

What is a fraction? part-whole review

CURRICULUM ALIGNMENT

NUM.FRC.3a compare and express in equivalent terms; and order fractions.

INTERACTIVES [Pizza Slicer](#) · challenge, display, explore

LESSON ARC

Open by sketching a round soda bread and asking why four shares must be the same size — surface 'equal parts'. On the pizza-slicer interactive, build halves, quarters, thirds and fifths one snapshot at a time, naming the denominator each cut. Add the numerator with two thirds, then pupils take turns slicing and shading at the board. They sketch three equal bars in copybook, and the maths-talk puzzle — why is one third bigger than one quarter — closes the lesson.

TEACHING MOVES

- Getting Started.** Sketch the round soda bread and take three hands-up answers, not call-outs. Listen for 'quarter' and for any 'fair' or 'same-size' answer — revoice it straight away as 'equal parts', the phrase you'll return to all lesson.
- Watch and Notice.** Cut each pizza one snapshot at a time on the interactive, using the same frame every time: 'one whole, cut into [N] equal parts — each part is one [name].' Point to the bottom number the first time you say 'denominator' so pupils see the word and its meaning together. Between reveals ask 'how many equal parts this time?' and take two answers before moving on.
- How Many Pieces Do We Shade?.** Build two thirds on the interactive and say it plainly: 'bottom number is how many equal pieces, top number is how many we colour in.' Check with one named pupil — 'for three quarters, how many pieces out of four do we shade?' — before the challenge needs the numerator.
- Try It Together.** Call one half, one quarter, one third, one fifth in turn. Before each pupil shades, ask the whole class 'how many equal parts do we need?' Seated pupils agree or correct aloud — that's their part. Watch for the pupil who shades the right count but eyeballs uneven slices, and relead 'the denominator is the number of parts'.
- Sketch the Bars in Your Copy.** Pupils draw three same-length bars and shade one half, one third, one quarter. Walk the room glancing for roughly equal bar lengths and fair splits — this is practice, not marking. Where a pupil's thirds are lopsided, prompt them to eyeball or fold the bar into three before shading.
- Class Challenge.** Run one half, one quarter, one third, two thirds at the board, checking each before moving on — keep it brisk, don't re-explain. On two thirds ask a named pupil 'how many of the three parts do we shade?' and for every target ask 'are the parts truly equal?' before pressing Check.
- What Did We Notice?.** Give the puzzle real time and take several answers. Listen for pupils reasoning from the pizza — more parts means smaller parts. Revoice a strong answer slowly: 'the bigger the bottom number, the more pieces, the smaller each piece.' Then press a second pupil to say it back in their own words.

COMMON MISCONCEPTIONS

⚠️ A pupil says one quarter is bigger than one third 'because four is more than three' — they read the denominator like a whole number.

Put a quartered pizza next to a thirds pizza on the interactive and have the pupil point to one piece of each. The whole is the same size, so more cuts make each piece smaller. Hold this back for the maths-talk puzzle, which is built for exactly this.

⚠ On the Try It Together board, a pupil shades the right number of pieces but the slices look unequal and they call it a fraction anyway.

Pause and ask the class 'are these parts truly equal?' Re-cut on the interactive so the slices are even, then restate that uneven pieces — even if you have the right count — aren't a fraction at all.

⚠ When you reach thirds or fifths, a pupil mutters that odd numbers 'don't split properly'.

Slice the pizza into three on the interactive and let the class confirm the slices are fair. Three equal parts is just as valid as two or four — the only rule is that the parts are equal.

DIFFERENTIATION

EMERGING

- Keep these pupils on halves and quarters in the copybook while the class moves to thirds and fifths — the same equal-parts idea, fewer cuts to judge.
- Pre-draw the three bars at equal length so the pupil only has to split and shade, not get the lengths right first.

DEVELOPING

- After the copybook bars, ask them to shade three quarters of a fourth bar — moving the numerator past one.
- Pose: 'which is the smaller piece, one fifth or one sixth?' and have them justify it from the cutting idea before the maths-talk.

PROFICIENT

- During the Class Challenge, narrate a harder variant aloud for a fast finisher: 'show me three fifths — how many of the five do we shade, and how do you know they're equal?'
- Ask them to explain to a younger pupil, in one sentence, why one third beats one quarter despite three being the smaller number.

➤ **Cross-curricular:** Tie to Home Economics or lunchtime sharing — pupils plan how to cut a real soda bread or traybake into equal pieces so everyone at the table gets a fair share.

ANSWER KEY

a) Equal slices only — the bottom number tells you how many.

b) The top number tells you how many to shade.

c) Check: shaded parts / total parts.

Q1: $3/11$

Q2: $5/7$

Q3: 12 parts ($4/5 = 12/15$)

Q4: 15 ($3/4 = 15/20$)