

Bonds of 10: ten's best friends

CURRICULUM ALIGNMENT

NUM.OPS.2

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

INTERACTIVES **Ten Frame** · challenge, display, explore

WHAT THIS LESSON TEACHES

A bond of 10 is a pair of numbers that join to make exactly ten. The empty spaces on a ten-frame show each number's best friend.

→ 6 and 4 make 10, because $6 + 4 = 10$.

→ If 7 counters sit in the frame, the 3 empty spaces show that 7's friend is 3.

MODEL THIS ON THE BOARD

FINDING THE FRIEND FOR 8

- 1 A classroom ten-frame already holds 8 counters.
- 2 Count the empty spaces left in the frame: there are 2.
- 3 So 8's best friend is 2, because $8 + 2 = 10$.

LESSON ARC

Open by flashing 7 fingers for one second, then hide them — pupils name how many stayed folded and how they knew so fast. Move to the ten-frame interactive with four partly filled frames (6, 7, 8, 5 counters); point at the empty spaces and let the class name each missing friend before you write the bond. Pupils take turns filling frames in Try It Together, write two different bonds in their copybook, then run three brisk Class Challenge turns. Hand out the Ten-frames sheet for seat work and close on the empty-spaces glance.

TEACHING MOVES

1. **Getting Started.** Flash 7 fingers for about one second, then hide both hands. Give five seconds of quiet think-time before any hands go up. Take three answers and listen for anyone already using the empty-spaces idea — revoice that answer for the class.
2. **Watch and Notice.** Work the four ten-frames in order: 6, 7, 8, then 5 counters already in. For each frame, point at the empty spaces and wait for the class to name the friend before you write the bond underneath. Pause on $5 + 5$ — both parts match, so the frame is split evenly.
3. **Try It Together.** Board opens with 6 counters in. One pupil fills the empties; the class says the pair aloud before the next turn. Change the start count to 9, then 4, then 2 between turns. Rotate four pupils. Watch for one-by-one empty counting and revoice any answer that names the friend from the gap at a glance.
4. **Write two pairs in your copy.** Leave $6 + 4 = 10$ visible on the board as the written model. Pupils write two different bonds of 10 in their maths copy. Walk the room glancing at pairs — this is whole-class copybook practice, not marking.
5. **Class Challenge.** Three brisk turns: 8 in, then 5 in, then 3 in. Ask the class to name the missing friend from the empty spaces before the pupil at the board fills them. Check each answer together and move on — practice, not re-teaching.

6. **Ten-frame sheet.** Hand out the Ten-frames printable. Pupils finish each partly filled frame to ten and write the bond beside it. Circulate watching for empty-space thinking rather than one-by-one counting of gaps.
7. **What Did We Notice?** Ask whether they counted every empty space one by one or saw the friend straight away. Revoice a strong answer: the empty spaces hand you the friend without counting one by one. If a pupil only lists pairs, nudge once toward how they spotted the friend on the frame.

COMMON MISCONCEPTIONS

⚠ Pupils count the empty spaces one by one instead of seeing the gap at a glance — they treat every bond like a slow tally.

Freeze the frame mid-turn. Cover the filled counters with your hand so only the empties show, then ask 'how many friends without counting?' Revoice the first pupil who names the gap in one look.

⚠ Pupils name the filled count again as the friend (e.g. 7 counters in, they say the friend is 7) — they mirror the visible side instead of reading the empties.

Point slowly along the empty cells only and have the class whisper-count just those. Write $7 + ? = 10$ underneath and fill the question mark from the empties they just named.

⚠ Pupils write a pair that overshoots or undershoots ten (e.g. $6 + 5 = 10$) because they add on from the filled count without checking the frame is full.

Invite them back to the ten-frame interactive and fill what they said. The overflow or leftover cell shows the pair is wrong. Reset and count empties first, then write the bond.

DIFFERENTIATION

EMERGING

- Keep early turns on 8 or 9 counters already in so only one or two empties show — the friend is easier to see at a glance.
- Let them hold up the matching finger-friend beside the frame before writing the bond in the copybook.

DEVELOPING

- After two copybook bonds, ask for the pair written both ways ($6 + 4$ and $4 + 6$) and whether both still make 10.
- On the Ten-frames sheet, cover the filled counters on one frame and ask them to name the friend from empties alone.

PROFICIENT

- Once the sheet is done, ask them to list every bond of 10 from $0 + 10$ through $10 + 0$ in their copy — check none are missing.
- Pose a missing-number line on the board: $10 = 3 + \square$. They write the friend without a frame showing.

✚ **Cross-curricular:** Tie to PE — six pupils are ready for a team of ten; the class names how many friends still need to join.

ANSWER KEY

Your turn · Fill the frame. Write the missing number. A) 1 B) 6

Your turn · Write the missing part. A) 3 B) 7

Is it right? · 5 needs 5 more to make 10. **tick** · 5 needs 4 more to make 10. **cross**

Star challenge · Write the missing part. **2**

EXTENSION SHEET · STRETCH ANSWERS

S1: 3

S2: 6

S3: 2

S4: $0 + 10, 1 + 9, 2 + 8, 3 + 7, 4 + 6, 5 + 5$