

LESSON PLAN: Who Bears a Per-Unit Tax?

Teacher: _____

Teaching date: _____

Course: AP Microeconomics

New original free-sample lesson. Not an excerpt from a paid lesson.

Teacher planning document. Keep the separate answer key and modeled teaching slides out of the student handout. Planned duration is 40 minutes for students who already know the Unit 2 prerequisites; the timing has not been classroom piloted.

I. Lesson overview

Field	Lesson specification
Unit	Unit 2: Supply and Demand
Topic	A seller-remitted per-unit tax in a stipulated competitive bottle market
Learners	AP Microeconomics students with prior supply/demand, surplus, and area practice
Duration	40 minutes
Aim	How can a graph show who bears a tax, what the government receives, and which trades no longer happen?
Framework	Effective Fall 2026 AP Microeconomics CED, Topic 2.8; POL-1.A; related knowledge POL-1.A.2 through POL-1.A.6; graphing skill 4.C
Conceptual thread	Separate the legal obligation to remit a tax from its economic burden; distinguish transferred revenue from forgone gains from trade
Materials	Six-page student handout; separate teacher answer key; ten-slide teacher presentation; calculator; pencil and ruler; two shading patterns

This is a bounded model lesson, not a policy recommendation. Every bottle quantity and price is illustrative simulated data. No conclusions about an actual bottle market, actual tax revenue, or the overall merits of a real tax follow from it.

II. Framework alignment

The [official AP Microeconomics CED, effective Fall 2026](#), printed page 55, PDF page 62, places government intervention in Topic 2.8. The lesson practices POL-1.A.b and POL-1.A.c through graph interpretation and calculations; identifying the policy supports POL-1.A.a. It addresses taxes within

the POL-1.A.2 through POL-1.A.6 knowledge sequence. It does not claim to teach every price-control or subsidy example within that topic.

The numbered tasks give the alignment an observable purpose: tasks 3-5 trace the tax's market effects; task 6 distinguishes revenue and efficiency loss; tasks 7-8 examine incidence. Tasks 2, 4, and 6 practice skill 4.C by showing a changed outcome on labeled axes. Baseline equilibrium and surplus reasoning are prerequisites, not separate new lessons.

There is no invented NYS standard and no claim of College Board approval. The exit questions and feedback criteria are original practice, not official AP scoring guidance. The published framework is an alignment reference; its diagrams, exam questions, and prose have not been reproduced.

III. Learning objectives

By the end of the lesson, students should be able to:

1. Construct and label the original and taxed market outcomes from the supplied schedule, retaining correct price and quantity units (Topic 2.8; skill 4.C).
2. Calculate buyer and seller burdens per traded bottle, daily burdens on traded bottles, and percentage shares using the original price as the comparison point (POL-1.A.c).
3. Identify and calculate a tax-revenue rectangle and deadweight-loss triangle, then explain what the lost quantity represents under the stated efficient-market assumptions (POL-1.A.3 through POL-1.A.5).
4. Evaluate a legal-remittance claim using price evidence and extend incidence reasoning to a market with unequal price responsiveness (POL-1.A.6).

Success requires agreement between the table, graph, arithmetic, and explanation. Correct arithmetic with an incorrectly labeled seller receipt does not establish mastery of the model.

IV. Academic language and key terms

Reasoning language: predict, locate, calculate, compare, evaluate, justify, distinguish, transfer, assumption, percentage share.

Content vocabulary: equilibrium, quantity traded, buyer price, seller receipt, per-unit tax, legal remittance, economic incidence, government revenue, deadweight loss, elasticity.

Use the same notation throughout: E_0 , Q_0 , and P_0 are the original equilibrium, quantity, and price; E_{tax} and Q_t refer to the taxed outcome; P_b is the buyer price and P_s is the seller's retained price. Read P_b and P_s at the same Q_t . Say "dollars per bottle" for a price or wedge and "dollars per day" for an area-based daily total. Do not interchange "revenue," "burden," and "deadweight loss."

Begin with the handout's remit/receipt meanings, then attach each term to an action or graph location. Have learners say what a seller actually keeps rather than relying on the unqualified phrase "the price."

V. Learner readiness and differentiation

No class demographics, names, diagnoses, or student counts are supplied. The adopting teacher should identify accommodations and grouping from their actual class rather than infer them from this plan. Teacher planning notes: _____.

Prerequisite check: students must be able to plot a linear schedule, find a competitive equilibrium, interpret price on demand/supply, understand gains from trade, and calculate rectangle/triangle areas. If this is not secure, use a separate prerequisite lesson or allow more than 40 minutes. Do not hurry a first introduction to surplus through the activity merely to meet the planned clock.

Access supports: provide the printed data table and blank axes already included; read instructions aloud when needed; allow calculator use; enlarge the axes; label with words and patterns rather than color alone. A student may orally explain reasoning while another records it, but each completes the individual exit check. Apply actual accommodation plans, including extended time, as appropriate.

Language supports: preview remit, retain, and foregone; use "Buyers pay ____, sellers keep ____, and the difference is ____." Invite a learner to explain in everyday language before adding the formal incidence term. These frames do not supply the numerical answer.

Extension without new numbered tasks: ask a student who finishes early to verify that the two per-bottle burdens sum to the tax, explain why an equally sized burden in this model is not universal, or describe which assumption would fail in an externality market. Keep this optional so it does not become an unkeyed assessment.

VI. Lesson plan and pacing

The six phases below sum to 40 minutes. Teacher actions, student actions, look-fors, and differentiation should be rendered as five native table columns in the Word plan.

Phase and time	Teacher actions and script	Student actions	Observer look-fors	Differentiation
Launch and prediction, 0-2 minutes	Distribute all student pages, keep the key private, and display the title/prediction slide. Say: "Today we will test a tax claim with a model, not vote on a real policy." Confirm bottles/day and dollars/bottle. Collect a few contrasting predictions without grading them.	Read the scenario and answer task 1 with a reason. Keep the prediction for later revision.	Learners give a reason, identify the hypothetical setting, and can locate the market table. Predictions are treated as starting hypotheses.	Read the prompt aloud; allow a short verbal prediction followed by a written phrase. Keep the unit labels visible.

Phase and time	Teacher actions and script	Student actions	Observer look-fors	Differentiation
Establish the baseline, 2-9 minutes	Use the blank-axis slide while students attempt task 2. Ask: "At which table row do buyer and seller prices agree?" Check curve names and units before displaying the baseline model at the end of this phase. Explain any correction through the schedule.	Plot D and S; label E_0 , Q_0 , and P_0 on page 2; record the original values. Compare their graph with the delayed model.	Student graphs reflect table points; equilibrium labels refer to one common quantity and price; corrections preserve the student's working.	Supply a ruler and larger axes as needed; ask a learner to identify points orally before plotting. Fast finishers check the equation intersection.
Add and graph the tax, 9-19 minutes	Allow 3 minutes for task 3 and 7 for task 4. Keep the answer graph hidden while students fill the tax column. Ask: "What must the buyer pay so the seller can keep the supply price and remit \$4?" Then ask students to trace vertically at Q_t . Reveal the tax model only after an attempt.	Add \$4 to every original supply price; draw $S + \text{tax}$; locate E_{tax} , Q_t , P_b , and P_s ; show the wedge and complete the check.	Taxed supply is shifted vertically by the same amount; students distinguish buyer payment from seller receipt and read both at the same quantity.	Chunk the instructions into curve, intersection, and two-price steps; use the sentence frame from section V. Avoid supplying the taxed row before students search.

Phase and time	Teacher actions and script	Student actions	Observer look-fors	Differentiation
Account and measure welfare, 19-31 minutes	Allocate 6 minutes to task 5 and 6 to task 6. Circulate to check the original comparison price, traded quantity, and daily units. Students shade the page 2 graph; the page 4 axes are an optional clean-copy space. Ask: "Which trades still occur? Which interval stops trading?" Reveal worked accounting and welfare slides after each attempt.	Complete burden calculations and shares. Shade distinct revenue and DWL regions, calculate areas, and explain the quantity decline and foregone interval.	Burdens sum to the tax; shares sum to 100%; the revenue rectangle uses Q_t ; the triangle lies between the original and taxed quantities. Explanations distinguish transfers from lost trades.	Offer area formulas already printed; allow patterned shading without colored pencils. If time is tight, preserve the existing graph rather than require a redraw.
Evaluate and transfer, 31-37 minutes	Allow 4 minutes for task 7 and 2 for task 8. Ask pairs to cite actual prices before judging the legal-remittance claim. Revisit task 1. After task 8, discuss responsiveness in percentage terms; do not present line steepness as a universal elasticity measure.	Write the claim evaluation, explain the changed remitter under the same assumptions, revise or support the prediction, and apply the responsiveness comparison to another market.	Reasoning uses buyer and seller price changes; learners qualify the remitter result to this model and distinguish elasticity from unscaled slope.	Use one short oral rehearsal before writing; prompt for one specific price comparison. Extension learners identify why equal sharing in this example is not a universal rule.
Individual exit check, 37-40 minutes	Hide answer-bearing slides. Ask for one response on each of tasks 9-12 without partner consultation. Collect the exit page or responses; keep answer letters in the separate key until submission.	Answer the four fixed-choice questions independently using their completed graph and calculations.	Each learner submits four choices, allowing the teacher to identify quantity, retained-price, revenue, and elasticity misunderstandings separately.	Apply actual timing or response-format accommodations. Preserve the same questions and choices; do not replace independence with a group answer.

VII. Assessment and next teaching decision

Task 1 is an ungraded prediction. During task 2, check that curves come from the table rather than a remembered sketch. During task 4, require the wedge and both price labels before accepting a verbal "price rises" answer. During task 5, check per-bottle units before daily totals. During task 6, ask students to identify the nontraded interval before accepting an area formula.

Use the four exit items diagnostically, one check per concept. An error on task 9 calls for rechecking the taxed intersection; an error on task 10 calls for tracing from buyer payment down to original supply; an error on task 11 calls for distinguishing the tax per unit from aggregate revenue; an error on task 12 calls for revisiting relative responsiveness. Do not equate one four-item exit check with broad AP readiness.

Next-lesson warm-up can use an anonymous common error from this work: redraw the relevant graph location or repair a mislabeled daily total. Continue to subsidies or unequal-incidence models only when students can account for both prices and the traded quantity. No homework, unit test, or additional graded quiz is invented here.

VIII. Assessment criteria and AP skill connection

Use the separate teacher key for worked answers and any optional practice-point allocation. This plan does not create a competing numeric rubric. The exit check contains four original multiple-choice items, with one selected response required per item.

For written/graph work, look for four types of evidence: correctly located and labeled outcomes; arithmetic that uses the correct quantity with units; distinction between revenue and DWL; and a claim supported by the model's prices and assumptions. Accept a correct explanation in different wording. Ask students to repair consequential graph errors rather than award full model credit for internally consistent arithmetic based on a wrong Q_t .

The graph tasks practice showing a changed situation, the purpose of skill 4.C. They are not reproductions of an AP free-response question, and the classroom checks do not predict an official exam score.

IX. Anticipated responses and misconceptions

Prediction and remittance: learners may expect sellers to bear everything because sellers send the payment. After the calculation, ask them to compare P_b and P_s with P_0 , rather than simply announce that the prediction was wrong. The evidence should revise the claim.

Graph construction: a student may add \$4 to demand or label the shifted curve as underlying production-cost supply without explaining the tax. Ask what a seller must charge to keep the original supply amount after remitting \$4. Retain D and S so their roles remain visible.

Seller receipt: a student may call the buyer price the seller's retained price. Ask for the remittance subtraction at Q_t and then locate the result on original S. Require units and curve location, not only a corrected number.

Total burden: a student may multiply a burden per bottle by the original quantity. Ask whether those bottles still trade after tax. Clarify that task 5 measures the burden on traded bottles, while task 6 separately measures lost gains on foregone trades.

Revenue and DWL: a student may label the entire tax rectangle as destroyed surplus. Ask who receives that money in the model and which transactions stop. The revenue is a transfer here; the triangle is the lost opportunity for gains from exchange.

Continuous versus discrete work: a student may list four individual numbered bottles and sum endpoint surpluses. Point back to straight-line interpolation and the continuous quantity convention. The reduction is four bottles/day represented by an interval; the welfare calculation is the triangle area, not a discrete endpoint sum.

Equal sharing and elasticity: a student may conclude taxes are always split equally, or that a steeper-looking curve always implies the larger burden. Ask which quantities and units generated this particular result and what "percentage responsiveness" means. Task 8 specifies relative responsiveness rather than asking students to infer it from an arbitrary drawing.

X. Teacher content knowledge and model limits

The original table implements demand price = $12 - Q/2$ and supply price = $Q/2$. Without tax their common point is $Q = 12$ and $P = \$6$. The seller tax is represented by buyer asking price = $Q/2 + 4$; its intersection with demand is $Q = 8$ and buyer price = $\$8$. At that quantity sellers retain $\$4$, leaving the stipulated $\$4$ wedge. These are derivations from the supplied original data, not observed-market estimates.

Relative to $\$6$, each side bears $\$2$ per traded bottle, so each bears $\$16/\text{day}$ on the eight bottles traded and half the tax per unit. Government receipts are $\$4 \times 8 = \$32/\text{day}$. The lost quantity is $12 - 8 = 4$ bottles/day; the continuous area is $1/2 \times \$4 \times 4 = \$8/\text{day}$. Keep this calculation separate from the reduction in either group's total surplus. The separate answer key supplies graph coordinates, full accounting, and acceptable response reasoning.

In this competitive fixed-curve model, changing which side legally remits the same tax leaves the required wedge and its economic outcome unchanged. It is not a claim that all administrative details of every actual tax are interchangeable. Avoid generalizing to tax evasion, collection costs, externality correction, or a changing underlying market, all excluded here.

For the transfer task, the less price-responsive side has less ability to adjust quantity and tends to bear more of the per-unit burden. Responsiveness is compared in percentage terms; slope depends on units and is not a universal elasticity measure. [OpenStax, section 5.3](#) was used to check the incidence concepts. Its wording, examples, and diagrams were not copied.

XI. Materials and preparation

Student materials: the six-page Student Handout PDF or editable DOCX, including the original data table, blank graph axes, calculation frames, response space, and four-question exit page. A pencil, ruler, and calculator are sufficient. Patterned shading avoids dependence on color.

Teacher materials: separate Teacher Answer Key PDF/DOCX; Teaching Slides PPTX/PDF; this Lesson Plan DOCX/PDF. The teacher slides intentionally contain delayed models. Their notes identify the task attempt required before each reveal. Do not distribute those modeled slides as a blank student worksheet.

Before teaching: confirm printed axis labels are legible; check that graph space and writing lines fit the page; verify the handout contains no key text; review the key and timings; prepare a place to collect individual exit responses. This package needs no live web connection during the lesson once its files are downloaded. Framework and factual-reference links are for teacher preparation.

Adopter adjustments: document actual accommodations, identify grouping, and extend time if the prerequisites are not secure. Retain the assumptions and units when adapting the model. The new lesson is an original companion on Unit 2 concepts, not a sample taken from an existing paid curriculum or a claim to reproduce a paid Review Board.