

Multiplication Workshop

Year 3 and Year 4

9.1.20

What will my child learn?

KS1

- Count in steps of 2, 3, 5 and 10
- Know multiplication and division facts for 2, 5 and 10

Year 3

- Count in steps of 4, 8, 50 and 100
- Know multiplication and division facts for 3, 4 and 8
- Multiply a two-digit number by a one-digit number

Year 4

- Count in steps of 6, 7, 9, 25 and 1000
- Know multiplication and division facts up to 12×12
- Multiply two- and three-digit numbers using formal written layout

What will my child learn?

- Counting in steps of a number.
- Understanding and finding answers to multiplication questions.
- Recalling multiplication facts.

It is important that children are able to do all of these things.



Understanding problems: Year 3

Is it true that a two-digit number multiplied by a one-digit number gives a two-digit answer?

Is it true that 8×8 gives the same answer as two lots of 4×8 ?



Understanding problems: Year 3

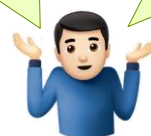


- Sally has some jumpers and pairs of trousers.
- She can make 12 different outfits.
- How many jumpers could she have and how many pairs of trousers could she have?

Understanding problems: Year 4

Is it true that if you multiply a three-digit number by 7, the answer will be odd?

Is it true that the greater the number, the more factors it will have?



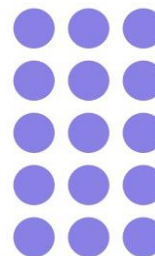
Understanding problems: Year 4



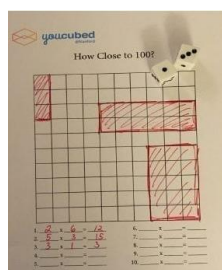
- Ellie and Eddie were having a reading competition.
- In one month, Eddie read 814 pages.
- Ellie read 4 times as many pages as Eddie.
- How many pages did they read altogether?
- How many fewer pages did Eddie read?

Arrays

- Arrangement of dots in rows and columns
- Visual
- Links practical and pictorial
- Aids understanding
- Enables pupils to practise counting in steps
- Shows connections between facts



Playing games with arrays



How Close To 100?

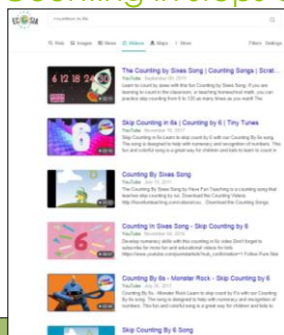
- Print out game boards from the YouCubed website (or just use squared paper!)
- Roll two dice to create multiplication questions.
- Colour the arrays on the paper and fill in as many squares as you can, to see how close you can get to 100.
- Can play together as a team or against each other on separate grids.
- Stick stickers over the numbers to create bigger calculations if required.

Counting in steps of a number



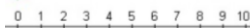
- Make cards from paper or card and write multiples of the number you are focusing on.
- Muddle them up and ask you child to put them in order.
- "How did you know which came first?" etc.
- "What patterns can you see?"
- Use to practise counting in steps of the number.

Counting in steps of a number



- YouTube videos: 'counting in ...'
- Songs (YouTube or ones you've made up yourself!)

Counting in steps of a number



- Use a number line to jump along in steps of the given number.
- A double number line can also be useful to start making the link to multiplication facts.

Counting in steps of a number

9 18 27 36 45
54 63 72 81 90

Talk about patterns. "What do you notice about the numbers you say when you count in 9s? Can you use this to predict which other numbers you might say if you continued counting in this way?" (Reasoning)

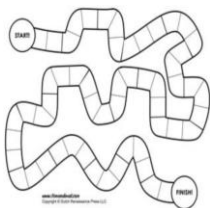
Learning facts



Matching cards

- Quick and easy to make; use the 'counting in steps' cards and make some question cards to match.
- Ask your child to match the question cards to the answer cards by counting in steps of the given number.
- Talk about each one and ask how they knew the answer.
- Ask them to draw a picture to match some of the calculations.
- Challenge them to match the cards a bit faster the next time they try.

Learning facts



Board games

- Draw a track, draw a line through the middle to make two tracks, and divide into sections.
- Take it in turns to roll a die but do not move forward until you have answered a question which has been asked by the other player.
- Move a counter or colour sections in as you move along the track.
- The first to get to the end of their track wins!

Learning facts



Maths Rockx

- App costs £9.99
- Multiplication facts are set to pop songs.
- Useful for car journeys or background music at home.

Developing Speed



Bingo

- Write eight answers for the multiplication table(s) you are focusing on.
- Use question cards and turn over one at a time.
- Whoever calls out the answer first can place it on their board if they need that number.
- You can also play in reverse, so that everyone writes the questions on their boards and the answer cards are turned over.

Developing Speed



Hit The Button

- Can be accessed for free on the internet, or the app can be downloaded for £2.99.
- Allows you to set which table(s) you want your child to practise.
- Your child has to answer as many questions as they can in one minute.
- Your child then tries to beat their own score.

Developing Speed



Answering multiplication questions

- o Cut paper into strips on one side.
- o Write a series of multiplication questions for the table your child is focusing on.
- o Ask your child to check each of their answers.
- o See if they can beat you!

Developing Speed



Maths Frame

- o Google 'maths frame multiplication tables check'
- o You can choose which table(s) you want your child to practise.
- o Your child has 6 seconds to answer each question.
- o This is a free resource which is similar in style to the multiplication check which all Year 4 children will take.

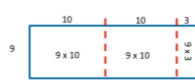
Developing Reasoning



Dotty paper

- o Google 'dotty paper' and choose the MathSphere link. (Squared paper can also be used as an alternative.)
- o Ask your child to cut out arrays to match multiplication facts.
- o "What do you notice about 4×6 and 8×3 ?"
- o "Can you find any more multiplication pairs?"
- o "Why does this happen?"
- o "How can this help you learn multiplication facts?"

Developing Written Methods



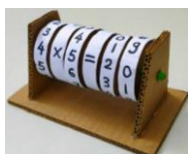
x	30	5
7	210	35

$$210 + 35 = 245$$

Using an open array

- o Year 3: Multiply a two-digit number by a one-digit number.
- o Also known as the grid method.
- o Makes a link between arrays and formal written methods.

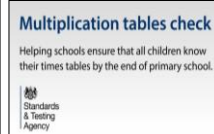
Have fun and offer encouragement



- o "You got 16 out of 20 in your test? Well done!"
- o "Let's have a look together at the ones which were wrong and think about how we can learn them together."
- o "I see the ones you found hard were 8×7 , 7×8 , 6×7 and 7×6 . What do you notice about these? What would help you to learn them?"

WHEN THE **FUN** STOPS **STOP**

Multiplication Tables Check



A new check for Year 4 children

- o The MTC is statutory for all Year 4 pupils from this year.
- o The check will take place in June, and it is up to head teachers to decide which children take it on which dates.
- o The test is very low key and will be administered in groups.
- o Access arrangements are available if your child might struggle to access the test.
- o You will be notified of your child's score at the end of the summer term.

