

Multiples of 2, 4 and 8

National Curriculum attainment target

- Count from 0 in multiples of 4 and 8

Lesson objective

- Count on and back in multiples of 2, 4 and 8

Previous related lessons

Unit 2, Week 1, Lesson 1; Unit 4, Week 1, Lesson 1;
Unit 4, Week 2, Lesson 1

Prerequisites for learning

Pupils need to:

- count in steps of 2, 4 and 8, forward and backward

Vocabulary

multiple, forward, backward, next, previous,
more, less

Future related lessons

Unit 6, Week 1, Lesson 2; Unit 6, Week 1, Lesson 3

Success criteria

Pupils can:

- recognise the multiples of 2
- recognise the multiples of 4
- recognise the multiples of 8



Getting Started

- Choose an activity from Number – Multiplication and division.
- Choose an activity from *Fluency in Number Facts: Y3/Y4* – Multiplication and division.

i Children should be able to count in multiples of two, four and eight, so this lesson will provide revision and reinforcement of these concepts.

This lesson will refer to a counting stick in 10 equal divisions. Amend accordingly for a 12 division counting stick.

Collins
Connect
Year 3, Unit 6,
Week 1

Teach

Resources

counting stick (per class); multiples of 2, 4 and 8 number cards with velcro (per class) (optional)

↓ Place the multiples of two, four and eight along the stick using the number cards with velcro.

↑ Count in multiples of two beginning at 20. Count in multiples of four, beginning at 40. Count in multiples of eight beginning at 80.

↑ Say: I make a jump, then I jump another 12. I land on 32. Who can show me on the number stick the first number I jumped to? (20) How many multiples of four did I jump each time? (five, three)

- Use a counting stick divided into 10 equal sections or, if available, a counting stick divided into 12 equal sections.
- As a class, count forward and backward using patterns of two, starting from zero.
- Name one end of the stick zero and the other end 20. Point to the first division on the stick and ask: **What number does this represent? How do you know?**
- Point to the seventh division. Ask: **What number does this represent? How do you know?** Check with the children counting in multiples of two from zero.
- Ask: **How many twos are there in 14?** (seven) **What is 14 divided by two?** (seven)
- Provide opportunities for children to discuss their answers with a partner before sharing with the class.
- Repeat for multiples of four and eight.
- Point at random divisions and ask which number each represents, the next multiple and the multiple before.
- Counting in multiples of eight, point to the division representing 64. Ask: **What would be the next number on the counting stick?** (72) **What would be the number before?** (56)
- Tell the children the size of the step and point to a mark at various positions on the stick. Ask: **What number does this represent?** Ask children to count forwards or backwards from this number to the beginning or end of the counting stick.
- Devise various scenarios involving multiples of two, four or eight, for example, using multiples of four. Say: **I start at zero, make a jump of eight, then a jump of 4. Where do I land? How many fours have I jumped? I start at zero and make five jumps of four and then three jumps of four. Where do I land? How many fours have I jumped? I make one jump then I make a jump of four. I land on 28. What was the number of my first jump?** (24)
- Provide opportunities for children to discuss their answers with a partner before sharing with the class.

Individualised Learning

Refer to Activity 1, 2, and 4 from the Learning activities on pages 242–243.

Pupil Book 3B – Page 16: Counting in steps of 2, 4 and 8
Progress Guide 3 – Extension, Year 3, Unit 6, Week 1, Lesson 1:
Counting in steps of 2, 4 and 8
Resources: coloured pencils (per child)

Plenary

Resource

counting stick (per class)



- Review work on multiples, focusing on the multiple(s) children are least secure with. Use the counting stick to demonstrate.
- For multiples of eight, start at zero and count forward and backward from zero to 80. Choose the position in the middle. Ask: **What number does this represent?** (40) **How do you know?** (40 is half of 80)
- Provide opportunities for children to discuss their answers with a partner before sharing with the class.
- Ask children to point to which end of the stick various multiples would appear, for example, 72 would be at the far right end, 16 would be at the left-hand end.
- Ask: **Would 20 appear on this counting stick? Why?** (no, because it is not a multiple of eight)
- Point to various divisions on the counting stick and ask children what number is represented.
- Count forward or backward from the number selected.



Homework Guide 3

Year 3, Unit 6, Week 1, Lesson 1:
Counting in steps of 2, 4 and 8

Overcoming Barriers

- Some children may not be able to visualise the multiples of numbers without seeing the multiple written down. Place small number cards on the counting stick and remove them gradually as children become more confident.