

Class-shop modeling: designed by pupils

CURRICULUM ALIGNMENT

MEA.MON.4

solve and pose practical tasks to investigate and make informed judgements about transactions and financial plans.

NUM.OPS.4

build upon, select and make use of a range of operation strategies.

INTERACTIVES (Class Budget · challenge, display, explore)

WHAT THIS LESSON TEACHES

Design a class shop by starting with a €50 float to buy all stock. Stock cost must stay at or under €50; profit is then takings minus that stock cost.

→ Float €50, stock cost €18, takings €33.60 gives profit €15.60.

→ 10% off a €2 snack makes the selling price €1.80.

MODEL THIS ON THE BOARD

PLAN ONE FOOD SHOP

- 1 Start with the €50 float for buying stock.
- 2 Choose six snacks that together cost €18 (under the float).
- 3 28 pupils each spend about €1.20 so takings reach €33.60.
- 4 Profit = $33.60 - 18 = 15.60$.

LESSON ARC

Open with the class-budget interactive showing a €50 starting float and the question of what to stock and charge. Build one shop together — six items entered against the €50 cap — and keep a side area of the board for the two numbers the interactive won't track: predicted takings ($28 \times €1.20 \approx €33.60$) and profit (takings minus stock cost). Pupils sketch their own priced shop in the copybook, then the Class Challenge works through several shops, ending on a 10% promotion twist.

TEACHING MOVES

1. **Getting Started.** Give five seconds of quiet think-time before any hands go up, then take three or four hands — not call-outs. Don't price anything yet; just gather a spread. Push the cost-versus-charge split early: 'the €50 is what we PAY for stock, not what we charge customers.'
2. **Watch and Notice.** The interactive only tracks stock against the €50 cap, so claim a clear side area of the board for takings and profit. Walk the three numbers slowly: 'this is what stock cost — this is what customers pay in — this is what's left.' Hold the class on the profit number; that gap is the whole lesson.
3. **Try It Together.** Pupils take turns at the board calling out items; the class agrees or corrects out loud. Prompt the takings estimate: 'if each of 28 of us spends about €1.20, what does the whole class spend?' Revoice a strong answer — 'so 28 lots of €1.20 is about €33.60' — and catch anyone calling a big takings figure 'profit' with 'but what did the stock cost us?'
4. **Sketch Your Price List in Your Copy.** Walk the room glancing that the three lines — starting float, predicted takings, predicted profit — sit separate, and that profit is takings minus stock cost rather than a copy of takings. No marking; this is whole-class copybook practice.
5. **Class Challenge.** Brisk practice management — pupils take turns at the board, check each answer, class confirms before moving on. For the promotion shop, model the method once: 'find one-tenth, then

subtract — 10% off €2 is €1.80, not €1.90.' Confirm each allocation lands under the stock ceiling so there's room for profit.

6. What Did We Notice?. Listen for pupils naming the stock cost as the thing that separates takings from profit. Revoice: 'so a shop can take in loads of money and still make almost no profit if the stock cost nearly as much.' Head off 'biggest takings wins' — the profit line is the real measure.

COMMON MISCONCEPTIONS

⚠ Pupils point at the takings figure — 'we made €33.60!' — and call it profit, ignoring what the stock cost to buy.

Stop and ask 'but what did the stock cost us?' On the board's side area, write the subtraction underneath the takings: $€33.60 - €18 = €15.60$. Make the two numbers physically separate so the gap is visible.

⚠ When taking 10% off a €2 item, pupils land on €1.90 — they take 10c (a tenth of the tenth) instead of one whole tenth.

Model the two-step method on the board: find one-tenth of €2 first (20c), then subtract, giving €1.80. Have a pupil say the tenth aloud before subtracting so the size of the discount is named, not guessed.

⚠ Pupils price stock at or above what they charge customers, so the shop can't make a profit and the €50 float gets eaten up.

Point at the cost-versus-charge split from the hook: the €50 is the buying price, the shelf price is higher. On the budget bar, show that the stock cost must sit well below predicted takings before there's any profit to count.

DIFFERENTIATION

EMERGING

- Pre-fill four of the six item prices in the interactive so pupils only price two and read the budget bar, rather than build the whole shop.
- For the takings estimate, drop to a round €1.00 each and 20 pupils so the multiplication stays friendly while the rest of the class works $€1.20 \times 28$.

DEVELOPING

- After the copybook sketch, ask: if you raised one item's shelf price by 20c, how much would profit change across the day? Work it on the board's side area.
- Give a missing-number twist: takings €33.60, profit €15.60 — what did the stock cost? Reverse the subtraction they just practised.

PROFICIENT

- On the promotion shop, pose: 'find the smallest number of extra items you'd need to sell at the 10%-off price to beat the full-price profit — explain how you know.' Narrate it as a harder Class Challenge variant at the board.
- Ask them to design a shop where two very different price lists give the same profit, then justify why the takings differ but the profit matches.

↗ **Cross-curricular:** Tie to Geography — link the class shop to how a local Irish village shop sets prices to cover its costs and still keep customers.

ANSWER KEY

- a) Item 1 — _____: pupils' own answer
- b) Item 2 — _____: pupils' own answer
- c) Item 3 — _____: pupils' own answer
- d) Item 4 — _____: pupils' own answer
- e) Item 5 — _____: pupils' own answer
- f) Item 6 — _____: pupils' own answer
- g) Total stock cost: (sum of left column)
- h) Predicted takings ($28 \times \text{avg}$): (avg sale $\times 28$)

i) Predicted profit = takings – stock: pupils' own answer

Q1: €25

Q2: €1.80

Q3: €11.60

a) Never : Stock cost must stay at or under the €50 starting float.

b) Always : That is exactly how profit is worked out in the class shop model.

c) Sometimes : Profit also depends on how much each shop spent on stock.

d) Sometimes : Profit is still possible if takings beat €50, but nothing is left for extra stock.

EXTENSION SHEET · STRETCH ANSWERS

S1: €389.21 (discount: €109.78)

S4: €77.38

S2: €88.49

S5: €151.81

S3: €161.70 (discount: €69.30)