

Time



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Targeting Maths Literacy
Time

Written by Katy Pike and Gerda Turner
Photo research by Amanda Santomaria
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Minutes and Hours



Time can be measured in minutes and hours.

There are 60 seconds in one **minute**.
There are 60 minutes in one **hour**.



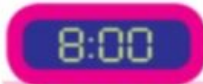
Clocks measure time. A watch is a small clock you wear on your wrist.

We use both **digital** and **analog** clocks. An analog clock has a long hand that points to the minutes and a short hand that points to the hours. A digital clock uses numbers to tell the time.

8 o'clock



Analog clock



Digital clock

Time before noon is **a.m.**
Time after noon is **p.m.**

Tim wakes up in the morning. The time is 7 a.m.



one elephant,
two elephants

How many elephants can you count in one minute?

The minutes come after the two dots, or colon, on a digital clock.

hours



minutes



Sunset is in the evening.



Telling Time

We can tell time to the hour and to the half hour.



Analog clocks show time to the hour when the long hand points to 12. The short hand tells us what hour it is. On a digital clock the hour number will be followed by a colon and two zeros.



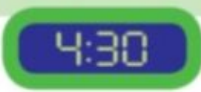
3 o'clock



3 o'clock



four thirty or
half past four



6

Half an hour is 30 minutes. Analog clocks show half past when the long hand points to 6. The short hand will be halfway between two numbers. On a digital clock the hour number will be followed by 30.

Some TV programmes last half an hour.



The minute hand is on 6. It is half past seven.



The :30 tells us it is half past seven.

It is nearly half past two.



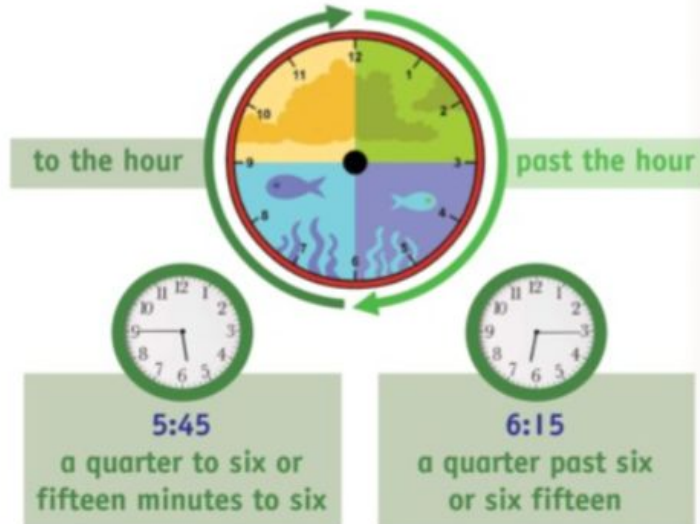
7



Telling Time to the Quarter Hour

There are 15 minutes in one quarter of an hour.

We can say that it is a quarter past or a quarter after the hour. We also say it is a quarter to the hour. As the minute hand moves from the 12 to the 3, it has moved through 15 minutes or one quarter of an hour.



What time do these clocks show?



10:15



5:45



Telling Time to Five Minutes

We often tell the time to five minutes.



For the minute hand, there are five minutes between each number on the clock face. When the minute hand moves between 1 and 2, it has moved five minutes.

You can skip count by fives to find the time. You can count by fives after the hour or before the hour.



The minute hand is 25 minutes past the hour. The time is 25 minutes past 10.



The minute hand is 10 minutes before the hour. The time is 10 minutes to 9.

Clocks can come in many different sizes and designs.

10 minutes past 10



25 minutes past 2



25 minutes past 11

25 minutes to 10



about 10 minutes to 7



about 25 minutes past 9





More Time, Less Time

Some things take more time, others take less time.

You need to be able to estimate using time. Choose the closest time that each event would take.

A game of hockey



About:

- 1 hour
- 1 minute
- 5 hours

About:

- 20 seconds
- 15 minutes
- 3 hours

Eating lunch



Yawning



About:

- 60 seconds
- 3 seconds
- 2 minutes

Watching a movie



About:

- one day
- 5 minutes
- 2 hours

Brushing your teeth



About:

- 2 minutes
- one hour
- a month

Sleeping



About:

- 2 hours
- 12 hours
- 12 minutes



How Long?

Sometimes we need to know how long an event will take.

If an event begins at 4:00 and ends at 8:00, it lasts for four hours. You need to look at the start time and the end time to work out how long something lasts. We then work out the difference between the two times.



How long is the piano lesson?

Piano Lesson
Start time 4:00
End time 4:30



How long is a swimming class?

Swimming Class
Starts 11:00
Finishes 12:00

How long will the movie take? Starts at 3:00. Finishes at 5:10.



How long did it take for Jade to walk to school? Jade left for school at 8:30. Jade arrived at school at 8:50.



How long is it from the beginning of the school day until lunch? School starts at 9:00. Lunch starts at 12:00.

How long did the football game last? Started at 1:00. Ended at 3:30.





Measuring Time



There are different timers that we can use to measure time.

Races are often timed using stopwatches. Stopwatches are accurate to a fraction of a second.



Sand timers measure different times. Sand timers can measure 1, 2, 3 or 5 minutes. An hourglass is a large sand timer that measures one hour.

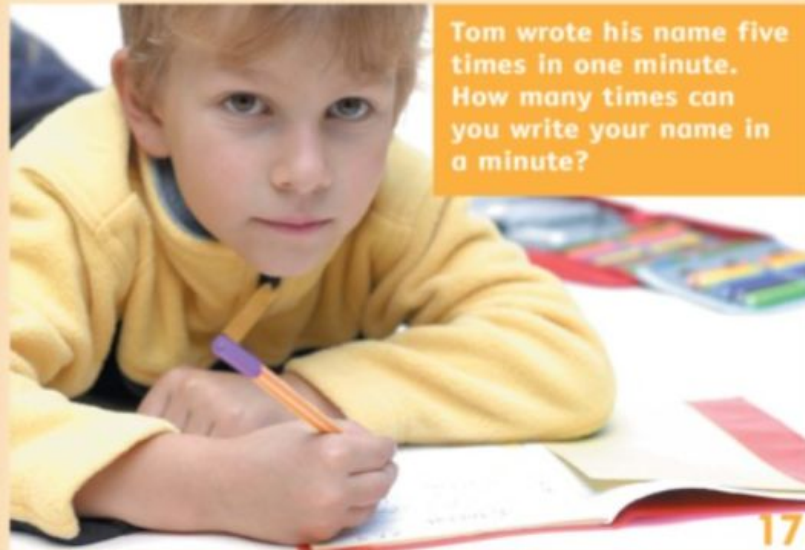


Use a one-minute timer to measure how many times you can do something in one minute. How many hops? How many beads can you thread? What number can you count to?

Sundials measure time using the rays of the sun.



Ovens often have timers that we use when we cook.



Tom wrote his name five times in one minute. How many times can you write your name in a minute?



Days and Weeks

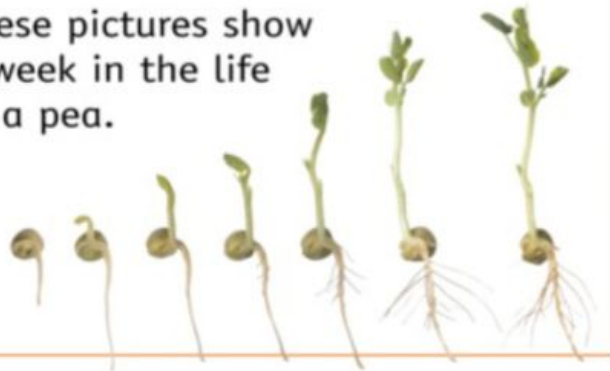
Time can be measured in days and weeks.

There are 24 hours in one **day** and 7 days in a **week**. There are 5 week days and 2 weekend days. What is today? How many days until the weekend?

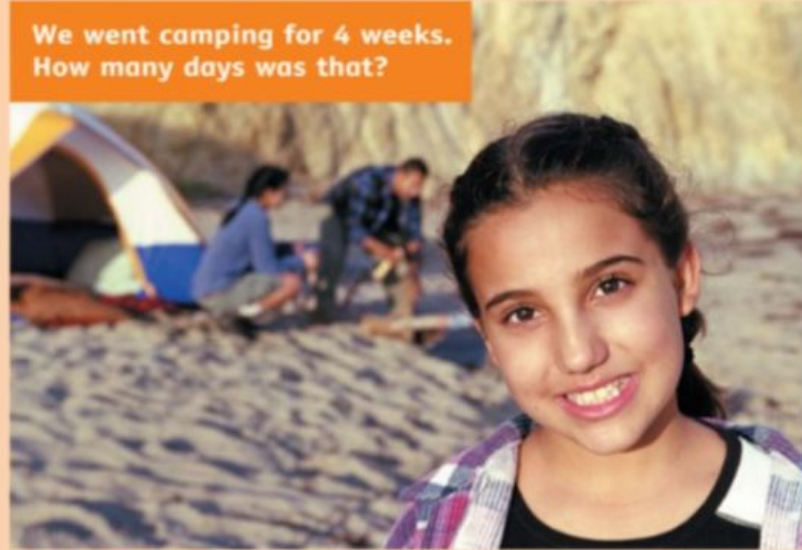
If **yesterday** was Sunday, what day would **tomorrow** be?

If it is 3 weeks until the holidays, how many school days is that?

These pictures show a week in the life of a pea.



We went camping for 4 weeks. How many days was that?



About how many weeks does this change take to happen?



Today is Wednesday. My birthday is in 5 days. When is my birthday?

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Months and Years

Longer times are measured in months and years.

There are 12 months in one **year**.
52 weeks also make one year. There are four seasons in every year.



All months have 30 or 31 days except for February. February has 28 days except in a **leap year** when it has 29 days. The years 2016, 2020, and 2024 are examples of leap years.

These pictures show a year in the life of a field.

This calendar shows a full year. It also shows the number of days in each month.





Reading a Calendar

We need to be able to read a **calendar**.

May	
Sunday	6 13 20 27
Monday	7 14 21 28
Tuesday	1 8 15 22 29
Wednesday	2 9 16 23 30
Thursday	3 10 17 24 31
Friday	4 11 18 25
Saturday	5 12 19 26

We write **dates** like this — 12 May. We can also use the short form where we write the day first, month second, year third.

12/5/15 is the same as 12 May, 2015.

May has 31 days. On this calendar the first day of May is a Tuesday. The last day of May is a Thursday. What day of the week is May 16? What day of the week is May 25?



What day of the week is New Year's Day?
What date is the last Friday in January?

January	
Sunday	7 14 21 28
Monday	1 8 15 22 29
Tuesday	2 9 16 23 30
Wednesday	3 10 17 24 31
Thursday	4 11 18 25
Friday	5 12 19 26
Saturday	6 13 20 27

On this calendar page, what date is the second Wednesday of April?

May	
Sunday	6 13 20 27
Monday	7 14 21 28
Tuesday	1 8 15 22 29
Wednesday	2 9 16 23 30
Thursday	3 10 17 24 31
Friday	4 11 18 25
Saturday	5 12 19 26

Ling has baseball training every Thursday in May. What are the dates Ling goes to training?

On what day and date does Autumn begin?

September	
Sunday	2 9 16 23 30
Monday	3 10 17 24
Tuesday	4 11 18 25
Wednesday	5 12 19 26
Thursday	6 13 20 27
Friday	7 14 21 28
Saturday	1 8 15 22 29



Glossary

- a.m.** the time from midnight to noon
- analog** a clock with hands
- calendar** a chart that shows the months of the year with the days in order
- date** naming a particular day in the month
- day** 24 hours
- digital** a clock that uses numbers to show the time
- hour** 60 minutes
- leap year** a year with one extra day — 366 days
- minute** 60 seconds
- p.m.** the time from noon to midnight
- tomorrow** the day after today
- year** 365/366 days; 12 months
- yesterday** the day before today
- week** 7 days