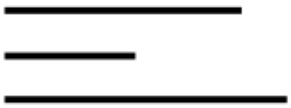
FLUENCY PROGRESSION – MEASURE

Year One (Length and Height)

- Outside collect sticks and place them in order. Use sentences such as This stick is the shortest. This stick is long but that one is longer etc.

- Circle the longest line. Can you draw a line smaller than the smallest line?



- Measure hunt:
  Find someone in the class taller than you, shorter than you.
  Find an object half the size/double the size of the strip of paper.

- Use a large stick from outside- preferably one that is 1 metre long. Stick masking tape at 10cm intervals (discretely). The children are to use this stick to find items that are longer, shorter, double, half and the same size.

Year One (Length and Height)

- Create a class height chart in your classroom

- Find an object: Longer than 10 cubes, Shorter than 7 cubes, Double the size your pencil

- Make a necklace using threading reels or beads. Measure how long it is using cubes, paper clips and other suitable objects

- Give the children different sized pieces of string. How many ways can you measure the pieces of string? You could use; cubes, a ruler, marbles, your fingertips etc.

- Show the children the image. What else can we use to measure? Gather different objects to measure.

Outside draw a line to show how far the long jumpers jumped. Work in groups to find out how else we can describe the length. E.g. how many rulers, maths books, people lying down, etc.

Year One (Weight and Volume)

- Which is heavier? Use a balance to help you investigate the items below.

  a) A ruler and a shoe.
  b) A pencil and a book
  c) An apple and a bottle of water
  d) A carrot and a banana

- Draw lines to match the pictures to the correct words.


Empty


Full


Half full

Use the words more or less to complete the sentence.


has _____ than


Year One (weight and volume)

- Choose four objects from around the classroom.
  Which is heaviest? Which is the lightest?
  What could you use to find out?
  Can you find two objects that weigh the same?

- Choose five different containers.
  How could you find out which container holds the most water?

  Fill up the containers using a cup.
  How many cups of water do you need to use to fill each container?

- Follow the recipe below to make pancakes.

1 large free-range egg
1 cup of self-raising flour
1 cup of milk

Use the same cup for the flour and the milk.
How could we make more pancakes?
How could we make less?

Year Two (Length and Mass)

- How long is the car?

- How tall is the teddy bear?

- How much do the cubes weigh?

Year Two (Length and Mass)

- Order the lengths below from shortest to longest:
  12cm, 25cm, 20cm, 15cm

- Weigh the items below, write a number sentence showing which is heavier using < or >.


- Fill in the boxes using <, >
  12m ☐ 17m

Table length ☐ Chair height

3kg ☐ 7kg

Year Two (Length and Mass)

- Here is a table of money that three people have in pounds and pence. Can you fill in the blank boxes?

Name	£	p	Total
Phil	4		£4.65
Sue	3	95	
Gary		115	£6.15

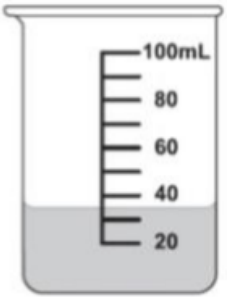
- Jackson went to the shop to buy milk and bread.

How much money does he need to pay without receiving any change?

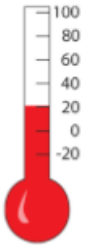
- Tara has 2 ten pence coins, a five pence coin and a fifty pence coin. How much money does she have altogether?

Year Two (Capacity, volume, temp)

- How much water is in the container?



- What temperature is the classroom?



- Choose the appropriate unit to measure how much water is used in a shower.

ml or l

Year Two (Capacity, volume, temp)

- Complete the sentences using the following symbols <, > or =

30ml ◯ 60ml

1L jug ◯ Two half litre jugs

52L ◯ 25L

- Order the results from largest to smallest: 500ml, 750ml, 250ml, 1L

- Who has more pop?

Eric

"I have these 2 bottles."

Sasha

"I have a 750ml bottle."

Year Three (Length and Mass)

- How long is the pencil?

- Find the length from A – B, find the length from B-C. Which is longer? How much longer?

- Insert <, > or = below.

13cm ☐ 140mm

1m ☐ 90cm

1m – 10mm ☐ Half a metre

Year Three (Length and Mass)

- Complete the missing boxes.

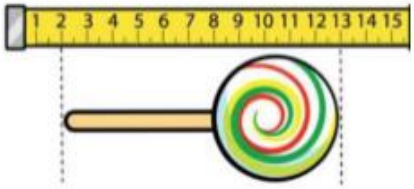
90mm – ☐ = 6cm

7m + ☐ = 810cm

70cm + 9mm = 1m – ☐

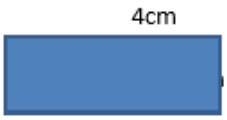
45mm + ☐ = 10cm – 4cm

- How much longer is the lolly than the car?



Year Three (Length and Mass)

- What is the perimeter of the rectangle?



- A square has sides of 3cm. What is the perimeter of the square?

- Measure the perimeter of the triangle.

Year Three (Length and mass)

- Use <, > or = to complete the statements below

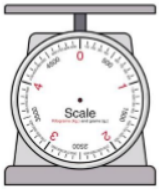
750g ◯ 0.8kg

500ml ◯ Half a litre

17mm ◯ 2cm – 5mm

- Penny bought 3 tins of beans from the shop. They each weighed 418g each. The bag weighed 5 grams. How heavy was the bag?

- A pack of strawberries weighing 226g and 2 jars of coffee, each weighing 480g, are put on the scale.



Draw an arrow to show the weight of the 3 items.

Year Three (Length and mass)

- Fill in the missing boxes

0.5l + 250ml = 1500ml – ☐

0.25l × ☐ = 2l + 500ml

- 3m – ☐ + 750cm = 2m

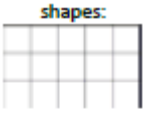
3.5kg + ☐ - 1.5kg = 3.5kg

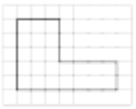
0.2l + 0.8l - ☐ = 0.9l

- Adam, Danny and JoJo have 7kg worth of marbles to share. Adam receives double the amount Danny receives. Danny receives double the amount JoJo receives.
How many kg of marbles do they each receive?

Year Four (Area)

- Find the area of these shapes:





- A rectangle measures 5 squares long by 3 squares wide.
What is the area of the shape?

- Max is building a patio made of 24 square slabs.
What could the patio look like?
Design it on squared paper.
Max is using 6 coloured square slabs in his design.
None of them are touching each other.
Where could they be in the designs you have made?

Year Four (Perimeter and Length)

- Complete the statements:

100cm = _____m
1km = _____m
1500ml = _____l
3.5kg = _____g

- Use the word and number cards to complete the statements.

To change from cm to mm _____ by __
To change from kg to g _____ by ____
To change from ml to l _____ by ____

multiply | 10 | 100 | divide | 1000

- Are these statements true or false?
1000m = 1km
1000cm = 1m
1000ml = 1l
1000g = 1kg
1000mg = 1g

Year Four (Perimeter and Length)

- Find the perimeter of the rectangle.

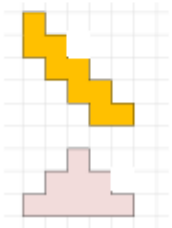
8cm
☐ 3cm

80m
☐ 30m

0.8m
☐ 30cm

$\frac{8}{10}$ m
☐ $\frac{3}{10}$ m

- Draw and find the perimeter of the shapes in centimetres.



Year Four (Area and perimeter)

- Complete the statements:

_____cm = 2 metres
4km = _____m
_____ml = 3.5 litres
_____kg = 7500g

- Convert the measures to the same unit and then complete the calculation.

3km + ☐ = 6500m

800m – ☐ = 0.3km

- Can you draw rectangles to represent the calculations below?

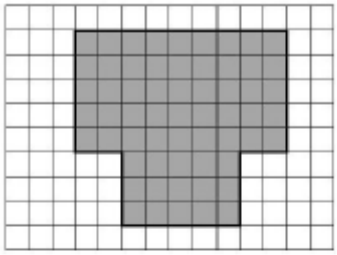
4cm + 30mm + 30mm + 4cm=

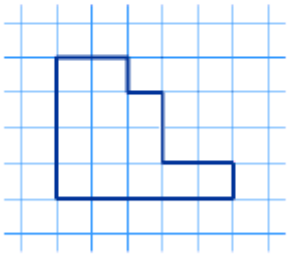
85mm + 85mm + 2.5cm + 2.5cm=

Complete each calculation.
What have you found?

Year Four (Area and Perimeter)

- Find the area of these shapes:





- Draw a rectangle that is 6 centimetres long and 4 centimetres wide.
  What is the area of the rectangle?

Year Five (Converting Units)

- Use <, > or = to complete the statements below

750g ◯ 0.8kg

500ml ◯ Half a litre

17mm ◯ 2cm – 5mm

- **True or false?**
  1000m = 1km
  1000cm = 1m
  1000ml = 1l
  1000g = 1kg

- Bryan is 2.68m tall.
  He is 99cm taller than his sister.
  How tall is his sister?
  Give your answer in centimetres.

Year Five (Converting Units)

- Fill in the missing boxes.

6 inch = ▭ cm

1 yard = ▭ feet

1 ounce = ▭ g

- **True or false?**

There are 16 pounds in a stone.

There are 16 ounces in a pound.

- Complete the statements:

I would measure milk in _____.

I can measure the length of my car in _____.

Is there more than one option? Which is the most reasonable and why?

Year Five (Converting Units)

- What is 444 minutes in hours and minutes?

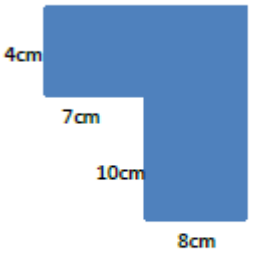
- Anya finishes school at twenty past three in the afternoon. Circle the 24 hour clock that is showing the time Anya finishes school.

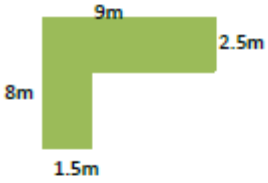
03:20 20:03 13:20 15:20 20:15

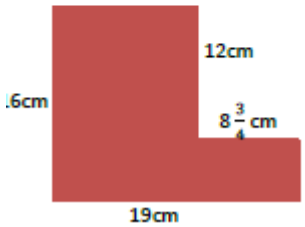
- Patrick begins watching a film at 4:27pm for 90 minutes.
  What time does the film finish?

Year Five (Perimeter and Area)

- Find the perimeter of the following shapes.

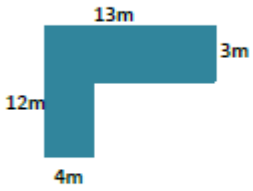


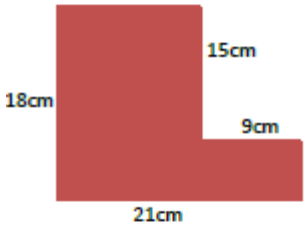


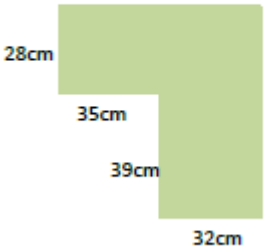


Year Five (Perimeter and Area)

- Estimate and work out the area of these shapes.
  Find the unknown sides first.







Were you close?

Year Five (Volume)

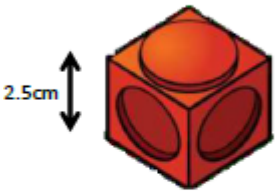
- Here is a litre jug with some water in.

Here is a glass that holds 300ml. It also has some water in.

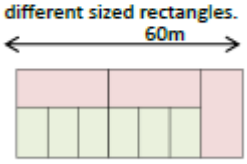
Estimate how much liquid there is altogether.

Year Five (Measure)

- A tower is made of red and green cubes.
  For every 1 red cube there are 2 green cubes.
  Each cube has a height of 2.5cm
  The tower is 30cm tall.
  How many green cubes are in the tower?



- The diagram is made up of two different sized rectangles.



For each large rectangle the length is double the width.
The length of the diagram is 60m.
Find the area of one of the small rectangles.

Year Six (Measure)

- Josh is trying to run 10 kilometres in one week.

Here are the distances he runs on the first three days:
Day 1: 1.6 kilometres
Day 2: 850 metres
Day 3: 2.12 kilometres
How much further does he have to run?

- Work out how many kilometres are in:

  2568 metres + 2 miles + 1.8 kilometres

- Miss Brown is making a packed lunch for each child in her class. They each receive:

  A 200g sandwich
  A 35g packet of crisps
  A 72g cookie
  A 43g apple

  She has 32 children in her class. What is the total weight of the classes packed lunches?

Year Six (Measure)

- Fill in the blanks

  149 hours =
  _____ days
  _____ hours

  784 minutes =
  _____ hours
  _____ minutes

- Louisa drinks a pint of milk with her breakfast, 1.3 litres of water throughout the day and 450 ml of juice before bed. How much liquid does she drink altogether in the day?
  Give your answer in litres.

- Use <, > or = to make the statements correct.

  19 feet ☐ 7 yards
  3 gallons ☐ 23 pints
  42 ounces ☐ 2 pounds

Year Six (Measure)

- Complete the statements:

a) 5 miles is approximately ..... km.
b) 40 kilometres is approximately ..... miles.

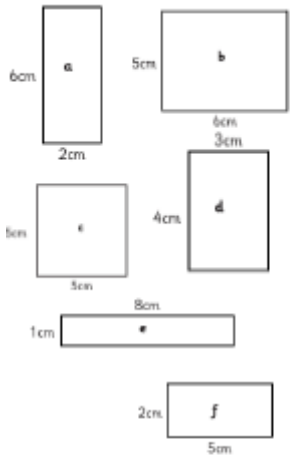
- Convert between miles and kilometres rounding to the nearest whole number:

Miles	Kilometres
	1.6km
2 miles	
	4.8km
5 miles	
	16km
20 miles	

- The distance from Edinburgh to Glasgow is approximately 80km. What is this in miles to the nearest whole number?

Year Six (Measure)

- Look at the shapes below.



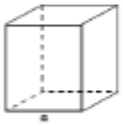
- Which two shapes have the same area?
- Which two shapes have the same perimeter?
- Draw two different rectangles that have an area of $12cm^2$.
- Draw two different rectangles that have a perimeter of 20cm.

Year Six (Measure)

- Which formula below would calculate the area of the right angled triangle?

a) a + b x 2
b) ab × 0.5
c) a + b + c
d) ab × 2

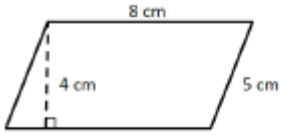
- Look at the cube below.

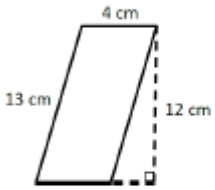


a) Write the formula for the surface area of the cube.
b) Write the formula that could be used to calculate the volume of this cube.

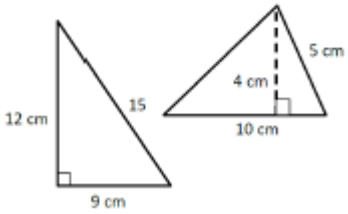
Year Six (Measure)

- Calculate the area of the parallelograms:



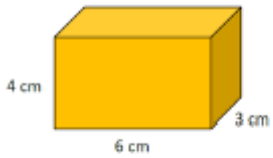


- Calculate the area of the triangles:

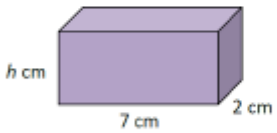


Year Six (Measure)

- Find the volume of the cuboid.



- This cuboid has a volume of 70cm^3. Calculate the height of the cuboid.



- A cube has a volume of 125cm^3. Calculate the length, height and width of the cube.

FLUENCY PROGRESSION – MEASURE (Money)

Year One (Money)

- Write the value of the coins.

 = pence

 = pence

 = pence

- Fill in the blanks.
One has been done for you.

One  = ___ 

One  = ___ 

Year One (Money)

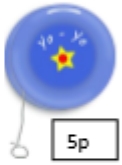
- Jenny gives 10p to her brother, she has 7p left. How much money did she have to start with?

Fill in your answer in the number sentence below.

☐ – 10p = 7p

- Here are some items.


8p


5p

Sam buys one train and one yoyo.

How much does he spend altogether?

- Tom buys one teddy.
How much change will he get from a ten pence coin?


7p

Year Two (Money)

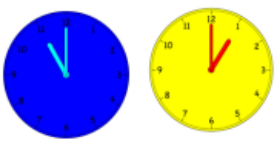
- Make 50p three ways using the coins below. You can use the coins more than once.

- I have £1.45. Can you find or draw the coins I could have to make this?

- Paul has £2 and Tony has £1.20. Which coins could Tony add to his pile to make his and Paul's amounts equal?

Year Two (Money)	Year Four (Money)	Year Four (Money)
• Benji spends £1.35 in the shop and pays with a £2 coin. How much change will he receive? • Arun buys an ice lolly from the ice cream van. It costs 90p. He pays in 10 pence coins. How many 10 pence coins does he use? • Fill in the missing box: ☐ + 40p = £1 – 30p 70p – 50p = 5p + ☐	• A box of chocolates costs £1.25. Hannah and Thomas want to buy 4 boxes of chocolates. If Hannah pays £2.45, how much must Thomas pay?  • Emma has five pounds. She spends a quarter of her money. How much does she have left?  • In the sale I bought some clothes for half price. Jumper £14 Scarf £7 Hat £2.50 T-shirt £6.50 How much would the clothes have been full price? How much did I spend altogether? How much did I save?	• Order the following amounts placing < or > between them. £25.62, 2657p, 2567p. • Robbie buys a toy car for 99p, a yoyo for £1.05, three sweets for 30p each and a chocolate bar for 47p. Does he have enough money to pay with a £5 note? • Martina buys a jacket for 2165p and a t shirt for £9.99. Hamid buys a coat for £32.00. Who spends the most?

FLUENCY PROGRESSION – MEASURE (Time)

Year One (Time)	Year One (Time)	Year One (Time)
• Create a class 'timeline of our day' with different o'clock and half past times displayed, alongside a picture. • Point to 11 o'clock on the class clock. • Match the words to the correct clock:  • What time is the clock showing?  • Go on a time hunt around school. Give the children a sheet with A, B, C, D and E on. They must find the correct clock and write the matching time. • Play time bingo. Say a time or show a clock and the children must stamp the correlating time on their bingo sheet	• Play hopscotch but write the days of the week/months of the year instead of the numbers. • Select a tree outside. Every week a child must take a picture of the tree. Discuss the changes which happen throughout the year. • Fill in the missing blanks: On _____, I visited the seaside all day. On _____, we did P.E. at school. • Give each child either a month of the year or an ordinal number e.g. 1st. They must find their partner and explain why they are together • Here are the days of the week mixed up. Can you put them in the correct order? Thursday Tuesday Saturday Monday Friday Sunday Wednesday	• Using a stop watch, can you see who can do 10 stars jumps the quickest? Take it in turns to time each other. • Give the children different events e.g. brush your teeth, sleep, run around the playground and the children will have to decide if the event will take seconds, minutes or hours. • James took 35 seconds to read a page in a book. A class spent 4 minutes looking at a page in a book. Who was the slowest? • Peter is eating his lunch at half past 12. Jane is eating her lunch half an hour later. Tick the clock which shows when Jane eats her lunch. 

Year One (Time)

- Put the following statements in the correct time order.

Next week I am going to the seaside
Yesterday I walked my dog
Tomorrow I will have pizza
Today I am going shopping

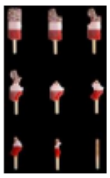
- Fill in the missing blanks for instructions on how to do work. Use next, first and after that.

_____ I open my book

_____ I write the date

_____ I do my work

- Use either a picture or a story. The children must use the correct language to sequence the events. An image such as the ice lolly one, could be used.



- Have a 'days of the week' display in your class with arrows: today, yesterday and tomorrow. A child must move these arrows each day.

Year Two (Time)

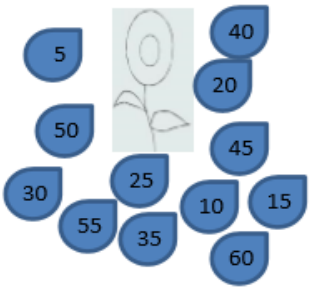
- Lily starts school at 8:45am. She arrives 10 minutes early. Show what time she arrived on the clock.

- What time is the clock showing?

- Complete the missing times.
James wakes up at 6:50am. 15 minutes later, he eats his cereal. This takes him 5 minutes. It is now _____. Half an hour later the time is _____. This is when he arrives at work.

Year Two (Time)

- The petals of the flower that shows how many minutes have passed the hour have fallen off. Can you put them back in the right order?



- Amie arrives to a party at 4:30pm. She leaves at 5:30pm. How long did she stay?
Tell me in hours and then in minutes.

- Tell me:
The number of minutes in an hour.
The number of hours in a day.

Year Two (Time)

- Which is greater?

Half an hour	45 minutes
60 minutes	1 hour

- Order these from the earliest time to the latest time:

Half past 2

3 o'clock

1 o'clock

Quarter to 3

- Andy worked from half past 10 until 2 o'clock.
Kat worked from 3 o'clock till 6 o'clock.
Who worked the shortest amount of time?

Year Three (Time)

- What time is shown on the analogue clocks below?

- Draw the times on the blank analogue clocks.

a) Five past four
b) Twenty five to ten
c) Half past seven

- Match the times on the digital clocks to the analogue clocks.

Year Three (Time)

- Write the time on the clocks to the nearest minute.

- Draw the hands on the clock to show the time below.

23 minutes to 9

- Fill in the gap.

_____ minutes past 4

Year Three (Time)

- Use a stopwatch to record the following events:

  a) Time taken to run all the way around the playground.
  b) Time taken to complete 10 mental maths questions.
  c) Time taken to do 20 star jumps

How long did each event take? Which took the longest? Would you record your time in seconds or minutes?

- In 1913 the world record for the quickest mile run by a man was 4 minutes 14 seconds. The world record is currently is 3 minutes 43 seconds.
  What is the difference in times? Can you find and compare other world records?

- Match the stop clock to the written time:

1 minute and 36 seconds — 00:01:36
25 seconds — 00:01:30
1 and a half minutes — 00:00:25

Year Three (Time)

- Sort the times below into am and pm.

5 o'clock in the morning.
3 o'clock in the afternoon.
08:45
16:43

- Use the vocabulary cards below to fill in the gaps about Sita's day.

Sita's alarm went off at seven _____ in the _____. She set off to school at eight _____. She arrived at 8:35 ___. After her _____ lessons, she had lunch at _____. In the _____ she learnt about the Victorians. School finished at 3:25___ . Sita went to bed at seven _____ but woke up five hours later at _____ when it was very dark.

noon | a.m. | p.m. | morning | afternoon | o'clock | midnight

Year Three (Time)

- Cut up the cards below and play a matching game with a friend. When you get a pair you keep it. The player with the most pairs wins!

1 hour	60 minutes	60 seconds	1 minute
7 days	1 week	1 month	about 4 weeks
12 months	1 year	24 hours	1 day

- Fill in the missing numbers in the rhyme.

___ days have September, April, June and November.
All the rest have _____, except for February alone. Which has ____ each year and _____ in a leap year.

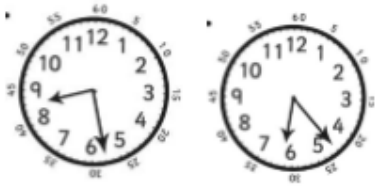
- Can you use the picture below to tell me how many days are in each month?

Year Three (Time)

- A TV programme starts at 5:20 and finishes at 6:05. How long does the programme last for?

- Kieran is learning his times tables. On Monday it takes him 1 minute and 12 seconds to complete 10 questions. By Friday he can complete 10 questions in 42 seconds. How much quicker is he by Friday?

- Look at the two clocks below. How much time has passed between the first and the second clock?



Year Four (Time)

- Read and write the following times in
  a) 24 hour clock
  b) 12 hour clock
  c) analogue

  e.g. Quarter past 2 in the afternoon:
  a) 14:15
  b) 2:15pm
  c)

- Work out the problems and then draw the hands in the correct position on the analogue clocks.

Paul sets off to London at 11:05am, the journey took 3 hours and 50 minutes. Draw the time he arrived on the clock.

Clare finishes school at 15:25, she had her tea 1 hour and 40 minutes later. Draw the time she ate tea on the clock.

Year Four (Time)

- Fill in the gaps:

  1 hour = __ minutes
  1 minute = __ seconds
  2 hours = __ minutes
  __ minutes = 180 seconds

- Katie goes swimming for 1 hour and 42 minutes. How many minutes was she swimming for?

- Kelsey is 7 and a half years old. How many months old is she?

Year Four (Time)

- Match the times; fill in the missing times in the empty boxes.

11:30pm	18:30
6:30pm	
2:30pm	14:30
11:30am	23:30
	08:30
8:30am	05:30

- A full day at school is 8 hours and 35 minutes. How long is this in minutes?

- Sarah is 7 years and 2 months old. Harry is 85 months old. Who is the oldest? Show your working.