programmes last for by using the start time and end time (we use the start time of the next programme). We can calculate the length of an interval by using a 'time' line (as seen above), which is like a number line. Looking at the time line above discuss the following questions with a grown up.

- What times could we write at the blue lines? Explain how you know? **07:30 and 08:30 because they are halfway.**
- What times does Bogus and the Fungusman start and finish? **07:10 and 07:25**
- Where should these times go on this timeline?



Can you calculate the difference between 07:10 and 07:25? **15 minutes**

To work out the difference, we can do this by counting on (just like finding the difference on a number line) and counting in multiples of 5 minutes. It is also important to know that column subtraction is not an appropriate method as time does not use the same number system.

### Task:

Using a timeline (you will need to draw one similar to the one from the first task), calculate the lengths of films. For each pair of films, you must state which one is longer or shorter by completing the sentence.

Top town Cinema – Screen 3 Schedule

Film	Start time
The Lion Princess	04:45pm
Back to Wizardland	06:10pm
Space Attack!	07:55pm
The Fire	10:10pm

Film	Length (in hours and minutes)	Which of these two films is longer?
The Lion Princess	1 hour and 25 minutes	The longest film was Back to Wizardland.  I know this because it lasted 20 minutes longer than The Lion Princess.
Back to Wizardland	1 hour and 45 minutes	

Film	Length (in hours and minutes)	Which of these two films is longer?
Space Attack!	2 hours and 15 minutes	The longest film was Space Attack!  I know this because it lasted 40 minutes longer than The Fire.
The Fire	1 hour and 35 minutes	

The final film finishes at 11:45pm. Doors close at midnight!

### Challenge:

Miss Armstrong set off hiking at 25 minutes past eight in the morning. She hiked for 1 hour and 50 minutes.

She said "I finished at 10:15 because 2 hours later will be 10:25 then I took off 10 minutes."

Is she correct? Explain your reasoning. **Miss Armstrong is correct. 1 hour and 50 minutes later will be 10:15.**