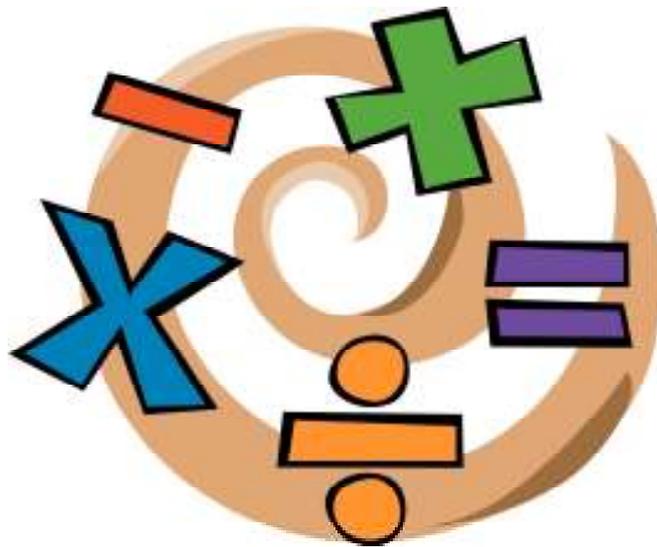


Times Tables Learning Ladder



**A booklet for parents to help
you support your child with
learning their tables.**

Dear Parents,

To try and encourage children to learn and practise their times tables, and associated division facts, we are launching a Times Table Learning Ladder that will run throughout the school. This is a challenge that will give children an opportunity to achieve awards linked to their recall of particular times tables, whilst improving their mental maths skills. Each child will start on a particular step, identified by their teacher. The steps are as follows:

Step 1: 2, 5 and 10 times tables

Step 2: 3 and 4 times tables

Step 3: 6 and 9 times table

Step 4: 7 and 8 times tables

Each step of the learning ladder is made up of three different awards for children to achieve These are:

Bronze: I can quickly recall multiplication facts

Silver: I can quickly recall multiplication and division facts

Gold: I can apply multiplication and division facts to help solve problems

E.g. If your child is Step 1, Bronze, they will be working on:
I can quickly recall the 2, 5 and 10 times tables.

Please be aware of what step and award your child is currently trying to achieve (please see step and award highlighted above.) Children will have several opportunities throughout the year to attain the award/s that they are working towards, and progress onto their next stage of the learning ladder. They can be greatly helped with this by your support at home. This booklet includes several ideas for games that you can play with your child, as well as a list of websites which provide links to a variety of games and activities that can also be used. Also within this booklet you will find examples of methods that we use at school to solve multiplication and division calculations.

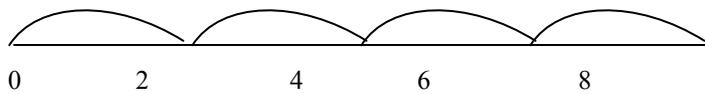
Thanks for your support with this

Miss H Arthur (Maths Manager)

Multiplication Strategies

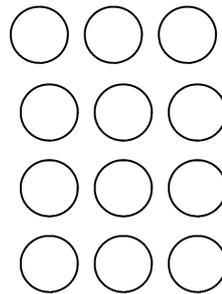
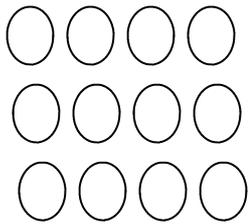
Multiplication is first introduced as repeated addition which can be shown as a number line

$$2 + 2 + 2 + 2 = 8 \quad \text{or} \quad 4 \text{ lots of } 2 \quad \text{or} \quad 4 \times 2 = 8$$



Multiplication is also described as an array

$$3 \times 4 = 3 \text{ lots of } 4 \quad \text{or} \quad 4 \times 3 = 4 \text{ lots of } 3$$



When applying multiplication facts to calculations involving larger numbers partitioning can be used.

$$\begin{array}{r} 13 \times 7 \\ \swarrow \searrow \\ 10 \quad 3 \end{array} \times 7 \quad \text{so} \quad \begin{array}{l} 10 \times 7 = 70 \\ 3 \times 7 = \underline{21} + \\ 91 \end{array}$$

Grid Method

346×9

x	300	40	6
9	2700	360	54

$2700 + 360 = 3060$

$3060 + 54 = 3114$

Long Multiplication

This can be extended to

456×5

456×5

$$\begin{array}{r} 456 \\ \times 5 \\ \hline 30 \text{ (6 x 5)} \\ 250 \text{ (50 x 5)} \\ \underline{2000} \text{ (400 x 5)} \end{array}$$

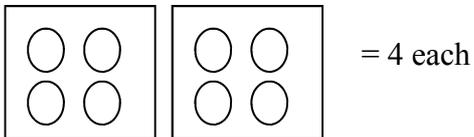
$$\begin{array}{r} 456 \\ \times 5 \\ \hline \underline{2280} \\ \underline{3} \end{array}$$

Division Strategies

Division is first introduced as sharing or grouping

$8 \div 2 =$

Sharing (i.e. one for you and one for you)

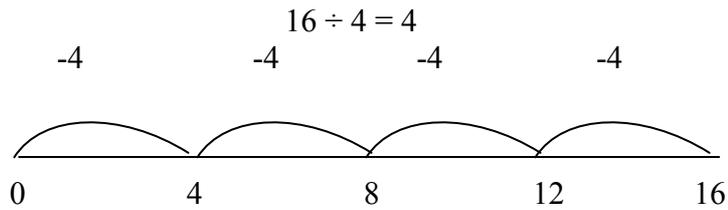


Grouping Method (How many groups of two equal eight)

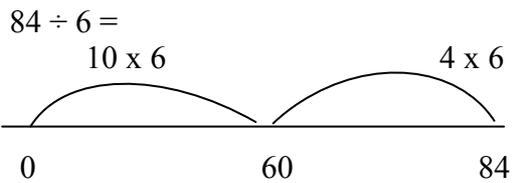
= 4 groups of 2



Using a number line to show (repeated subtraction) grouping



This can be extended into the chunking method, where we can move in bigger groups



$$84 \div 6 = \begin{array}{l} 10 \times 6 = 60 \\ 4 \times 6 = \underline{24} \\ 14 \times 6 = 84 \end{array} \qquad \text{Therefore } 84 \div 6 = 14$$

Long Division

$$356 \div 6$$

$$\begin{array}{r} 6 \overline{) 356} \\ \underline{300} \quad (50 \times 6) \\ 56 \\ \underline{54} \quad (9 \times 6) \\ 2 \end{array}$$

Therefore $356 \div 6 = 59$ remainder 2

Fun activities to do at home

Encourage your children to practise their tables and develop their speed of recall. Say them forwards and backwards. Ask your child questions like:

What are five threes? What is 15 divided by 5?

Seven multiplied by three? How many threes in 21?

Here are some games you can also play

Bingo

One person has one of the target tables (e.g. 2 x table) and the other has another (5 x table). Write six numbers in that table on a piece of paper, for example *4 8 10*
16 18 20

- Roll one or two dice. If you roll two dice, add the numbers together.
- Multiply that number by your table number (in this case 2 or 5)
- If the answer is on your paper, cross it out.

The first to cross out all six of their number wins

Super Fingers

Play this game with a partner. It is similar to rock, paper, scissors but instead each person puts a number of fingers out, for example one person might put out three fingers, the other seven. The first person to say the answer to 3 x 7 gets a point.

Playing Cards

Share the playing cards out between two people. Each person puts a card down. The first person to work out what those two numbers multiplied together are gets to keep the cards

Websites

- http://www.multiplication.com/interactive_games.htm
- <http://www.woodlands-junior.kent.sch.uk/maths/timestable/interactive.htm>
- <http://www.bbc.co.uk/skillswise/numbers/wholenumbers/multiplication/timestables/game.shtml>
- <http://www.primarygames.co.uk/>
 - Multiplication grids
 - Balloon Bingo
- <http://www.mathszone.co.uk/>
 - Select Number facts \times / \div from menu
- <http://www.sgfl.org.uk/games/games/maths/multiplicationstation>
- <http://www.oswego.org/ocsd-web/games/Mathmagician/mathsmulti.html>

