

Spotlight 5: a learning check

Has insecure understanding of the structure of the number system, resulting in addition and subtraction errors and difficulty with estimating

Opportunity for: explaining and discussing

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Calculator zapping

Time 5–15 minutes

Resources

- Calculator each
- At least two children, or the whole class

Check: does the child use key vocabulary?

digit	ones/tens/hundreds	order
larger/largest	/thousands	before
smaller/smallest	column	after
more than	estimate	rounding to the nearest
less than	guess	ten/hundred
units	nearer/nearest	

Teaching activity

‘This game, **Calculator zapping**, will help you with understanding place value, and that will improve your estimating and your calculating.’

Each child needs a calculator.

How to play

1. Tell the children which number to key in, for example, ‘four hundred and fifty-nine’:

459

(Make sure everyone has it entered correctly.)

2. Now give an instruction to ‘zap’ a digit in one move. (One move is one operations key, one number and the equals key. See Spotlight 2.)

For example, if you wanted to zap the five in 459 you have to enter -50 (not -5).

So ask the children:

? How could you get rid of the five in one move with one subtraction?

Many children at this point will key in -5 , so you need to clarify why that doesn’t work.

3. Repeat with different numbers.

Variations

- Children can choose their own three-digit numbers and use the rule that they must zap the digits in descending order. So in the number 456, they must get rid of the 6 first.
- Zap digits in ascending order.
- Children play in pairs, one child challenging another. Let them explore large numbers!

Learning outcomes

By the end of this set of activities children should be able to:

- tackle related learning tasks with increased motivation and confidence;
- use and understand connected mathematical vocabulary;
- understand the structure of our Base 10 number system;
- understand how the magnitude of the digits changes depending on where the digit is placed;
- understand the role of zero as a place holder;
- understand and use columns, reading numbers appropriately;
- order and round amounts of money;
- add and subtract with money amounts;
- start to make estimates.