



Slides 06.13: Scale the Recipe and Cost It From the Circular

Lesson 6.13, two days, 20 slides. Day 1 is slides 1 to 10. Day 2 is slides 11 to 20.

DAY 1: Scaling and the Yield Check

Slide 1: Do now (Day 1)

- A recipe for 4 people needs 1 1/2 cups of sauce.
- How much sauce for 8 people?
- How much for 28 people? (Calculator allowed for this one.) Notes: Answers 3 cups and 10 1/2 cups. Take both from students.

Slide 2: The store does not sell 10 1/2 cups

- It sells jars.
- How many jars? Notes: Leave this on the board. Do not answer it. This is the whole lesson.

Slide 3: The three-step rule

1. **Divide** the portions you need by the portions the recipe makes. That is the scale factor.
2. **Multiply** every ingredient by the scale factor.
3. **Round up** to the number of packages the store actually sells. Notes: Copy all three into the top of the worksheet.

Slide 4: The worked line

- A recipe makes 4 servings and needs 8 oz dry spaghetti. We need 28 portions.
- Step 1: $28 \div 4 = 7$
- Step 2: $8 \text{ oz} \times 7 = \mathbf{56 \text{ oz}}$
- Step 3: $56 \div 16 \text{ oz per pound} = 3.5 \text{ lb}$. The store sells 1 lb boxes. **Buy 4**. Notes: Say the reason out loud: always round up. Running out at minute 30 is the one mistake you cannot fix. An extra box costs \$1.29.

Slide 5: Your turn, every line

- Find your recipe on page 1. It makes 4 servings.
- Fill the scaling table: ingredient, amount for 4, $\times$ the factor, scaled amount, the unit the store sells, packages to buy.
- Scale Lead reads each line aloud before anybody writes it. Notes: 12 minutes. Circulate. Ask “what unit is that in, and what unit does the store use?”

Slide 6: Watch the units (the demo)

- 1 cup = 8 fluid ounces
- A recipe wants **3 cups**. The store sells a **32 ounce box**. Enough?
- $3 \times 8 = 24 \text{ fl oz}$. The box holds 32. **Yes, with 1 cup left**. Image: a liquid measuring cup next to a 32 oz box of broth on a table. Notes: Hold the real box and the real cup.

Slide 7: The trap

- **8 ounces on a bag of shredded cheese is a WEIGHT, not a volume.**
- 4 ounces of shredded cheese is about 1 cup.

- So an 8 oz bag is about **2 cups**, not 1. Image: an 8 oz bag of shredded cheese next to a dry measuring cup, with the cheese poured into two cups. Notes: This is the error that shows up on cheese, sauce, and sour cream every single year. Say it with the bag in your hand.

Slide 8: The conversions this project needs

- 1 cup = 8 fluid ounces
- 1 pound = 16 ounces (weight)
- 1 stick of butter = 8 tablespoons = 1/2 cup
- 1 tablespoon = 3 teaspoons
- Shredded cheese: 4 oz is about 1 cup
- A 16 oz can of refried beans is about 1 3/4 cups Notes: The last four are estimates.
[Sal: measure one package of each once and write the real number on the strip.]

Slide 9: The yield check

- We need **30** portions: 28 students, me, and one spare.
- Count what your plan actually makes.
- Example: 4 lb dry pasta at 2 oz per portion = **32 portions**. Clears 30 with 2 spare.
- Under 30? Raise your hand and add a package. Notes: A plan that feeds 26 is not a cheaper plan. It is a failed plan.

Slide 10: Exit card (Day 1)

- "Our plan makes ___ portions, and the ingredient I am least sure we scaled right is ___."
Notes: Sort into "clears 30" and "does not." Start Day 2 with the ones that do not.

DAY 2: Costing It From the Circular

Slide 11: Do now (Day 2)

- Circular at your seat. Find the cheapest shredded mozzarella.
- Write the brand, the size in ounces, and the price.
- Then write the price for ONE ounce. Notes: Put a store brand and a name brand on the board side by side with price per ounce under each.

Slide 12: Same cheese, different number

- Today every line on your sheet gets that number.
- And the total has to come in under twenty dollars.

Slide 13: The two questions to ask on every line

1. What does the **whole package** cost? That is what you pay.
2. What does **one ounce** cost? That is how you choose. Notes: The Unit 1 rule, still true: you pay for the whole package, not the spoonful you use.

Slide 14: The worked line

- Store brand shredded mozzarella, 8 oz, \$1.99. $\$1.99 \div 8 = \0.249 per ounce
- Name brand, 8 oz, \$2.99. $\$2.99 \div 8 = \0.374 per ounce
- The store brand is cheaper by 12.5 cents an ounce.

Slide 15: Cost every line

- Item, brand, size, price, price per ounce, packages, line cost.
- **Write the running total after every line, not at the end.**
- Cost Lead owns the total. A second teammate checks every line before it is written. Notes: 13 minutes. At minute 24 call time; every station writes its total on the wall sheet.

Slide 16: The four totals

- Read them out loud.
- Any station over \$20.00 has a problem to solve.
- The class total has to come in under \$80.00.

Slide 17: The three legal swaps

1. **Store brand for name brand**
 2. **A bigger package**, when the price per ounce drops AND you will use it
 3. **Cut a line that is not on the plate** (an optional topping, a second cheese)
- A swap only counts if it saves at least \$0.25 and does not break the allergy list or your station card.

Slide 18: These are real swaps I actually made

- Name-brand cookies to store brand: saved **\$14.40**

- Name-brand whipped topping to store brand: saved **\$6.00**
- Butter, two packs down to one: saved **\$5.99**
- Cups, two packs down to one: saved **\$3.99**
- **\$30.38 saved on a \$150 order.** Final total: \$147.84. Notes: Show the real shopping list. Students believe the teacher who actually did it.

Slide 19: Log every swap

- What we swapped out, what we swapped in, both unit prices, what it saved, **what we gave up.**
- Then recheck the allergy list. A swap can bring in a new allergen.

Slide 20: Peer check, then my signature

- Trade with the station next door. Check three things: every line has a size and a unit, the running total adds up, the total is at or under \$20.00.
- Fix what they flag. Bring it to me.
- **No signature, no shopping list in Lesson 6.15.** Notes: Closure: two students read the class total and the cost per person. Then ask, and let it sit: “Could a family eat for that?”