

Spotlight 5: a learning check

Continues to subtract twos when calculating twenty divided by two without using knowledge that two multiplied by five equals ten

Opportunity for: discussing and explaining

Chunking chase

Time 10–20 minutes

Resources

- At least two players
- Large folders or books
- Egg-timer or stopwatch
- Rewards

Check: does the child use key vocabulary?

- | | |
|-------------|------------------------|
| steps back | chunks |
| hops back | same amount altogether |
| take away | divided by |
| bigger hops | |

Teaching activity

This game, **Chunking chase**, can be played with children cooperating in pairs racing another pair. Children can hide what they are doing behind a big book propped open on the table.

You can vary the numbers as children get more confident, starting with numbers that fit with taking a first large chunk of ten times the step size and leave no remainder, for example:

$$36 \div 3 \quad \text{or} \quad 48 \div 4 \quad \text{or} \quad 70 \div 5$$

Children can move on to numbers where they might need to take more than one step of ten times the step size, for example:

$$54 \div 2 \quad \text{or} \quad 78 \div 3 \quad \text{or} \quad 92 \div 4$$

Then they can move on to numbers that have a remainder, for example:

$$71 \div 2 \quad \text{or} \quad 83 \div 4 \quad \text{or} \quad 55 \div 2 \quad \text{or} \quad 87 \div 5$$

You can put the division calculations that you want the children to use in a bag, or just give them one calculation at a time for a 5-minute lesson.

How to play

1. Players write down the division calculation.
2. The egg-timer will then be started and the players try to work out the calculation by chunking the numbers so that they can do it quickly.
3. The players record the division as a vertical calculation going down the page or as number line hops.
4. Every player or pair that works it out before the egg-timer runs out will win ten rewards.
5. Then players compare their methods and answers.
6. Players who have worked out the calculation correctly will win a further ten rewards.
7. Write down the score and keep it for next time.

? Could you have done that calculation a different way?

? Which way is best? Why?

Variations

- Play with a stopwatch and write down how many minutes it takes. Players then score that many minutes and this becomes their 'personal best time'. Next time they play the game they have to try to beat it!
- (You need to supervise this and it can take quite a long time to be ready to play.) Each player or pair makes up a division for the other player or pair. But they must know the right answer to any division they give another player! They must write this down first.

Learning outcomes

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

- use and understand connected mathematical vocabulary;
- tackle related learning tasks with increased motivation and confidence;
- take steps back along a number line in multiples of the step size;
- record in a vertical way, subtracting multiples of the step size;
- use their knowledge of multiplication to speed up their calculating;
- understand that chunking makes calculating faster.