

PFL Academy

Teacher Guide: Chapter 2.2 — Understanding Tax Brackets and Tax Rates

OVERVIEW

TIME	MATERIALS	PREREQUISITES
45-50 Minutes	Student Activity Packet, Calculator	L-06 Federal and State Taxes

LESSON FLOW

5 min THE CHALLENGE

- Read Jared's tax misconception scenario.
- Discussion: "Has anyone heard that you can lose money by getting a raise? Why is this a myth?"

10 min CORE CONCEPTS

- Draw "staircase" visual of progressive brackets on board.
- Emphasize: ONLY income in each bracket is taxed at that rate.
- Define marginal (highest bracket) vs. effective (average) rates.
- Show 2023 tax brackets for single and married filing jointly.

25-30 min APPLY IT

- **Part A (12 min):** Walk through \$50,000 calculation step-by-step. Verify students understand the bracket math.
- **Part B (8 min):** Filing status comparison. Discuss marriage penalty vs. bonus.
- **Part C (5-10 min):** Tax avoidance vs. evasion classification. Emphasize legal boundaries.

10 min CHECK YOUR UNDERSTANDING

- Complete in class or assign as homework.
- Review Q3 (Taylor's calculation) to reinforce bracket math.

DIFFERENTIATION

Support

- Provide colored "staircase" diagram with each bracket as a step.
- Use money manipulatives to physically separate income into brackets.
- Pre-fill the first bracket calculation as a model.
- Create reference card with 2023 bracket thresholds.

Extension

- Calculate how much a \$10,000 raise actually costs in taxes at different income levels.
- Research how retirement contributions affect taxable income and brackets.
- Compare effective rates across different countries' tax systems.

ANSWER KEY

Part A: Calculate Taxes Using Brackets

\$50,000 Income (Single Filer):

$$\$11,000 \times 10\% = \$1,100$$

$$\$33,725 \times 12\% = \$4,047$$

$$\$5,275 \times 22\% = \$1,160.50$$

TOTAL TAX: \$6,307.50

1. Marginal Rate: 22% (the rate on the highest bracket reached)

2. Effective Rate: $\$6,307.50 \div \$50,000 \times 100 = 12.6\%$

Part B: Filing Status Comparison

Sara's Household (\$110,000 Married Filing Jointly):

$$\$22,000 \times 10\% = \$2,200$$

$$\$67,450 \times 12\% = \$8,094$$

$$\$20,550 \times 22\% = \$4,521$$

TOTAL TAX: \$14,815

$$\text{Effective Rate: } \$14,815 \div \$110,000 = 13.5\%$$

3. The "married filing jointly" status provides wider brackets. If Sara and spouse earned \$55,000 each and filed as single, more of each person's income would fall into the 22% bracket. Filing jointly keeps more income in the lower 10% and 12% brackets.

Part C: Tax Avoidance vs. Evasion

Action 1: LEGAL. Contributing to a 401(k) is a tax-deferred strategy explicitly allowed by tax law to encourage retirement savings.

Action 2: ILLEGAL. All income, including cash tips, must be reported. Underreporting income is tax evasion and can result in penalties and criminal charges.

Action 3: LEGAL. Home office deductions are allowed for legitimate business use of space, following IRS rules for calculation.

Check Your Understanding

1. C (\$15,275—only the amount above \$44,725 is taxed at 22%)

2. Only the income IN the new bracket is taxed at the higher rate. All previous income stays at the lower rates. A raise always increases take-home pay, just with diminishing returns at higher brackets.

Taylor's Tax (\$75,000 Single):

$$\$11,000 \times 10\% = \$1,100$$

$$\$33,725 \times 12\% = \$4,047$$

$$\$30,275 \times 22\% = \$6,660.50$$

TOTAL: \$11,807.50

$$\text{Effective Rate: } \$11,807.50 \div \$75,000 = 15.7\%$$

4. When both spouses earn similar high incomes, their combined income pushes more money into higher brackets than if they filed separately. When incomes are unequal, the lower earner's unused bracket space offsets the higher earner's burden.

5. Should recognize: Always accept raises/overtime because more income = more take-home pay. Use effective rate (not marginal) to estimate actual tax burden. Side income is taxed at marginal rate but still profitable.

COMMON MISCONCEPTIONS

Misconception	Clarification
"Moving to a higher bracket means ALL my income is taxed at that rate."	Only income WITHIN each bracket is taxed at that rate. If you earn \$50,000, only \$5,275 is taxed at 22%—not all \$50,000.
"I could make less money after a raise if it pushes me into a higher bracket."	Mathematically impossible. Even if a \$1,000 raise is taxed at 22%, you still keep \$780 more. You always come out ahead.
"My marginal rate is what I pay on all my income."	Your effective rate (total tax ÷ total income) is your actual tax burden. Someone "in the 22% bracket" likely pays 12-15% overall.