

Bonds of 6 and 7: parts that make the whole

CURRICULUM ALIGNMENT

NUM.OPS.2

select, make use of and represent a range of addition and subtraction strategies.

ALG.EXP.2

interpret the meaning of symbols or pictures in number sentences.

INTERACTIVES **Number Bonds · challenge, display, explore**

WHAT THIS LESSON TEACHES

A number bond shows a whole split into two parts. Bonds of 6 always keep 6 as the whole; bonds of 7 always keep 7 as the whole.

→ 5 and 1 are parts of 6

→ 4 and 3 are parts of 7

MODEL THIS ON THE BOARD

FINDING THE MISSING PART OF 6

- ① The whole is 6.
- ② One part is 2.
- ③ Find the missing part: 6 take away 2 leaves 4.
- ④ Check the bond: $2 + 4 = 6$.

LESSON ARC

Open by flashing six counters, then hiding them split between two closed hands — take three quick pair guesses without revealing. On the IWB, walk number-bond diagrams for 6 ($5+1$, $4+2$, $3+3$) and 7 ($5+2$, $4+3$), pointing at the whole first every time. Pupils take turns building bonds of 6 at the board, then draw $3+3$ for 6 and $4+3$ for 7 in copybooks. Class Challenge finds missing parts for 6 and 7; maths-talk lands on ‘the whole stays put while the parts change’.

TEACHING MOVES

1. **Getting Started.** Show six counters briefly, then hide a split across two closed hands. Take only three quick pair guesses — do not open your hands yet. Keep the tone curious: ‘what could be hiding?’ rather than a race to the right answer.
2. **Watch and Notice.** On each bond diagram, point to the whole first, then the two parts. After 5 and 1, 4 and 2, then 3 and 3, ask ‘what is the same in every picture?’ Move to bonds of 7 the same way. Revoice: the whole stays put while the parts are different. If a pupil thinks a bigger part means a bigger whole, hold two bonds of 6 side by side.
3. **Try It Together.** Keep the whole locked on 6. Invite three pupils up in turn for pairs such as 5 and 1, 4 and 2, then 3 and 3. Before each check, the class adds the parts aloud. If anyone changes the top circle when a part changes, pause and point straight back to the whole.
4. **Draw two bonds in your copy.** Sketch one empty bond on the board first — one circle on top, two below — then set pupils to draw whole 6 with parts 3 and 3, and whole 7 with parts 4 and 3. Walk the row checking the whole sits on top and both parts are filled; this is practice, not marking.
5. **Class Challenge.** Keep the board work brisk: four challenges in order (missing part when 4 makes 6; when 2 makes 6; when 5 makes 7; when 3 makes 7). Before each Check ask ‘which part is missing, and how do you know?’ If a pupil counts from one every time, nudge them to start from the known part and count on.

6. What Did We Notice?. Ask what stayed the same and what changed across the bonds. Listen for ‘the whole stayed 6 or 7’ and ‘the parts were different’. Revoice: when one part is bigger, the other is smaller, and the whole stays put. Point back at the top circle if anyone treats a new pair as a new whole.

COMMON MISCONCEPTIONS

⚠ A pupil sees parts 5 and 1, then 4 and 2, and says the second bond is a smaller whole because 4 is smaller than 5.

Hold both bonds of 6 side by side on the IWB. Point at the top circle on each: ‘same whole — six both times. The parts swapped sizes; the whole did not move.’

⚠ When a pupil changes one part on the board, they also change the top number — as if a new pair needs a new whole.

Stop and put your finger on the top circle. ‘The whole stays six. Only the parts below can change.’ Rebuild the pair under the same top number.

⚠ Asked for the missing part when one part is 4 and the whole is 6, a pupil counts 1, 2, 3, 4, 5, 6 from the start instead of using the known 4.

Prompt: ‘you already have four — count on from four to reach six.’ Gesture the hop $4 \rightarrow 5 \rightarrow 6$ so they see the missing part is 2.

DIFFERENTIATION

EMERGING

- Stay on bonds of 6 only at the board; leave bonds of 7 for teacher-supported turns later.
- Sketch the empty bond frame (one top circle, two below) on their copybook page so they only fill the three numbers.

DEVELOPING

- After the two copybook bonds, ask them to list every pair that makes 6 before moving on.
- On a Class Challenge miss, ask ‘how did you know?’ and wait for ‘I counted on from the part I could see’.

PROFICIENT

- After the Class Challenge set, ask: if one part of 7 goes up by 1, what must the other part do — and why does the whole still stay 7?
- Send fast finishers into the Student Activity Book page while the class finishes the last board turn.

✂ **Cross-curricular:** Tie to PE — split a group of 6, then 7, into two teams and call out each bond pair before the race.

ANSWER KEY

Your turn · Write the missing part. A) 2 B) 3 C) 2

Is it right? · 3 and 4 make 7. **tick** · 5 and 2 make 6. **cross**

Star challenge · Write the missing part. 6

EXTENSION SHEET · STRETCH ANSWERS

S1: 4

S3: 5

S2: any two of $0 + 6$, $1 + 5$, $2 + 4$, $3 + 3$

S4: 7