Grade 6 Math · Lesson 10 — Your Own Food Cart

Every Grade 6 skill together, in one business · ages 10 to 13 · 45 minutes · the workbook, one screen, this page, a pencil and paper

At a Glance

- **The book:** 6th Grade Math Workbook: Real-World Problem Solving, Chapter 10 (The Entrepreneur), by Dr. Gene A Constant.
- **Free tool:** The Owner's Forecast (a free business-plan simulator on the Entrepreneurship hub), free, no login, plays in the browser: globalsovereignuniversity.org/entrepreneurship.
- **Ages and time:** Grade 6 · ages 10 to 13 · 45 minutes.
- **Prep (5 min):** read the Teaching Creed and have the workbook open to Chapter 10. Have a calculator, paper for a budget, and a ruler for the cart drawing.

Why this lesson

Real problems do not arrive one skill at a time. A small business mixes ratios with percents, algebra with geometry and statistics with plain honesty. This capstone shows a child that the math of the whole year is the math of being their own boss.

What the learner will be able to do

- Read a market survey with ratios and percents.
- Build a startup budget and track debt with integers.
- Write, simplify and use a profit expression.
- Report two weeks of sales with statistics, honestly.

The 45-Minute Climb

How to read this: the gold box in each step is your lesson, word for word. Run it as written. The notes beneath are optional support. "The group" means your family; "host" means you.

1 · The Hook (5 min)

"If you sold tacos for $5 each and each one cost $1.80 to make, how many would you have to sell in a day to cover a $75 market fee?"

Say it like this: Let your child try. Most will divide 75 by 5. Ask: do you keep the whole $5? That question opens the chapter.

2 · Work It Together (15 min)

Work Section 10.1 and 10.2 together in the workbook: 160 people at 5:3 means 100 buyers; costs total $6,000; after savings and the grant, the debt is −$2,100. Then write the profit expression from Section 10.3: 5t − 1.80t − 75 = 3.20t − 75.

Draw the cart from Section 10.4 on paper and label its dimensions. Then explore the Owner's Forecast together on the Entrepreneurship hub.

3 · The Talk (8 min)

1. Why is the profit per taco $3.20 and not $5? 2. Why write the family loan as −3,000? 3. Sales went up from week 1 to week 2. What would make you trust that it will keep going?

You are not fishing for one right answer. You are listening for understanding:

- Q1: Each taco costs $1.80 in ingredients, so only $3.20 of each sale is left over.
- Q2: It is money owed, a debt, so it is a negative balance.
- Q3: More weeks of data, and a steady pattern rather than one lucky day.

4 · Solo Climb (12 min)

Five problems on your own, with your work shown.
1. You survey 160 people. The ratio of people who would buy tacos to people who would not is 5:3. How many would buy?
2. A small-business grant covers 15% of the startup costs of $6,000. How much is the grant?
3. Evaluate 3.20t − 75 for a day when you sell 150 tacos.
4. The cart is 8 ft long, 4 ft wide and 6 ft tall. Find its volume.
5. You wrap all six sides of that cart in vinyl. How many square feet do you need?

Why solo: a test, a job and real life ask you to work alone. Five problems rehearse exactly that. The answers are at the end of this plan.

Keep It Fresh (5 min, the next day)

Two review problems from earlier chapters.
1. Find: |7| + |−12|
2. A $120 jacket is marked down 25%. What is the sale price?

Ready to move on? Four of the five Solo Climb problems right, with work shown, means this skill is solid. If not, reread the worked examples together and try two more problems from the chapter before the next lesson. Short review of old skills keeps them from fading.

5 · The Takeaway (5 min)

“A business is a math problem you get to live inside. Count every cost, keep the books honest, and let the numbers tell you when to grow.” · Homework: Write the Two-Week Business Report from the workbook’s Action Report as a one-page letter to the family that lent you the money.

The badge moment: finishing all five steps earns the Bronze ring of this lesson’s badge, The Owner. Mark it on the Climber’s Passport now; the homework is how Silver and Gold are earned during the week.

Common Mistakes to Watch For

- Forgetting the daily fixed cost when finding profit.
- Rounding 117.19 tacos down instead of up.
- Reporting a percent change from the new amount instead of the original.

The Teaching Creed

You are not the expert; the book and the method are. Your job is to ask “how do you know?” one more time than feels natural, and to celebrate wrong answers out loud. In here, a wrong answer is where the lesson lives.

GENO, GSU’s free tutor, can explain any step a second way, any hour, in 83 languages, with no login: globalsovereignuniversity.org/free-tutor. A prompt for the host: Ask GENO: “My child wrote the daily profit as 5t − 75. Help them find what is missing without giving the answer.”

Adapt It and Measure It

Differentiation

- Struggling: work one section per day over four days.
- Ahead: change the price to $6 and rework the whole plan.
- Large co-op: each team runs a different cart and presents its report.
- Reluctant: let the child choose what the cart sells.

Evidence of learning (no exam)

Look for three things. **Tried**: finished all five Solo Climb problems with work shown. **Noticed**: can name the mistake in Common Mistakes that they almost made. **Changed**: the next day, solves one new problem from the same chapter without help. Those three words are the whole rubric, and they match the badge tiers below.

Gamify It — The Campus Climb

Every GSU lesson is one badge on the Climber’s Passport, earned at four depths: Bronze, Silver, Gold and Platinum.

LESSON 10 BADGE — The Owner · Bronze — The Climb: finished the 45-minute lesson, all five steps. · Silver — The Try: did the homework and explained it to the host. · Gold — The Proof: completed the chapter's Action Report in the workbook with every answer checked against the Answer Key. · Platinum — The Teacher: ran this lesson as host for someone else. The harvest of a teacher is teachers.

Answers for the Host

1. 100 people
2. $900
3. $405
4. 192 cubic feet
5. 208 sq ft

Keep It Fresh: 1. 19 · 2. $90

Every answer above comes from the workbook's own Answer Key. The book behind this lesson: 6th Grade Math Workbook: Real-World Problem Solving, Chapter 10 (The Entrepreneur).

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