

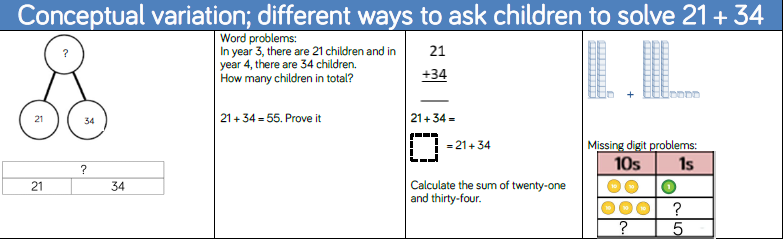
Maths Calculation Policy

2019-2020

Progression in Calculations from Year 1 to 6

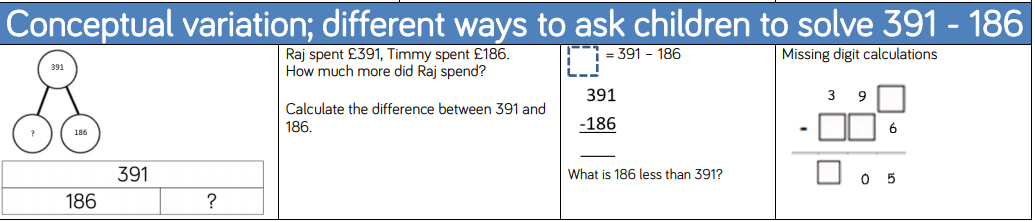
Addition: sum, total, parts and wholes, plus, add, altogether, more, exchange, ‘is equal to’ ‘is the same as’

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| Key skills and stem sentences | Concrete | Pictorial | Abstract |
| Year 1 | | | |
| Combining two parts to make a whole: part- whole model  \_\_\_\_\_\_\_\_\_\_\_\_ is a whole, \_\_\_\_\_\_\_\_\_\_\_\_\_ is a part, \_\_\_\_\_\_\_\_\_\_\_\_ is a part.  There are \_\_\_\_\_\_ in total.  First… Then… Now…  e.g. | Use cubes or other resources to add two numbers together as a group or in a bar.        8  1 | Image result for part whole model  C:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\2GUHBRQ0\Simple-Flower-Outline-12183-large[1].png  Image result for part whole model additionC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\2GUHBRQ0\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\2GUHBRQ0\Simple-Flower-Outline-12183-large[1].png  Use pictures to add two numbers together as a group or in a bar.  C:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\2GUHBRQ0\Simple-Flower-Outline-12183-large[1].png  C:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\2GUHBRQ0\Simple-Flower-Outline-12183-large[1].png | 4 + 3 = 7  10= 6 + 4  5  3  Use the part-part whole diagram as shown above to move into the abstract. |
| Starting at the bigger number and counting on  The bigger number is \_\_\_\_\_\_\_. To find the total, I need to start at the biggest number, then count **on**.  (delete words as chn become more familiar)  First… Then… Now…  E.g. **First** there were 4 children on the bus, **then** 3 children got on, **Now** there are 7 children on the bus.  (this will help with the inverse relationship and missing number) | Start with the larger number on the bead string and then count on to the smaller number 1 by 1 to find the answer.  Ten frames will also support this skill  http://farm3.static.flickr.com/2523/3874931251_6932e82614_o.jpg | 12 + 5 = 17    Start at the larger number on the number line and count on in ones or in one jump to find the answer. | 5 + 12 = 17  Place the larger number in your head and count on the smaller number to find your answer.  \_\_\_\_ more than \_\_\_\_ is \_\_\_\_.  The sum of \_\_\_ and \_\_\_\_ is\_\_\_\_.  The total of \_\_\_ and \_\_\_\_ is \_\_\_\_\_. |
| Making 10.  I need \_\_\_\_ to make ten. I have \_\_\_\_ left over. 10 + \_\_\_ is \_\_\_\_\_. | 6 + 5 = 11  Start with the bigger number and use the smaller number to make 10. | Use pictures or a number line. Regroup or partition the smaller number to make 10.    Draw the tens frame and counters | 7 + \_\_\_ = 10  10 + \_\_\_\_ = \_\_\_\_ |
| Year 2 | | | |
| Adding three single digits  (delete words as chn become more familiar)  \_\_\_\_ and \_\_\_\_ make ten. Ten add \_\_\_\_ is \_\_\_\_\_. | 4 + 7 + 6= 17  Use knowledge of number bonds to 10 and 20 to solve quickly.    Following on from making 10, make 10 with 2 of the digits (if possible) then add on the third digit, e.g. put 4 and 6 together to make 10. Add on 7. | C:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\OZODVY09\pitr-Candy-icon[1].png  Add together three groups of objects. Draw a picture to recombine the groups to make 10.  +  +  + | Combine the two numbers that make 10 and then add on the remainder.  Look for ways to make 10 and use this knowledge to solve,  e.g. 9 + 3 + 4 = 10 + 2 + 4 = 16 |
| Add a two digit number and ones  \_\_\_\_ can be partitioned into \_\_\_\_ and \_\_\_\_.  \_\_\_\_ and \_\_\_\_ make (a multiple of ten).  (Multiple of ten and \_\_\_\_\_ (remainder) makes \_\_\_\_\_\_.  e.g. 17 + 5  5 can be partitioned into 3 and 2.  17 and 3 make 20.  20 and 2 make 22. |  |  |  |
| Column method- no exchange  *Year 2 to also begin to use exchanging when ready. See next skill for breakdown.*  The\_\_\_ is in the ones column, it represents \_\_\_ one(s).  The \_\_\_ is in the tens column, it represents \_\_\_\_ ten(s) | 24 + 15=  Use base 10 blocks to represent the numbers. Add the ones together and then add the tens.  Place value counters will also aid this skill. | Draw the base 10 or counters to help them to solve additions. Sicks for tens and dots for ones.  A hundred square and number line can also support this skill. |  |
| Year 3 onwards | | | |
| Column method with exchanging  *Year 2 only to two 2 digit numbers*  *Year 3 onwards will work with larger numbers*  If the column sum is equal to ten or more, we must exchange.  We need to exchange ten ones for one ten. | Make both numbers on a place value grid.  36+25    To progress to:    Add up the ones and exhange 10 ones for one 10.    Add up the rest of the columns, exchanging the 10 counters from one column for the next place value column until every column has been added.  As children move on to decimals, money and decimals place value counters can be used to support learning. | Children can draw a pictoral representation of the base 10 or place value counters to further support their learning and understanding. | Start by partitioning the numbers before moving on to clearly showing the exchange below the addition.      Ensure that the abstract column method is shown alongside the base 10 to explictly link where the exchanging is and why.    As the children move on, introduce decimals with the same number of decimal places. Money can also be used here.  Year 5 and 6 include place holders |



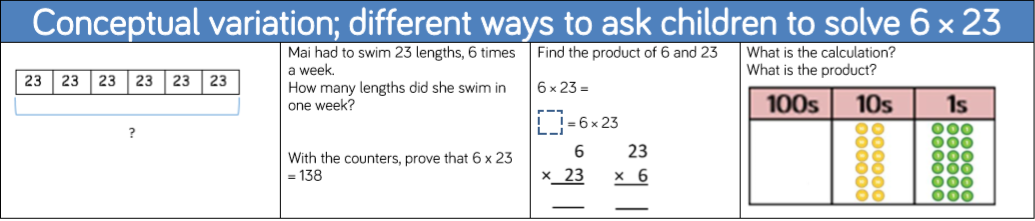
Subtraction: take away, less than, the difference, subtract, minus, fewer, decrease, exchange

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| Key skills | Concrete | Pictorial | Abstract |
| Year 1 and 2 | | | |
| Taking away ones  First… Then… Now…  e.g. **First** there were 4 children in the car, **then** 1 child got out, **Now** there are 3 children in the car. | Use physical objects, counters, cubes etc to show how objects can be taken away.  6 – 2 = 4 | Cross out drawn objects to show what has been taken away. |  |
| Counting back  *All year groups should use this approach when using number lines to support subtraction*  The whole is \_\_\_\_.  The part we are taking away is \_\_\_\_\_\_.  Start on \_\_\_\_\_\_ and count back \_\_\_\_. | Make the larger number in your subtraction. Move the beads along your bead string as you count backwards in ones.    13 – 4  Use counters and move them away from the group as you take them away counting backwards as you go.  http://3.bp.blogspot.com/-mFqQPE4k1TE/VGzRNnUu30I/AAAAAAAAAJM/12p6qvgkmoE/s1600/EvenOdd_ColoredCounters_Scattered.jpg | Count back on a number line or number track    Start at the bigger number and count back the smaller number showing the jumps on the number line.    This can progress all the way to counting back using two 2 digit numbers. | Put 13 in your head, count back 4. What number are you at? Use your fingers to help.  To progress to:  Counting back in multiples in your head, visualising the number line. |
| Make 10  To reach the next 10 I need to takeaway \_\_\_\_.  \_\_\_\_\_ can be partitioned into \_\_\_\_ and \_\_\_\_.  \_\_\_\_\_ takeaway \_\_\_\_ is 10.  10 takeaway \_\_\_\_ is \_\_\_\_\_. | 14 – 5 =  Make 14 on the ten frame. Take away the four first to make 10 and then takeaway one more so you have taken away 5. You are left with the answer of 9. | To reach the next 10 I need to takeaway 3.  7 can be partitioned into 3 and 4.  13 takeaway 3 is ten.  10 takeaway 4 is 6. | 16 – 8=  How many do we take off to reach the next 10?  How many do we have left to take off? |
| Part / Whole Model  \_\_\_\_ is the whole, \_\_\_\_ is a part and \_\_\_\_\_ is a part.  First… Then… Now… (as above) | Link to addition- use the part whole model to help explain the inverse between addition and subtraction.  If 10 is the whole and 6 is one of the parts. What is the other part?  10 - 6 = | Use a pictorial representation of objects to show the part part whole model. | 10  5  Move to using numbers within the part whole model. |
| Finding the difference  The difference is the amount between amounts. | Compare amounts and objects to find the difference.    Image result for two towers of cubes  Use cubes to build towers or make bars to find the difference  Use basic bar models with items to find the difference | Count on to find the difference.  Draw bars to find the difference between 2 numbers.  http://image.slidesharecdn.com/intro-to-sm-1220840292402057-8/95/intro-to-singapore-math-13-728.jpg?cb=1345557040 | Children progress to the understanding that to find the difference you can simply take away.  Hannah has 23 sandwiches, Helen has 15 sandwiches. Find the difference between the number of sandwiches.  23 – 15 = 8  Children to explore why 8-6 = 7-5 = 6-4 |
| Column method without exchanging  *Year 2 (not year 1)*  The bigger number is \_\_\_\_\_\_ so that goes at the top.  Take away the \_\_\_\_\_\_, then takeaway the \_\_\_\_\_\_. | Use Base 10 to make the bigger number then take the smaller number away.  Show how you partition numbers to subtract. Again make the larger number first. | Draw the Base 10 or place value counters alongside the written calculation to help to show working. | http://media.showmeapp.com/files/205114/pictures/thumbs/1100814/last_thumb1379615590.jpg  [https://encrypted-tbn3.gstatic.com/images?q=tbn:ANd9GcS1ohiHkzn0cS0nvwRP-5EyK0TDGl_A1tbsAl0XjNPBssTas4YVeQ](http://www.google.co.uk/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0CAcQjRxqFQoTCPyKt_H6h8kCFUNEFAodiFAGCA&url=http://huppiemama.com/teaching-subtraction-using-manipulatives/&bvm=bv.106923889,d.d2s&psig=AFQjCNEr_xOQu7fhwvMOMFTIen6kpdc03g&ust=1447317198959935)This will lead to a clear written column subtraction. |
| Year 3 onwards | | | |
| Column method with exchanging  *Year 2 only to two 2 digit numbers*  *Year 3 to three digit numbers.*  *Year 4 onwards will work with larger numbers*  The ones column represents \_\_\_ one (s) minus \_\_\_\_ ones (s). This is equal to \_\_\_ ones.  (repeat with tens, hundreds, etc)  We cannot have two digits in any place value column, so we need to exchange one ten for ten ones. | Use Base 10 to start with before moving on to place value counters. Start with one exchange before moving onto subtractions that exchange twice.    Make the larger number with the place value counters  Start with the ones, can I take away 8 from 4 easily? I need to exchange one of my tens for ten ones.    Now I can subtract my ones.  Now look at the tens, can I take away 8 tens easily? I need to exchange one hundred for ten tens.  Now I can take away eight tens and complete my subtraction    Show children how the concrete method links to the written method alongside your working. Cross out the numbers when exchanging and show where we write our new amount. | Draw the base 10 and ensure the children can see what is happening when the column to the left has been exchanged.  Draw the counters onto a place value grid and show what you have taken away by crossing the counters out as well as clearly showing the exchanges you make. | Children can start their formal written method by partitioning the number into clear place value columns.    Moving forward the children use a more compact method.  This will lead to an understanding of subtracting any number including decimals. |



Multiplication double, times, multiplied by, the product of, groups of, lots of, equal groups, exchange

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| Key Skills | Concrete | Pictorial | Abstract |
| Year 1 | | | |
| Doubling  Doubling is an amount twice. | Use practical activities to show how to double a number. | Draw pictures to show how to double a number. | Partition a number and then double each part before recombining it back together. |
| Counting in multiples  We are counting in multiples of \_\_\_\_ so we count every \_\_\_\_. | Count in multiples supported by concrete objects in equal groups. | Use a number line or pictures to continue support in counting in multiples. | Count in multiples of a number aloud.  Skip counting.  Write sequences with multiples of numbers.  2, 4, 6, 8, 10  5, 10, 15, 20, 25 , 30 |
| Repeated addition  There are \_\_\_\_ in each group. There are \_\_\_\_ groups. We have to add \_\_\_\_ \_\_\_\_\_ times. | Use different objects to add equal groups. |  | Write addition sentences to describe objects and pictures.  2 x 5  Abstract number line showing 3 groups of 4 |
| Year 2 | | | |
| Arrays- showing commutative multiplication  \_\_\_\_ lots of \_\_\_\_ is the same as \_\_\_\_ lots of \_\_\_\_. | http://www.australiancurriculumlessons.com.au/wp-content/uploads/2013/05/arrays-multiplication-division-lesson.jpgCreate arrays using counters/ cubes to show multiplication sentences. | Draw arrays in different rotations to find **commutative** multiplication sentences.  Link arrays to areas of rectangles.  http://mathcentral.uregina.ca/QQ/database/QQ.02.06/maro1.1.gif | Use an array to write multiplication sentences and reinforce repeated addition. |
| Using the inverse (to be taught alongside division)  \_\_\_\_ lots of \_\_\_\_ is \_\_\_\_ so \_\_\_\_ divided by \_\_\_\_ is \_\_\_\_. | See above | See above |  |
| Year 3 and Year 4 | | | |
| Partition to multiply  \_\_\_\_ can be partitioned into \_\_\_\_ and \_\_\_\_\_.  \_\_\_\_ lots of \_\_\_ ones is \_\_\_\_.  \_\_\_\_ lots of \_\_\_\_ tens is \_\_\_\_.  \_\_\_\_ ones add \_\_\_\_ tens is \_\_\_\_. | Show using base 10 or numicon (first without exchanging) |  | Children to be encouraged to show the steps they have taken. |
| Year 5 and Year 6 | | | |
| Column multiplication  We always need to start at the ones.  \_\_\_\_ ones times \_\_\_\_ ones is \_\_\_ ones.  \_\_\_\_ ones times \_\_\_\_ tens is \_\_\_\_ tens. Because we are multiplying by ten, we need to add in a zero as a place value holder.  We cannot have more than one digit in any place value column, so we need to exchange \_\_\_ ones as \_\_\_\_ ten  (and etc as needed) | Children to be supported by base 10 with smaller numbers before representing numbers using base 10.    It is important at this stage that they always multiply the ones first and note down their answer followed by the tens which they note below. | Bar modelling and number lines can support learners when solving problems with multiplication alongside the formal written methods.    C:\Users\nathan.crook\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\3IR2FLXR\photo (7).JPG*C:\Users\nathan.crook\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.Outlook\3IR2FLXR\photo (5).JPG* | Start with long multiplication, reminding the children about lining up their numbers clearly in columns.  If it helps, children can write out what they are solving next to their answer.  http://amsi.org.au/teacher_modules/B1/B1t102.png  http://ictedusrv.cumbria.ac.uk/maths/SecMaths/U1/images/pic018.gif  This moves to the more compact method.    Note where the exchanging is placed within the calculation |



Division share, group, divide, divided by, half, divisor, dividend, quotient, remainder, exchange

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| Key skills | Concrete | Pictorial | Abstract |
| Year 1 | | | |
| Sharing objects into groups  \_\_\_\_ shared equally between \_\_\_\_ is \_\_\_\_\_ | I have 10 cubes, can you share them equally in 2 groups? | Children use pictures or shapes to share quantities.  C:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].pngC:\Users\b.smith\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\C9ORAZE7\Simple-Flower-Outline-12183-large[1].png  8 ÷ 2 = 4 | Share 9 buns between three people.  9 ÷ 3 = 3 |
| Repeated subtraction  We need to divide \_\_\_\_ into groups of \_\_\_\_, so we need to take away \_\_\_\_ each time. We have \_\_\_\_ groups of \_\_\_\_. |  |  |  |
| Year 2 | | | |
| Division as grouping  \_\_\_\_ split into \_\_\_ groups means there would be \_\_\_\_ in each group. | Divide quantities into equal groups.  Use cubes, counters, objects or place value counters to aid understanding. | Use a number line to show jumps in groups. The number of jumps equals the number of groups.    http://gcamath3.weebly.com/uploads/9/1/4/0/9140392/200455_orig.jpgThink of the bar as a whole. Split it into the number of groups you are dividing by and work out how many would be within each group. | 28 ÷ 7 = 4  Divide 28 into 7 groups. How many are in each group? |
| Division within arrays | Link division to multiplication by creating an array and thinking about the number sentences that can be created.  Eg 15 ÷ 3 = 5 5 x 3 = 15  15 ÷ 5 = 3 3 x 5 = 15 | Draw an array and use lines to split the array into groups to make multiplication and division sentences. | Find the inverse of multiplication and division sentences by creating four linking number sentences.  7 x 4 = 28  4 x 7 = 28  28 ÷ 7 = 4  28 ÷ 4 = 7 |
| Division with a remainder  A remainder is what is left over after splitting into equal groups.  \_\_\_\_ divided by \_\_\_ gives \_\_\_\_ equal groups, with \_\_\_\_\_ remaining. | 14 ÷ 3 =  Divide objects between groups and see how much is left over  Image result for counters    Cuisenaire over a ruler can also be used. | Jump forward in equal jumps on a number line then see how many more you need to jump to find a remainder.  Draw dots and group them to divide an amount and clearly show a remainder. | Complete written divisions and show the remainder using r.  29 ÷ 8 = 3 r 5  http://amsi.org.au/teacher_modules/G7/G7_qt2%202.png |
| Year 3 onwards | | | |
| Short division (no exchange)  In division, we start from the largest place value column. We start from the right.  \_\_\_ is \_\_ tens and \_\_\_ ones. \_\_\_\_ tens divided by \_\_\_\_ is \_\_\_\_. \_\_\_\_\_ ones divided by \_\_\_\_\_ is \_\_\_\_\_. \_\_\_\_ add \_\_\_\_ is \_\_\_\_\_.  e.g. 36 is 3 tens and 6 ones. 3 tens divided by 3 is one ten. 6 ones divided by 3 is 2 ones. One ten add 2 ones is 12. | Should first be shown using base 10 and shared into groups, to understand the place value.  Use place value counters to divide using the bus stop method alongside |  | 36 ÷ 3 = 12 |
| Short division (with exchange)  e.g. 42 is 4 tens and 2 ones. We can share 3 tens equally with one ten in each group but there is one ten left over. We need to exchange this ten for ten ones. Now we have twelves ones. 12 shared between 3 is 4 ones. In each group there is one ten and 4 ones. 10 add 4 is 14. | 42 ÷ 3=  Start with the biggest place value, we are sharing 40 into three groups. We can put 1 ten in each group and we have 1 ten left over.    We exchange this ten for ten ones and then share the ones equally among the groups.  We look how much is in 1 group so the answer is 14. | http://www.studyzone.org/testprep/math4/d/division2.gifStudents can continue to use drawn diagrams with dots or circles to help them divide numbers into equal groups.    Encourage them to move towards counting in multiples to divide more efficiently. | Start with division without remainders      Move onto divisions with a remainder.    Finally move into decimal places to divide the total accurately. |
| Year 6 | | | |
| Long division  Systematically go through every small step using a deliberate structure that is easy to understand which numbers are being referred to e.g. 7 hundreds, not just ‘the 7’. | http://1.bp.blogspot.com/-sKOAxHzGGDU/VLnXC_w9zuI/AAAAAAAABjA/4rSN_sdNrxI/s1600/Screen%2BShot%2B2015-01-16%2Bat%2B12.26.32%2BPM.png  Use base 10 and place value counters to secure understanding | Use partitioning to support understanding of division, e.g. 364 ÷ 14  Look for numbers which are clear multiples of the divisor,  e.g 364 = 140 + 140 + 70 + 14  Divide each multiple by the divisor  140 ÷ 14 = 10  140 ÷ 14 = 10  70 ÷ 14 = 5  14 ÷ 14 = 1  Combine the answers together to find the total.  364 ÷ 14 = 10 + 10 + 5 + 1 = 26 | http://cdn.ttgtmedia.com/rms/computerweekly/41431_pa.gifWrite out the divisors times table and use these facts to help.  1 x 45 = 45  2 x 45 = 90  3 x 45 = 135  4 x 45 = 180  5 x 45 = 225  6 x 45 = 270  7 x 45 = 315  8 x 45= 360  9 x 45 = 405  10 x 45 =450  Watch this simple video for a clear explanation  C:\Users\deryn.forrest.DISCOVER\Downloads\qrcode.34529296.png |

