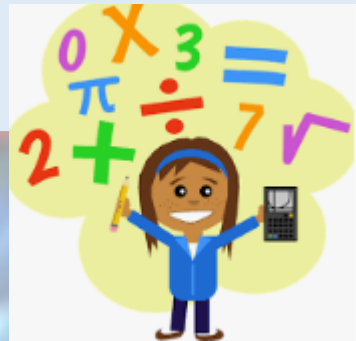




Maths Workshop

Year 4



Overview

- How can you support Maths teaching at home?
- Curriculum Expectations.
- Example questions.
- Why is it important to learn times tables?



How can you support at home?

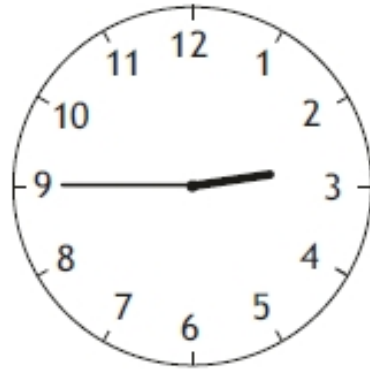
- Time
- Measure
- Money
- Times tables

Time – Curriculum Expectations

| Year | Expectation |
|------|--|
| 1 | <ul style="list-style-type: none">• tell the time to the hour and half past the hour and draw the hands on a clock face to show these times. |
| 2 | <ul style="list-style-type: none">• 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. |
| 3 | <ul style="list-style-type: none">• read time with increasing accuracy to the nearest minute from an analogue clock, including using Roman numerals from I to XII; record and compare time in terms of seconds, minutes and hours;• use vocabulary such as o'clock, a.m./p.m., morning, afternoon, noon and midnight• know the number of seconds in a minute and the number of days in each month, year and leap year• compare durations of events [for example to calculate the time taken by particular events or tasks]. |
| 4 | <ul style="list-style-type: none">• read, write and convert time between analogue and digital 12- and 24-hour clocks• solve problems involving converting from hours to minutes; minutes to seconds; years to months; weeks to days. |
| 5 | <ul style="list-style-type: none">• solve problems involving converting between units of time.• read and interpret information in timetables. |

Let's try it

A clock shows this time twice a day.



Tick the two digital clocks that show this time.

03:45

02:45

09:45

21:45

14:45

Let's try it

Jack finished a sponsored run in 53 minutes 25 seconds.

Ally finished 3 minutes 50 seconds **after** Jack.

How long did Ally take?

Layla finished the run 8 minutes 45 seconds **before** Jack.

How long did Layla take?

Measures – Curriculum Expectations

| Year | Expectation |
|------|---|
| 2 | <ul style="list-style-type: none">• choose and use standard units to estimate and measure length/height (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest unit, using rulers, scales, thermometers and measuring vessels• compare and order lengths, mass, volume/capacity |
| 3 | <ul style="list-style-type: none">• measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)• measure the perimeter of simple 2-D shapes |
| 4 | <ul style="list-style-type: none">• convert between different units of measure [for example, km to m; hour to minute]• measure and calculate the perimeter of a rectangle in cm and m |
| 5 | <ul style="list-style-type: none">• convert between different units of metric measure (km and m ; cm and m; cm and mm; g and kg; l and ml)• understand and use approximate equivalences between metric units and common imperial units such as inches, pounds and pints• calculate the area and perimeter of rectangles• use all four operations to solve problems involving measure [for example, length, mass, volume, money] using decimal notation, including scaling. |
| 6 | <ul style="list-style-type: none">• convert measurements from a smaller unit of measure to a larger unit, and vice versa, using decimal notation to up to three decimal places• solve problems involving the calculation and conversion of units of measure, using decimal notation up to three decimal places• convert between miles and kilometres |

Let's try it

Put these amounts in order starting with the largest.

- Half of 3 litres
- Quarter of 2 litres
- 300 ml

Explain your thinking.

Let's try it

Fill in the missing boxes so that the amounts are in order from smallest to greatest.

$\frac{1}{2}$ a litre

millilitres

$\frac{1}{3}$ of 2 litres

millilitres

$\frac{1}{4}$ of 3 litres

Money – Curriculum Expectations

| Year | Expectation |
|------|---|
| 1 | <ul style="list-style-type: none">• recognise and know the value of different denominations of coins and notes |
| 2 | <ul style="list-style-type: none">• recognise and use symbols for pounds (£) and pence (p); combine amounts to make a particular value• find different combinations of coins that equal the same amounts of money• solve simple problems in a practical context involving addition and subtraction of money of the same unit, including giving change |
| 3 | <ul style="list-style-type: none">• add and subtract amounts of money to give change, using both £ and p in practical contexts |
| 4 | <ul style="list-style-type: none">• estimate, compare and calculate different measures, including money in pounds and pence |
| 5 | <ul style="list-style-type: none">• use all four operations to solve problems involving money using decimal notation |

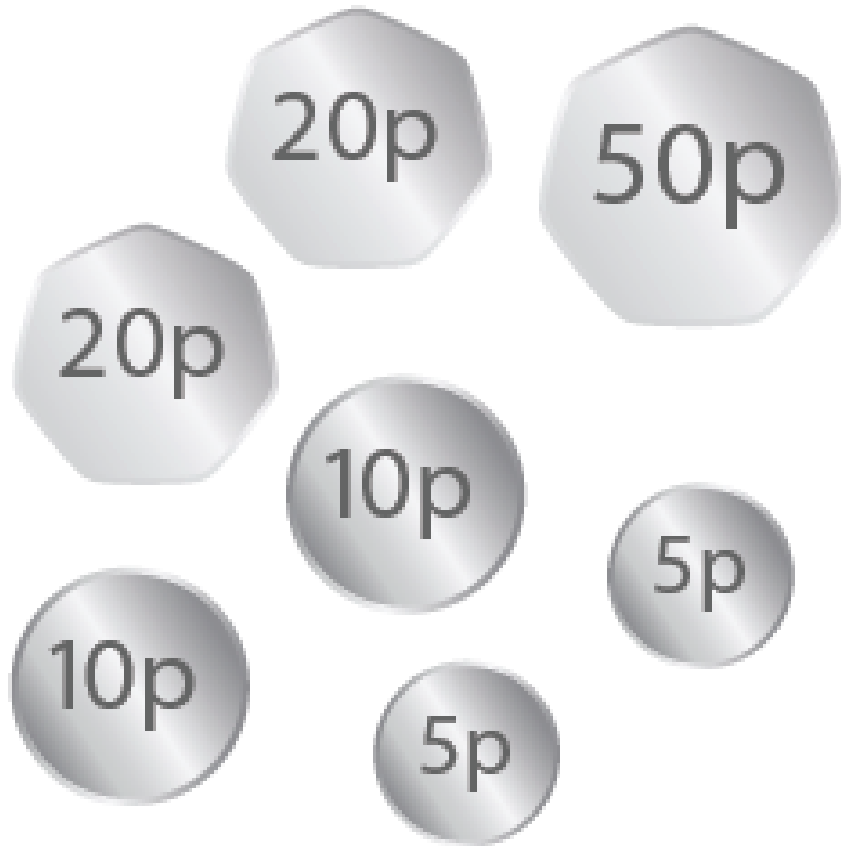
Let's try it

Which would you rather have, $3 \times 50\text{p}$ coins or $7 \times 20\text{p}$ coins?

Explain your reasoning.

Let's try it

Sid and Sam share some money. Sid gets twice as much as Sam. Tick the coins which Sid might take.



Year 4

Is there more than one way of sharing the coins?

Curriculum Expectations

| Year | Expectation | Examples |
|-------|--|---|
| 2 | 10, 5 and 2 times tables | $10 \times 4 = \square$ $28 \div 2 = \square$ $\square \div 5 = 9$ How many 2s in 24? |
| 3 | 10, 5, 2, 4, 8 and 3 times tables | $8 \times 4 = \square$ $16 \div 4 = \square$ $21 \div \square = 3$ How would you use $5 \times 3 = 15$ to work out 50×3 ? |
| 4 | 10, 5, 2, 4, 8, 3, 6, 9, 7, 11 and 12 times tables | $7 \times 6 = \square$ $54 \div 9 = \square$ $32 \div \square = 8$ $0.2 \times 8 = \square$ $320 \div 4 = \square$ |
| 5 & 6 | Application of all times table facts to 12 x 12 | $96 \div 12 = \square$ $9^2 = \square$ $9,000 \times 12,000 = \square$ $0.7 \times 0.7 = \square$ $540 \div \square = 60$ |

Starting in the academic year 2019-20 there will be an on line Times Tables Check administered for children in Year 4.

Why is it important to learn Times Tables?

Being fluent in your times tables is **essential** for success in Mathematics.

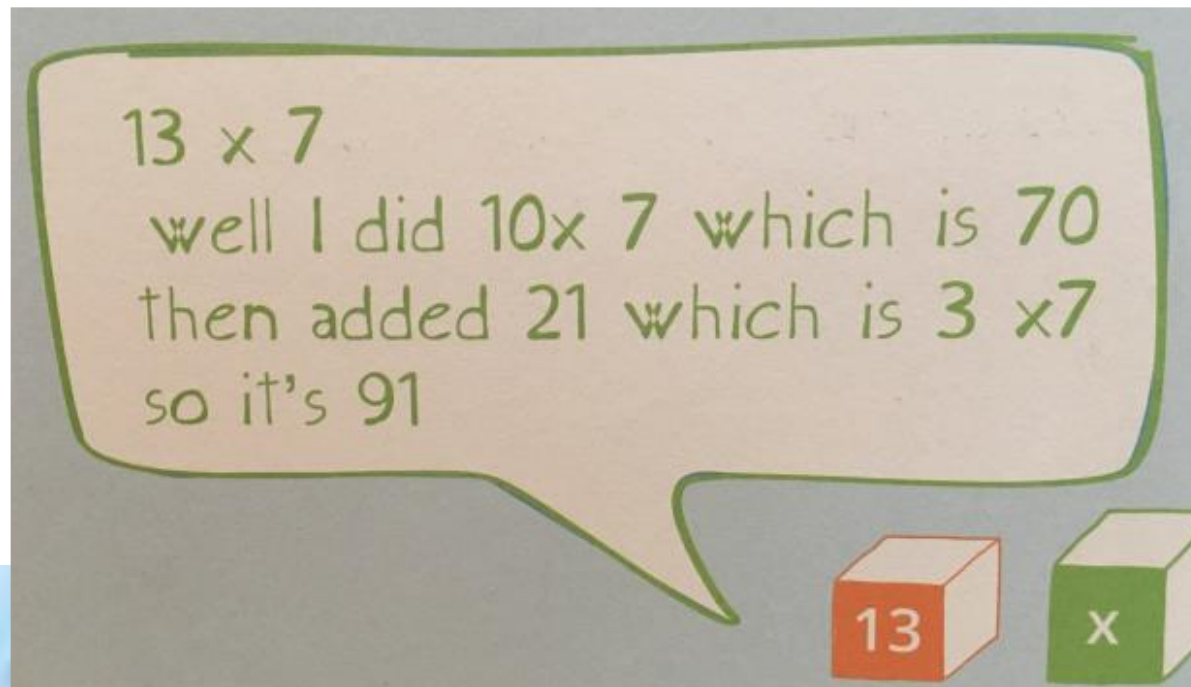
Children who can't recall their times tables struggle in all areas of mathematics, due to cognitive overload.

Why is it important to learn Times Tables?

- Instant Recall with facts is essential so the mind is free to think about concepts.
- Children need to move away from inefficient counting strategies as quickly as possible.

Why is it important to learn Times Tables?

BUT knowing your times tables is so much more than just memorisation. Children aren't just thinking "I know this fact" but "I know this fact therefore I can work out this..."



Teaching Techniques

How do we teach times tables at school?

We introduce multiplication as repeated addition using apparatus and talking about equal groups.



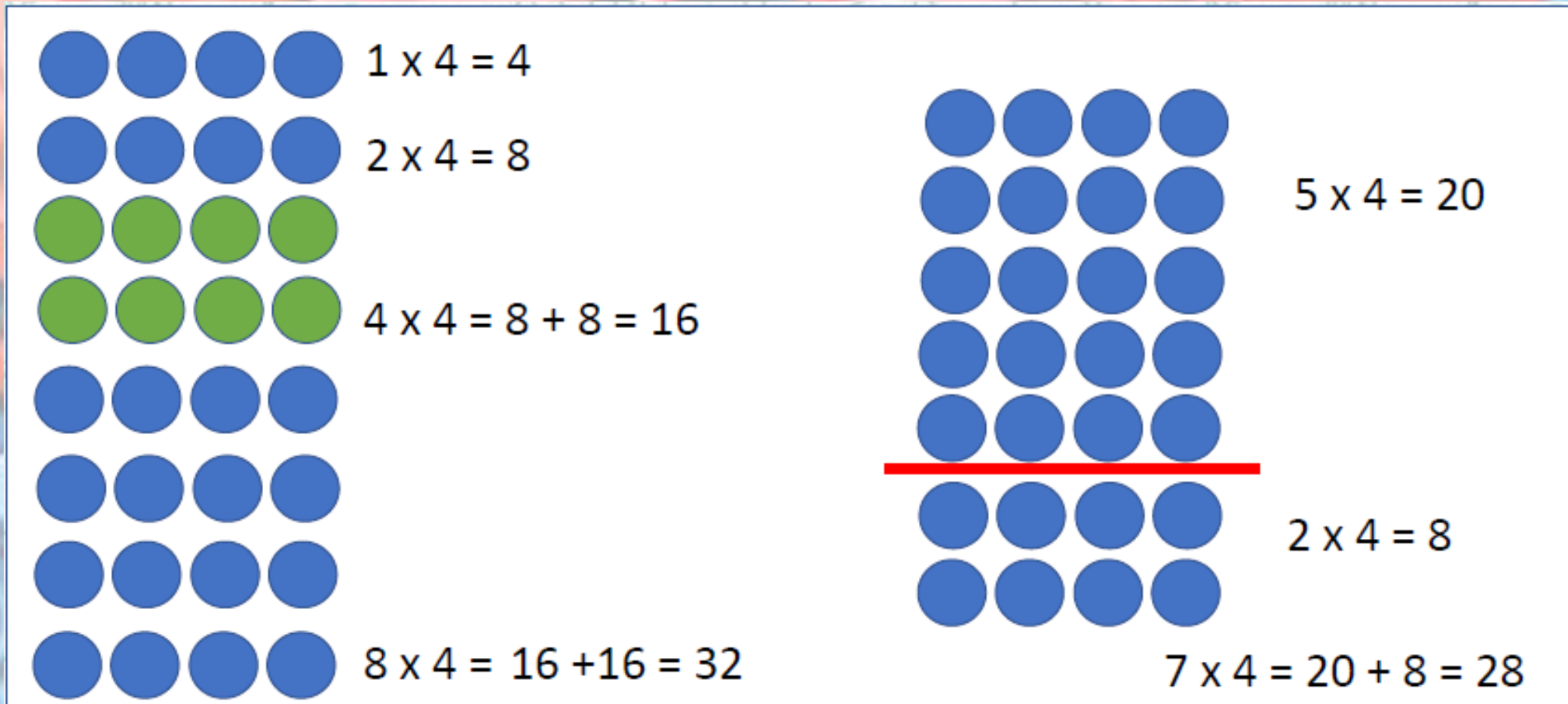
$$3 + 3 + 3 + 3 + 3 + 3 = 18$$

$$6 \times 3 = 18$$

There are 18 cubes altogether.

Teaching Techniques

Arrays are used to show the relationship between the times tables




How Can I Help at Home?

- Reinforcing the importance of times tables.
- Make it fun!
- Play games from our Times Table Games Ideas sheet.
- Having times tables displayed at home.
- Chanting singing times tables – [BBC - Supermovers - Time table songs](#) / [Mathletics – Play – Times Tables Toons](#).
- Ensuring children practise through Times Tables Rock Stars and Mathletics Multiverse.

Times Table Rock Stars

- Each week your child will be concentrating on a times table relevant to their year group.
- They will take a paper test three times a week. They are given three minutes to answer 60 questions.
- Children can practise their times tables at home daily by accessing <https://ttrockstars.com/> through a computer or app.
- Constant practice increases speed and accuracy of recall.
- Remember being fluent in your times tables is **essential** for success in Mathematics.
- Use it or lose it!



Thank you for coming.
Please complete the feedback sheet provided.