Written subtraction (3)

National Curriculum attainment targets

- Subtract whole numbers with more than four digits, including using the formal written methods (columnar subtraction)
- Use rounding to check answers to calculations and determine, in the context of a problem, levels of accuracy

Lesson objectives

- Subtract whole numbers with five and six digits using the formal written method (decomposition)
- Use rounding to check answers to calculations

Previous related lessons

Unit 5, Week 1, Lesson 2; Unit 5, Week 1, Lesson 3

Prerequisites for learning

Pupils need to:

- use the formal written method with four-digit numbers

Vocabulary

column subtraction, place value, rounding

Future related lesson

Unit 11, Week 1, Lesson 2

Success criteria

Pupils can:

- write out the calculation correctly
- subtract each column
- change the columns when needed

Throughout the lesson, ensure that the digits are referred to by their place value not just as a one-digit number. So in 15 728, the digit 7 must be referred to as 700.

Read each calculation before working it out to ensure that children are aware of the whole number not just focusing on columns.

Getting Started

- Choose an activity from Number – Addition and Subtraction.
- Choose a game or activity from *Fluency in Number Facts:* Y5/Y6 – Addition and subtraction.

Teach

Collins Connect
Year 5, Unit 9, Week 2

Resources

mini whiteboard, pen and eraser (per child)

- Display: Slide 1.
- Say: **Work out the calculation using the formal written method.**
- Watch the children's working out and notice any steps that they are unsure of.
- Work through the calculation as a class, asking different pairs to explain what needs to be done next and why. Focus on any aspects you have noticed the class found tricky.
- Say: **Now let's check our answers by rounding the numbers in the calculation.**
- Ask: **What is 75 443 rounded to the nearest multiple of 100?** Write 75 400 on the board.
- Ask: **What is 27 617 rounded to the nearest multiple of 100?** Write 27 600 on the board.
- Say: **Work out 75 400 subtract 27 600 and use the answer to check your calculation.**
- Display: Slide 2. Say: **Remember to work neatly so you can see when you need to change any of the columns.**
- Say: **Work out this calculation together, and then use rounding to check your answer.**
- Watch the children's working out and notice any steps that children are unsure of.
- Work through the calculation with the class, asking different children to explain what needs to be done next and why.
- Display: Slide 3.
- Say: **Work out this calculation, and then use rounding to check. You need to work very carefully or your working out will not be clear.**
- Ask a child to feedback their working out, the rest of the class can check the working out is correct.
- Ask another child to talk through their rounding calculation.

- Write on the board: 463 392 – 82 715.
- Ask: **How can you use the formal written method to subtract this five-digit number from the six-digit number?**
- Ask a pair to share their working. Check the rest of the class agree.
- Establish that digits with the same place value must be written out underneath each other.
- Write on the board: 528 377 – 9198.
- Say: **Work out this subtraction calculation.**

Individualised Learning

Refer to Activities 2 and 3 from the Learning activities on pages 362 to 363.

Pupil Book 5C: – Page 16: Written subtraction (3)
Progress Guide 5: – Support, Year 5, Unit 9, Week 2, Lesson 3: More written subtraction

Plenary

Resources

mini whiteboard, pen and eraser (per pair)

- Write 400 006 – 299 999 on the board.
- Ask: **What do you think is the best way to work out this calculation?**
- Ask some pairs to share their ideas. Establish that as both numbers can be easily rounded, a mental method would be very efficient for this calculation.
- Say: **Work out the answer and be ready to explain how you did it.**
- Ask a pair to share their strategy, then ask which other pairs used the same one.
- If any pairs have used a different method, ask them to explain it.
- Say: **Write down a similar calculation that would be better subtracted mentally than using the written method.**
- Ask some pairs to share their calculation with the class. The rest of the class should work it out mentally.

Homework Guide 5
Year 5, Unit 9, Week 2, Lesson 3: Written addition and subtraction

Overcoming Barriers

- If children are making mistakes with the formal written method, it indicates they do not have a secure understanding of why the method works. Children who do understand the method can apply it to any numbers. Stay with three-digit numbers and show the subtracting of each column separately alongside the formal written method so children can clearly see the place value of each answer, e.g. 500 – 200.