Counting, partitioning and calculating

| Activity name | Learning objectives | Managing the homework |
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| A1 |  |  |
| Investigating place value <br> Re-order two, three or four given digits to make as many different numbers as possible. | Explain what each digit represents in whole numbers, and partition and order these numbers | Before: Ask the children to remind you of the strategies used in class to find the greatest and smallest numbers. <br> After: Share results. Is the outcome the same with different digits? |
| Aim high <br> A place value game using five $0-9$ cards to make the highest number. | Explain what each digit represents in whole numbers, and partition and order these numbers | Before: Discuss the place value choices children face when they pick a high or low digit early in the game. <br> After: Invite the children to describe their strategies. Ask what difficult decisions they had to make (for example, a middle-sized number early on). |
| The differences game <br> Subtract by counting on aloud, either mentally or using a number line. | Extend mental methods for whole-number calculations, for example to subtract one nearmultiple of 1000 from another (for example, 6070-4097) | Before: Remind the children about counting on in 'jumps' to round up to the next 10, 100 and so on. <br> After: Ask the children to explain how they calculated. Can they suggest a rule to help someone else? |
| Take it away! <br> Practise the vertical subtraction methods used in class - the expanded or compact methods - with some calculations. | Use efficient written methods to subtract whole numbers | Before: Remind the children to use the method that they have been working on in class and not to be tempted to try somebody else's 'easier' method. <br> After: Ask individuals to demonstrate the method(s) they prefer. Troubleshoot any difficulties. |
| A2 |  |  |
| Number chains <br> Spot the pattern and complete the number sequence. | Count from any given number in whole-number and decimal steps, extending beyond zero when counting backwards | Before: Do some examples of these types of number patterns together. Discuss some strategies and things to look for. <br> After: Hear some examples and invite the children to challenge each other with their own examples. Ask them to explain the 'key' or 'rule' to their patterns. |
| Where is the hottest place? <br> Use < and > to order temperatures and write statements about them. | Explain what each digit represents in whole numbers and order these numbers | Before: Ask the children to remind you of the meanings of the < and > symbols. <br> After: Link to geography. Ask: Where would you go to ski? Where would you go to get a suntan? Encourage the children to use an atlas to find the locations of the places listed on the worksheet. |
| Number search <br> Find lines of four numbers that can be rounded to the same whole 10 or 100. | Explain what each digit represents in whole numbers and round and order these numbers | Before: Ask the children to remind you of the rule that they created to assist them with rounding numbers. <br> After: Invite the children to share their results. |
| Colour, add and win <br> Complete addition and subtraction calculations in order to colour the flowers. | Use knowledge of place value and addition and subtraction of two-digit numbers to derive sums and differences | Before: Establish the playing rules and demonstrate using the example on the sheet. <br> After: Children swap sheets with a partner and check the calculations. |

