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| **Progression in the teaching of Subtraction** | | | |
|  | **CONCRETE** | **PICTORIAL** | **ABSTRACT** |
| Subtracting by crossing out or taking away | Children can use physical objects, counters, cubes etc to show how objects can be taken away.  Children begin to use the part-part whole model to support their subtractions. | With their own drawings, children can cross out drawn objects to show what has been taken away.  Chapter4_p2[1]  Children can create their own part-part whole model to show their subtract facts. They can be drawn alongside the pictorial representation or the use of equipment.  Chapter4_p4[1]  Chapter4_p4[1]Chapter4_p2[1] | Begin to use the term number sentence and allow children to see the relationship between these and their pictorial representations.  6 - 2 = 4  7 – 2 = 5  4 – 3 = 1 |
| Subtracting by counting back | Children get cubes or counters to represent the largest number, they then remove the objects away from the group, one at a time counting back as they do so. The same can be done using a variety of equipment, including bead strings, creating bars with cubes etc.      maxresdefault[1]  Chapter7_p10[1] | Children can use a number line to start with the largest number and draw on the correct amount of jumps to count back.  Chapter4_p6[1]  Children may be able to use this method for two digit number where children can count back in larger jumps.    Chapter4_p6[1] | Chapter7_p10[1]Children recognise the need to start with the largest number and are able to count back in their head using the appropriate jumps.  57 – 23 = 34  8 – 3 = 5 |
| Part part whole | 10  If 10 is the whole and 6 is one of the parts. What is the other part?      Children make links with addition and the part part whole model. With the support of a part part whole mat they arrange their equipment to help find the missing part. | Chapter7_p17[1]Children can draw their own part-part whole models to support their subtractions. They make the connections to addition and can create the different facts that they show. They draw pictures and numbers alongside it. | Children have moved from drawing the pictures in the part part whole model to be able to use soley numbers. They are beginning to think flexibly about how to partition the numbers in support their subtractions.  They can write the number sentences and know the fact families the part part whole model shows.  Chapter4_p12[1] |
| Finding the difference | Children create two models to compare them to find the difference between them. How these are arranged is important to allow children to see where the difference can be found.  They could build towers of cubes and compare these. | Children can make a bar model (comparative model) in order to represent difference questions. This will support children’s ability to locate where the difference is.    NSPM_UK_3A_Chapter2_HIRES_V2_p60[1]They could also draw a number lines in order to count between the numbers in order to find the difference. They recognise what the amount of jumps mean. | Children are able to solve problems such as  Simon has 12 pencils, Lulu has 43 pencils, find the difference between the number of pencils?  They can use the bar model of visual representation of finding the difference and explain this. |
| Making 10 | Children begin to use their number bond to ten skills in order to partition numbers usefully to help with their subtraction.  They are able to use tens frames to support them to make ten.  Chapter7_p14[1] | Children are able to draw their own models of how they have partitioned a number to support their subtractions. Using this drawing, they can explain how they have chosen to partition the number and think about why this way was efficient. They write the number sentences alongside their drawings.  Chapter7_p15[1] | Chapter7_p14[1]Chapter7_p14[1]Children can write their own number sentences showing there partitioning and subtracting from ten first. They can use the support of the part part whole model. |
| Column subtraction – no renaming | It is important that children are secure with place value and recognise how to partition the number. Children start by using the base 10 and place value counters to set out the column method. They understand the largest numbers goes on the top. Children can physically move the equipment and remove the bottom number from the top, knowing to start with the ones.  After using the equipment, they can create their own drawing of the column method, before using solely numbers. They see the written method alongside their equipment and own representation in order to see the links between the two.  MNP_UK_4A_2_HiRes_V2_p25[1] | | Children recognise how to line up the digits and to always start adding in the column furthest right. They understand that the biggest number goes on top and to subtract in columns.  They are able to explain this method to somebody else. As they become more fluent they are able to correct errors and find missing numbers in calculations.  They progress to using this method with decimal numbers.  MNP_UK_4A_2_HiRes_V2_p25[1] |
| Column subtraction with renaming | Children use the base 10 and the place value counters to create the column method. They recognise the largest number needs to go on top and they can make this when with the equipment. They know when the digit on top is smaller, they must exchange with the next column (for example exchange one ten and rename them as 10 ones). They are able to use the equipment to show this and then crossing out or removing the number from below.  After using the equipment, they can create their own drawing of the column method, before using solely numbers. They see the written method alongside their equipment and own representation in order to see the links between the two | | Children are able to use column subtraction and can show when renaming has taken place. They understand the need to show this and can confidently explain their written method.  As they become more fluent, they are able to correct errors and find missing numbers in calculations.  They progress to using this method with decimal numbers.  MNP_UK_4A_2_HiRes_V2_p27[1]  MNP_UK_4A_2_HiRes_V2_p27[1] |