WORKED SAMPLES - WHAT THE MARKS ACTUALLY LOOK LIKE

The same work, twice.

Every one of the nine deliverables, written by the same learner on the same project, at two levels: what a 2-out-of-6 looks like, and what a 5-out-of-6 looks like. Nobody can produce a research report they have never seen.

9	18	1	3
deliverables, both levels	worked samples in total	learner, one dinner, one term	No-Tech variants

Who this learner is

Zainab declared Practitioner and took the dinner her mother already cooks most Thursdays. She weighed one plate four times across five weeks, swapped the chicken for dry chana, and got a fall of 116 litres she is only willing to half-claim.

Name	Zainab Riaz
Where	Township, Lahore
Project	The Sixty-Litre Dinner - High-Tech route
The meal	Thursday chicken pulao with raita, one pot for five

Every Secure sample has a visible imperfection left in it, on purpose.

A flawless example teaches learners to fake polish. A good one shows a real person catching their own mistake and saying so. Look for the flagged flaw at the end of each pair - naming an error you could not fix outscores a clean number that hides one.

Read this before copying anything

These are samples, not answers. A submission that reuses these figures, this meal or these sentences is not the learner's work and will be returned. Use them to see the shape of the thing, then measure your own.

How a facilitator uses these

Put the two versions of one deliverable side by side and the band stops being a word. Learners argue about the difference sentence, not about the mark.

1. Hand out the Emerging and the Secure of one deliverable with the marks cut off, and ask which one you would trust with your own money.
2. Read the difference sentence last, after the room has already found it. Where nobody finds it, that deliverable needs teaching before it needs marking.
3. Point at the flaw in every Secure sample and say out loud why it costs nothing. Polish is not a criterion; a dated correction is.
4. Set the Emerging version as a twenty-minute repair task - add the one missing thing, a date, a unit, a source line - then hold the repair up against the Secure version.

DELIVERABLE 1 OF 9 - RESEARCH STRAND - DUE WEEK 2

Question card

It fixes one quantity, one unit and one household on paper before any measuring starts, so the change made later has something to be traced back to.

EMERGING sets up 2/6 on the artefact

```
QUESTION CARD

Topic: Water in food

Why I chose it: Food takes a lot of water to grow and most people don't know how much. Agriculture uses most of the world's fresh water. I want to find out how much water is in the food we eat and see if we can save some.

What I will do: Research water footprints online and measure some meals at home. Then compare and make a chart.

Tier: Practitioner
```

Why it sits here

- "Water in food" is a topic, not a named quantity with a unit - the 0-1 artefact band calls this "the quantity behind it was never defined"
- No household, no plate and no divisor, so no before-figure can exist for an after-figure to be compared against
- "Measure some meals" is plural and open-ended; the project locks one dish measured four times the same way
- Nobody is named to contact, so the expert row of gate one has nothing to start from in week 2

SECURE sets up 5/6 on the artefact

```
QUESTION CARD - 8 April 2026

Dish: chicken pulao with raita. Our house, Township, Lahore.
Eaters: 5 - Ammi, Abbu, Dadi, Hamza, me. Cooked most Thursdays.

QUESTION: How many litres of water and how many rupees stand behind ONE plate of our Thursday pulao, and which single item carries most of both?

Unit: litres per plate. Second unit: PKR per plate.
Divisor: whole pot ÷ 5, typed into the cell so it can be checked.
Baseline night: Thursday 9 April, before anything changes.
First person I will contact: Dr Saima Nawaz, agronomist, Water Management Research Centre, University of Agriculture Faisalabad - email from the department staff page. Sending Tuesday 14 April.
Declared level: Practitioner.

[16 Apr, biro, squeezed in at the bottom] Ammi says not Ramadan Thursdays and not when we go to Nana's. 41 Thursdays a year, not 52. Fix the yearly line.
```

Why it sits here

- One named quantity with its unit - litres per plate - and the household it belongs to, written before any measuring starts, which is the deliverable check word for word
- The divisor is fixed at five and stated on the card, so the baseline and the three after-weeks can share it: "the same divisor" in the Secure artefact band
- A dated baseline night is set before the change exists, which is what gate two tests first
- A named first contact with a channel and a send date, so the expert row has a two-way exchange to grow from rather than a video or a chatbot

THE ONE THING THAT MOVED IT

The Emerging card names a subject; the Secure card names a plate, a Thursday night, a divisor of five and a person to email on Tuesday.

The imperfection left in on purpose

The Ramadan correction is in a different pen, squeezed in eight days late, and it strikes 52 down to 41. It costs nothing because it is dated, and because it makes the yearly figure right rather than tidy.

DELIVERABLE 2 OF 9 - OUTREACH STRAND - DUE WEEK 3

Expert interview pack

It proves a real specialist answered back, and records the one sentence from them that changed how the learner measured.

EMERGING gate one fails - the work is returned unmarked, no score out of 20

```
INTERVIEW QUESTIONS

1. How much water does farming use?
2. Is climate change affecting crops in Pakistan?
3. What can we do to save water?

Who I will ask: an agronomist or a farmer
Sent: not yet
Reply: -

I could not find anybody's email address. There is a good YouTube video by an agricultural scientist
which explains water footprints very well and I took my facts from that. My uncle in Okara has land so
I might ask him, he knows about farming.
```

Why it sits here

- Three questions, none of them about this plate - the gate's named catch is that "nothing in the log will be specific to this measurement"
- Nothing was sent and nothing came back, so there is no dated two-way exchange, which is the whole of the expert row's proof
- A YouTube video is cited as the expert; a one-way source cannot answer back and cannot be asked what it did not expect
- Nothing the expert said changed the method or the number, which is this deliverable's own check

SECURE clears gate one, expert row; also feeds 6/8 on the defence

```
SENT - email, Tue 14 April 2026, 21.42
To: Dr Saima Nawaz, Water Management Research Centre, University of Agriculture Faisalabad (address
from the department staff page)
Subject: Fifteen minutes on a water footprint I measured at home

"Hello, my name is Zainab Riaz. I have weighed one dinner my family ate in Township, Lahore and worked
out the litres of water behind it from Water Footprint Network per-kilogram figures. One of my numbers
looks wrong to me - the chicken line comes to 606 litres on one plate. Could you spare fifteen minutes
this week to tell me which number to distrust? My five questions are below and my plate sheet is
attached as one page."

Q1 For the crop you know best, how many litres reach one kilogram at the farm gate, and how do you
know?
Q2 How far off is a global average for a field in Sheikhupura, and in which direction?
Q3 Before you see my numbers - which item on this plate is the most water-expensive?
Q4 When a farmer changes one practice, how long before it shows in water use?
Q5 If a buyer asked you to prove a shipment's water footprint tomorrow, what would you send?

REPLY - Fri 17 April 2026, 11.05. The part that mattered, word for word:
"Your chicken figure is for boneless meat. If you weighed the pieces with bone in, and in a pulao you
did, you are carrying about thirty per cent bone through a coefficient that never saw any. Take the
edible fraction first. And do not tell anyone 4,325 is Pakistan's number. It is a global average and
most of it is feed grain grown somewhere else."

WHAT IT CHANGED: I did not reweigh - I applied an edible yield of 0.70 to the bone-in mass in a visible
formula cell and cited her email beside it. Chicken fell from 606 to 424 litres a plate. My whole
baseline fell from 1,168 to 986. Logged in the failure log, 17 April, thirteen days before the swap
went in.
```

Why it sits here

- Five questions sent 14 April and a reply on 17 April, with the expert's name, role and institution - the gate's proof line for a dated two-way exchange
- One sentence recorded word for word that changed the number, which is exactly what the deliverable check asks for
- The opening message names a figure the learner already distrusts, so the reply comes back specific to this plate rather than general advice
- The correction is dated thirteen days before the change, so before and after both use the new method - the gate row on "a before and after measured by different methods" stays clean

THE ONE THING THAT MOVED IT

Secure carries the reply, and inside the reply the one sentence that made a number change.

The imperfection left in on purpose

"I did not reweigh" is a slightly defensive line, and the fix is a factor applied after the fact rather than a fresh weighing. It costs nothing because the factor is stated, attributed to the expert, dated, and applied to both halves of the comparison.

DELIVERABLE 3 OF 9 - RESEARCH STRAND - DUE WEEK 4

Evidence log

It holds every weighing, price and borrowed coefficient with its date and its source, so a stranger can rebuild the before-number without asking the learner anything.

EMERGING gate two fails - no dated baseline, returned unmarked

```
INGREDIENTS

Rice 750
Chicken 700
Onion 2
Tomato 3
Oil some
Yoghurt 1 cup
Ginger garlic
Spices
Salt

WATER
rice 2500
chicken 4300
onion 270

Total for the meal = about 9,000 litres
Cost = around Rs 900 for the pot

(prices from the internet, water figures from a website)
```

Why it sits here

- No dates and no instrument anywhere, so this is not a baseline: the gate returns it under "a before-figure with no stated method"
- "Onion 2" and "oil some" carry no unit, where the Secure artefact band requires every figure to carry a unit and a date
- "Prices from the internet" is the mistake the project names outright - online prices standing in for what this household actually paid
- Coefficients appear with nothing beside them; a number with no source line is struck out at marking, and 9,000 is the pot, not the plate

SECURE clears gate two and carries 5/6 on the artefact

```
BASELINE - Thu 9 April 2026, weighed 19.10 before the pot went on.
Instrument: Nova NKS-3 digital, 1 g, zeroed with the bowl on it. Divisor: pot ÷ 5, typed as a formula.

item | raw g/plate | PKR/kg | shop | L/kg | source | L/plate
rice, super basmati | 150 | 420 | Al-Madina Karyana, Township | 2,497 | WFN Product Gallery, "Rice",
global av., accessed 11 Apr | 375
chicken, bone-in 140 g x 0.70 edible | 98 | 720 | Bismillah Chicken, Ghazi Rd | 4,325 | WFN Product
Gallery, "Chicken meat" - edible fraction per Dr Nawaz, email 17 Apr | 424
canola oil | 17 (18 ml x 0.92) | 620/L | Al-Madina | 4,301 | Mekonnen & Hoekstra 2011, Vol 2 App. II,
"rapeseed oil" | 73
yoghurt (raita) | 50 | 260 | Ahmed Dairy | 1,020 | ESTIMATED - no yoghurt row in the gallery. Used
"milk", roughly 1 kg milk per 1 kg yoghurt. Probably low. | 51
whole spices | 3 | 1,800 | Akbari Mandi | 7,048 | M&H 2011 App. II, "spices, mixed" | 21
onion | 50 | 120 | thela, Green Town | 272 | WFN Product Gallery | 14
tomato | 40 | 180 | thela, Green Town | 214 | WFN Product Gallery | 9
garlic | 6 | 480 | Al-Madina | 589 | WFN Product Gallery | 4
ginger | 5 | 640 | Al-Madina | 589 | ESTIMATED - no ginger figure found in either source. Garlic used
as a stand-in. | 3
green chilli + coriander | 6 | 200 | thela | 322 | WFN, "vegetables, fresh" | 2
salt | 2 | 60 | Al-Madina | 0 | not a crop. 0 entered, not left blank. | 0
gas | - | est. PKR 35/pot | - | - | estimate: no separate meter. Not counted in litres. | -

PLATE, food only = 976 L. PKR 214 + 7 gas = 221.
Conversion used all through: 100 g dry rice cooked to 258 g on 15 Apr, so 0.39 raw per gram cooked.

WASTE - bowl by the sink, weighed before binning, 18-24 Apr
18 Apr 0 g - 19 Apr cooked rice 180 g = raw 70 g = 175 L - 20 Apr 0 g - 21 Apr tomatoes gone soft 190 g
= 41 L - 22 Apr roti 165 g = flour 110 g at 1,827 = 201 L - 23 Apr leftover pulao 410 g = rice-
equivalent 160 g = 400 L, UNDERCOUNT, the chicken in it is ignored - 24 Apr yoghurt 220 g = 224 L, half
onion 55 g = 15 L
Week: 1,220 g, 1,056 L ÷ 105 plates (5 people x 3 meals x 7 days) = 10 L per plate.

BASELINE = 986 litres and PKR 221 per plate.
```

Why it sits here

- Every before-figure carries its date, its instrument and its source, and the divisor is written into the row - gate two's proof line in full
- Raw grams per person, not cooked, with the measured 0.39 conversion stated so a stranger can reproduce the before-number
- Two rows say ESTIMATED and why, and one says which direction it is probably wrong in - the Secure defence band's separation of measured from inferred, done in the log rather than in the viva
- Salt is entered as 0 rather than left blank, and the 23 April waste row is marked UNDERCOUNT instead of quietly rounded

THE ONE THING THAT MOVED IT

Every coefficient in the Secure log has a source line beside it, and every guess says the word ESTIMATED and why.

The imperfection left in on purpose

The 23 April waste row is knowingly wrong - leftover pulao converted as if it were rice only, with the chicken in it ignored - and the row says so. Naming an undercount you could not fix outscores a clean number that hides one.

DELIVERABLE 4 OF 9 - PROCESS STRAND - DUE WEEK 5

Failure log

It records what slipped, on what date, and what each slip did to the comparison, because three weeks of measuring always slips somewhere.

EMERGING 2/6 on the process

```
FAILURE LOG

- The scale was broken.
- One week was very busy with exams so I could not do everything properly.
- My phone died and I lost some of the photos of the scale.
- I forgot to weigh the waste a few times but it was only small amounts.

Apart from that everything went to plan and the results came out how I expected.
```

Why it sits here

- "The scale was broken" and "a week was busy" are the cosmetic failures the Emerging process band names by example
- Not one entry carries a date, so nothing can be checked against the evidence log
- No entry says what any slip did to the comparison, which is this deliverable's own check
- "It was only small amounts" is a missed reading noted but never counted, and "everything came out how I expected" is the sentence a marker is trained to distrust

SECURE 5/6 on the process

```
FAILURE LOG - Zainab Riaz, The Thursday Count

15 Apr. Found it. On 9 April I weighed the rice OUT of the pot - 2,050 g, cooked - and typed it in as
raw. The rice line came out at 1,024 L a plate and I only looked twice because it beat the chicken.
Cooked basmati is not raw basmati. Cost: the whole baseline rice row and the first chart I drew. Fix:
weighed 100 g dry rice, cooked it, weighed 258 g. Conversion 0.39, written at the top of the sheet.
Reweighed dry rice on 16 Apr before the pot. Rice row is now 150 g and 375 L. Old row struck through,
left in.

17 Apr. Dr Nawaz says 4,325 is boneless meat and I weighed bone-in. Applied edible yield 0.70. Chicken
606 to 424 L, baseline 1,168 to 986. Logging it here because I changed the method after my first
baseline reading, even though it made the number better. Thirteen days before the swap, so both halves
use it.

30 Apr, week 1. Forgot to weigh the oil before it went in the pan. Reconstructed from the mark on the
bottle: 18 ml, plus or minus 5. Marked estimated in the row. Cost: week 1 is about 20 L a plate looser
than the other two.

7 May, week 2. Bilal came, six ate. The pot was scaled up so grams per plate held, but I divided the
raita by 5 and not by 6 and did not catch it until 9 May. Week 2 is 3 L a plate too high. Left the
wrong figure in with the correction written under it, and the chart says so.

9 May. No waste weighing on 8 May - the house was empty all day. This is NOT a zero and I am not
writing one. "Not measured." Week 2's waste is divided by 90 plates, not 105, and the divisor change is
in the sheet.
```

Why it sits here

- Five dated entries, each naming what broke, the correction and what it cost the comparison in litres - the Secure process band's three requirements in every entry
- The cooked-rice entry is the learner catching their own error, and the spoiled row stays struck through in the log rather than deleted
- The 8 May gap is written as "not measured" rather than as a zero, and the divisor for that week is changed to match - a slip counted, not just noted
- The 17 April method change is logged even though it improved the number, with the date that proves it predates the swap

THE ONE THING THAT MOVED IT

Emerging says what broke; Secure says what it cost the comparison, in litres.

The imperfection left in on purpose

The 7 May raita error was never fixed in place. Week 2's bar is still three litres too high, with the correction sitting under it. Keeping the spoiled row is what the band asks for; silently repairing it is what loses the marks.

DELIVERABLE 5 OF 9 - DESIGN STRAND - DUE WEEK 5

The build

It is the measuring rig and the comparison chart together, so the instrument behind the numbers and the numbers themselves can be inspected in one place.

EMERGING 2/6 on the artefact

```
THE BUILD - A3 poster, printed at Farooq Print Shop

Across the top in large blue letters: "OUR DINNER USES 9,000 LITRES OF WATER!!"
Underneath: a photograph of a plate of pulao, a stock photograph of a dripping tap, and a border of
clip-art water drops.
Middle of the poster: a text box with a drop shadow reading "Water footprint = all the water used to
grow and make our food."
Bottom right, small: "Save Water. Save Pakistan."

No axis. No item breakdown. No dates. The 9,000 is the whole pot, and the poster does not say so. No
after-weeks appear anywhere.
```

Why it sits here

- A total with no working - the 0-1 artefact band's "a claim of improvement stands where a measurement should be"
- 9,000 is the pot and not the plate, and nothing on the poster states which, so the unit is undefined
- No axis, no items, no dates: a stranger cannot repeat either half from the artefact alone
- No after-week appears at all, so there is nothing to compare, and "Save Water" is an adjective standing where a number belongs

SECURE 5/6 on the artefact

```
THE BUILD - the rig and two charts, photographed on the same counter

THE RIG: Nova NKS-3 digital scale, 1 g. One steel bowl kept only for waste, by the sink. A 500 ml
marked jug for oil and milk. The six-column sheet taped inside the cupboard door. Same scale, same
bowl, same jug on all four cooking dates. Scale display photographed readable on 9 Apr, 30 Apr, 7 May
and 14 May.

CHART 1 - Datawrapper bars, litres per plate, largest first:
Chicken 424 | Rice 375 | Oil 73 | Raita 51 | Spices 21 | Onion 14 | Waste share 10 | Tomato 9 | Garlic
4 | Ginger 3 | Chilli + coriander 2 | Salt 0
Title: "Chicken and rice are 81% of the water on one Thursday plate"
Axis: litres of water per plate - raw mass x published litres per kilogram
Source line: Water Footprint Network Product Gallery and Mekonnen & Hoekstra 2011 Vol 2 App. II, global
averages, accessed 11 April 2026.
Limit line on the chart: global averages, not Punjab. Raita and ginger are estimated - see the evidence
log.

CHART 2 - four bars, one axis, litres per plate:
Baseline 9 Apr 986 | Week 1, 30 Apr 884 | Week 2, 7 May 902 | Week 3, 14 May 825
Mean of the three after-weeks: 870. Fall 116 litres a plate, 12%. PKR 221 to 152.
Printed under the bars: "Week 2 had six eaters and a raita divided by five instead of six. It is 3 L
high and it is shown as measured."
```

Why it sits here

- The measuring rig is photographed with the scale readable on all four dates, so the same instrument before and after is shown rather than claimed
- All three after-weeks are charted separately, including week 2 which went backwards, which the Secure artefact band requires instead of a single mean
- A source line and a stated limit sit on the chart itself, not in the learner's head - a Practitioner citing every borrowed figure to its table
- The title carries the finding and its share, so a stranger reads the axes correctly with nobody standing there explaining them

THE ONE THING THAT MOVED IT

Secure charts all three after-weeks separately, including the one that went backwards, instead of averaging it away.

The imperfection left in on purpose

Week 2's bar is printed three litres too high, with a line under the chart saying exactly why. The rubric pays for the marked slip and docks the silent correction, so an admitted error on the face of the artefact is worth more than a clean bar.

DELIVERABLE 6 OF 9 - DESIGN STRAND - DUE WEEK 5

One-page explainer

One page that gets the finding into somebody who was not there, in ninety seconds, carrying the before number, the after number and one honest limit.

EMERGING 3/6 on the artefact

```
MY PROJECT: THE SIXTY-LITRE DINNER

For this project I chose the Agriculture and Climate lab. A water footprint means all the water that is used to grow and make our food, including rain and irrigation. In Act 1 I measured my dinner and in Act 2 I changed one thing and measured it again for three weeks.

First I asked my mother which dinner we cook the most. Then I weighed everything on the kitchen scale and looked up the water figures. Then I made a chart on Datawrapper, which was quite hard at first but I worked it out.

I learned a lot about water and about working carefully and not rushing. I think everybody should think about how much water is really in their food before they throw it away.
```

Why it sits here

- It explains the project, not the finding: no before number and no after number appear anywhere on the page
- "I learned a lot" is an adjective where the artefact band asks for a figure with a unit and a period
- No limit is stated, which the deliverable check names explicitly
- A neighbour reading this in ninety seconds cannot repeat a litres figure back, because there is not one to repeat

SECURE 5/6 on the artefact

```
986 LITRES ON ONE PLATE

One plate of the pulao we cook most Thursdays in Township carries 986 litres of water and PKR 221. Five of us eat it 41 Thursdays a year. That is about 202,000 litres and PKR 45,300.

Chicken is 424 of those litres - 43% - off 98 grams of meat. Rice is 375. Everything else on the plate together is 187.

I changed one thing. Chicken out, 70 g of dry chana in. Same dish, same scale, same pot divided by five, same two published tables. Cooked 30 April, 7 May, 14 May.

986 goes to 884, then 902, then 825. Mean 870. A fall of 116 litres a plate and PKR 69 a plate. Over a year, about 23,800 litres and PKR 14,100.

WHAT THIS NUMBER CANNOT TELL YOU: the litres-per-kilogram figures are global averages. Nobody measured the field in Sheikhupura that grew this rice. If Punjab basmati is thirstier than the world average, my rice line is too low - and rice is the line my change never touched. Week 2 went the wrong way. It is on the chart, at the height it was measured.

Ammi says the chana stays twice a month, not every Thursday.
```

Why it sits here

- Leads with 986 litres and gives the before number, the after number, the one change and one stated limit - the deliverable check, in that order
- The yearly figure runs at the household's real frequency, 41 Thursdays, so the problem is costed over a stated period rather than annualised by assumption
- The limit is specific and self-damaging: the untouched line is the one most likely to be understated
- The week that went the wrong way is named on the page and reported at measured height, with the care a win would get

THE ONE THING THAT MOVED IT

Emerging explains the project; Secure explains the finding, and starts with the number.

The imperfection left in on purpose

The page ends on Ammi's opinion, which is not a measurement. It sits last, after the litres and the rupees, which is exactly where the project puts opinions.

DELIVERABLE 7 OF 9 - BRANDING STRAND - DUE WEEK 5

Identity card

A name the household can use for the measurement, and one sentence about the learner that survives into the next project in a different lab.

EMERGING scores nothing on its own and takes nothing with it

```
IDENTITY

Name: AquaSave
Logo: a blue water drop with a green leaf inside it. Made in Canva.
Colours: blue (#1E88E5) and green (#43A047)
Tagline: "Every Drop Counts"
Font: Montserrat Bold for the name, Open Sans for the rest

I made three versions of the logo and asked my friends which one looked best. Seven out of nine picked
version 2 so I used that one.
```

Why it sits here

- "Every Drop Counts" carries no number, where the deliverable check asks for the figure itself rather than an adjective about it
- Nothing here names the measurement, so the household has no way to refer to it without the learner explaining
- There is no one-line self-description at all, so nothing survives to a second project
- Nine friends were polled on which logo looked best - design effort spent where the artefact earns none

SECURE supports 5/6 on the artefact

```
IDENTITY CARD

THE MEASUREMENT IS CALLED: The Thursday Count.
So the house can say "did you do the Thursday Count this week" without me starting the explanation
again.

WHO I AM, ONE LINE: I am Zainab. I weigh what my house already does, and I write the number down before
I change anything.
(That line has to still be true on my fourth project, so it says nothing about water.)

THE SENTENCE I WANT REPEATED AT SOMEBODY ELSE'S TABLE: "One plate of Thursday pulao is 986 litres of
water, and 43% of that is the chicken."

THE PROMISE: every number I publish carries a date, a unit and the page it came from. Where I guessed,
it says GUESSED.

Written in marker on the cupboard door, not designed. No logo. Ammi reads it every Thursday while the
pot is on.
```

Why it sits here

- A name the household actually uses, so the measurement can be referred to without explanation - which is what "so the household can refer to it by name" means in practice
- The one-line self-description says nothing about water, so it holds on a fourth project in a different lab
- The repeatable sentence carries the figure and its share - 986 litres, 43% chicken - rather than an adjective about the figure
- The promise names the discipline the evidence log then honours, including the word for where the learner guessed

THE ONE THING THAT MOVED IT

Secure's one line says nothing about water, so it still works on the fourth project.

The imperfection left in on purpose

The promise says GUESSED and the evidence log says ESTIMATED. The two words do not match and the inconsistency is plain on the page. Nobody is misled, and the discipline behind both words is identical.

DELIVERABLE 8 OF 9 - OUTREACH STRAND - DUE WEEK 6

Relations ledger

Ten logged relationships with dates and replies, which is the gate the whole submission passes or fails before anybody scores it.

EMERGING gate one fails - returned unmarked with the missing rows named

```
PEOPLE I TALKED TO

1. Ammi
2. Abbu
3. Hamza
4. Dadi
5. Areeba
6. Faisal
7. Mehak
8. Uncle Tanveer
9. Sana aunty
10. The chicken shop man

They all thought it was a good project and said I had worked hard. Ammi and Dadi and Abbu were all at
the table when I asked them so I asked them together. Everyone said well done and that they would think
about water more.
```

Why it sits here

- Ten names with no roles, no dates and no replies; the gate returns the work unmarked until every row carries evidence
- "They all said well done" is praise with no requested change, and the gate states that praise with no requested change is not a review
- Three relatives asked once at the same table giving the same answer - the gate's named catch for the affected row, visible in the learner's own sentence
- No expert is identifiable by role or institution, so the expert row cannot be proved at all

SECURE clears gate one - all ten logged, plus one declined

```
RELATIONS LEDGER - The Thursday Count
name | role | date | channel | what they said | what came of it

EXPERT
Dr Saima Nawaz | agronomist, Water Mgmt Research Centre, UAF | sent 14 Apr, replied 17 Apr | email, PDF
saved | "Your chicken figure is for boneless meat." | Applied 0.70 edible yield. Baseline 1,168 to 986.

THE PROBLEM AFFECTS THEM (3)
Nusrat Riaz (Ammi) | cooks it | 12 Apr; agreed the change 26 Apr, voice note | in person | "Chana is
fine but not every week. Your Dadi will not eat it twice." | Swap agreed for exactly three Thursdays.
She is the one who signed it off before it went in.
Riaz Ahmed (Abbu) | buys it | 13 Apr | in person | "Chicken was 640 in January. Check the receipt, not
my memory." | Every price re-taken from April receipts and shop visits.
Hamza Riaz | eats it, 14 | 30 Apr | in person | "It's fine. But it's not pulao without meat." | Written
down verbatim. He is why there was no fourth week.

PEERS - all before the after-period closed on 14 May
Areeba Shah | classmate | 22 Apr | WhatsApp | "Your divisor is 5 but you said six people ate last
Thursday. Which is it?" | Divisor written into every cell as a visible formula.
Faisal Butt | classmate | 26 Apr | WhatsApp | "Add your rupee column again." | It was out by PKR 9.
Fixed. His message screenshotted.
Mehak Zubair | cousin, Karachi | 5 May | WhatsApp | "Litres of what? Your axis just says litres." |
Axis relabelled "litres of water per plate".

SAW THE FINISHED WORK AND REPLIED (3)
Rafiq Ahmed | shopkeeper, Al-Madina | 17 May | in person | "375 litres for one plate of rice? Are you
sure?" | Opened the WFN page on my phone and showed him the table.
Sana Malik | neighbour | 18 May | in person | "Twelve per cent is not much for giving up chicken." |
Fair. It is in the explainer as measured.
Hafiz Junaid | cousin, Sheikhupura | 19 May | phone | "Your rice line never moved. That is where your
water is." | True. Written into what I would test next.

DECLINED - logged, not counted toward the ten
Aslam Sheikh | poultry feed supplier, Raiwind Rd | 20 Apr | phone | "We don't share farm data." | Asked
once, did not push. This is why the expert row is Dr Nawaz and not him.
```

Why it sits here

- All four rows carry names, roles, dates, channel, a direct quote and what came of each - the gate's proof lines rather than a list
- The three peer comments all predate 14 May and each led to a visible change: a formula, a PKR 9 arithmetic fix, an axis label
- The person who agreed the change before it was made is named, and her agreement is dated 26 April, before the first after-reading on 30 April
- The three finished-work replies each name a number, a method or a limit, and they disagree with one another

THE ONE THING THAT MOVED IT

Every Secure row ends in what came of it, and the dates prove the peers spoke before the chart was drawn.

The imperfection left in on purpose

Two of the three peers are classmates who message on the same WhatsApp thread, which is close to the clustering the gate warns about. It survives because the dates are four days apart, the comments are on different things, and each one produced a change you can see in the artefact.

DELIVERABLE 9 OF 9 - DEFENCE STRAND - DUE WEEK 6

Defence video

Under three minutes in which the learner reasons from their own before-and-after data, rather than repeating the result more slowly.

EMERGING 2/8 on the defence

```
[transcript, 0:41 of 1:12]

"...um, so this is my project, The Sixty-Litre Dinner. Our dinner uses nine thousand litres of water. That's a lot of water for one meal. Chicken is the worst one out of everything. So we changed to chana instead and now it's less.

ASSESSOR: Would that drop have happened anyway, without your change?

No, because we changed the chicken. That's what made it go down. Before it was more and after it was less, so it worked.

ASSESSOR: What was your before-figure, and what date did you take it?

It was around nine thousand... it's on the poster, I can show you the poster. I did it in April, I think the second week. I'd have to check my phone for the exact day."
```

Why it sits here

- The before-figure cannot be produced on request - "a figure from their own before-period cannot be found" is the 0-2 band word for word
- The standing question is answered from belief: "we changed the chicken, that's what made it go down", with nothing behind it
- The submitted result is restated close to word for word and no confounder is named at all
- The figure quoted is the pot rather than the plate, and the learner does not notice the unit is wrong

SECURE 6/8 on the defence

[transcript, 1:52-3:00 of 2:58]

"...so, the baseline. Thursday the ninth of April, Nova scale, one gram, pot divided by five, typed into the cell so you can check it. 986 litres a plate and 221 rupees. Chicken is 424 of that and rice is 375. Both figures are Water Footprint Network global averages, accessed the eleventh of April. I can open the page now if you want it.

ASSESSOR: Would this fall have happened anyway, without your swap?

Partly, yes. Um - let me do the honest version. The swap is the only thing I chose to move. Two things moved that I did not choose. Rice went from 150 grams a plate to 140 in week three, because rice got dearer and Ammi cut the pot. That is 25 litres, in one week out of three, so about eight litres off my 116. Call it seven per cent of the saving that is not mine.

And here is one nobody has asked me. Two of my three after-Thursdays fell in the school holidays. We were all home, we ate the leftovers on Friday, and the waste share went 11, then 19, then 6. If I had cooked the baseline in the holidays too, my 116 would be smaller. I would guess about 100 - that is a guess, not a measurement.

What I can defend is the chicken line. 424 litres out, 292 in, same scale, same coefficient table, three dated nights. What I cannot defend is that the whole 116 is mine.

ASSESSOR: Convince me three weeks is enough.

For the ingredients, yes, because I weighed those and they barely moved. For the waste share, no - it swung 11, 19, 6, and a mean of three is not much use on a spread like that. A fourth week would have gone outside the holidays, and that is the one I would take."

Why it sits here

- The standing question is answered from the record: what was held fixed, what was only written down, and how much of the fall is not the swap
- A confounder the assessor had not raised - the school holidays - arrives unprompted with its direction and a rough size, which is the 7-8 band's move
- A limit is conceded without dropping the finding: the chicken line is defended, the whole 116 is not
- The before-figure, its date and its instrument come out in one sentence, out of order, with no hunting

THE ONE THING THAT MOVED IT

Asked whether it would have happened anyway, Secure says "partly, yes" and puts a number on the part that is not theirs.

The imperfection left in on purpose

"I would guess about 100" is a guess said out loud, and the learner labels it as one in the same breath. The band asks for the direction and roughly how much; a labelled estimate is the honest form of that, and the "um" costs nothing.

The same three deliverables on the No-Tech route

Paper, a pen and conversations reach the identical finding. These three are where the two routes look most different - the rest translate almost unchanged.

3 - Evidence log

No spreadsheet. Six columns ruled across a notebook page, the division written out longhand in the margin so a second person can check it, and the coefficient table hand-copied from a printed page with the organisation, the table name and the date it was obtained written across the top. Every source is ink beside the number, not a link.

```
Top of page, underlined: WATER FIGURES copied from Water Footprint Network Product Gallery printout, run
off at Farooq Print Shop, Ferozepur Rd, 11 April 2026.

Thu 9 Apr - pot ÷ 5 - Nova scale, 1 g
item      g/plate  Rs/kg  shop         L/kg   L/plate
rice        150     420   Al-Madina   2,497    375   (750 ÷ 5 = 150; 0.150 x 2497 = 374.55)
chicken      98     720   Bismillah   4,325    424   (140 bone-in x 0.70 - Dr Nawaz, 17 Apr)
oil          17     620   Al-Madina   4,301     73
yoghurt      50     260   Ahmed Dairy 1,020     51   EST - no yoghurt in the table, milk used
salt          2      60   Al-Madina       0      0   (zero, not blank)

PLATE = 976 L food + 10 L waste share = 986 L - Rs 221
```

5 - The build

No Datawrapper. Both charts go on squared paper to a stated scale, so anybody can put a ruler on a bar and re-read it. The rig is the same rig: a scale or a marked cup with one weighed conversion, one waste bowl, one ruled page. The finished chart is shown in person and three readers sign and date the back.

```
Squared paper, A4 landscape, ruler and one pen.
Scale written top left: 1 square = 25 litres. Axis starts at 0, marked.
Four bars: 9 Apr 986 (39.4 squares) - 30 Apr 884 - 7 May 902 - 14 May 825.
Title in capitals across the top: CHANA INSTEAD OF CHICKEN TOOK 116 LITRES OFF ONE PLATE.
Under the axis, smaller: litres of water per plate. Raw mass x published litres per kilogram, Water
Footprint Network Product Gallery, printed 11 Apr 2026, global averages.
Last line: Week 2 had six eaters and a raita divided by five. It is 3 L high and it is shown as
measured.
Back of the sheet: signed and dated by three readers.
```

6 - One-page explainer

One handwritten side, read aloud to three people who eat this meal, with the number said first and their words written underneath as they say them. Nothing is designed and nothing is printed. The test does not move: a neighbour hears or reads it once and repeats the litres figure back correctly.

```
986 LITRES ON ONE PLATE

Our Thursday pulao, Township. One plate: 986 litres of water, Rs 221. Five of us, 41 Thursdays a year -
about 202,000 litres and Rs 45,300.
Chicken is 424 of the litres. Rice is 375. Everything else is 187.
I took the chicken out and put 70 g of dry chana in. Same dish, same scale, same pot ÷ 5, same printed
table. Three Thursdays: 884, 902, 825. Mean 870. Down 116 litres a plate, 12%.
What it cannot tell you: those figures are world averages. Nobody measured the field in Sheikhupura.

Read aloud to - Rafiq 17/5: "375 for rice, really?" - Sana Malik 18/5: "twelve per cent is not much." -
Junaid 19/5: "your rice never moved."
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Both routes are marked against the same twenty points.

A hand-drawn chart with a stated source and an honest limit scores exactly what a spreadsheet chart scores. What is marked is whether a stranger could repeat the measurement, not what produced the picture.