Grades 9-12

Lesson 9

INCOME TAXES

Key concepts: Government (public) spending, federal income taxes, state income taxes, marginal vs. average tax rates, tax planning

Summary: This lesson introduces students to federal and state income taxes, including why we have taxes and what is funded by taxation, average vs. marginal tax rates, taxes and financial (investment) planning, and tax avoidance vs. tax evasion.

NJ Core Curriculum Content Standards for Personal Financial Literacy:

Standard 9: 21st Century Life and Careers
- Standard 9.2 Personal Financial Liteacy
- 9.2.A. Income and Careers: 9.2.12.A.9, 9.2.12.A.10
- 9.2.B. Money Management: 9.2.12.B.4, 9.2.12.B.5
- 9.2.D. Planning, Saving, and Investing: 9.2.12.D.12
- 9.2.F. Civic Financial Responsibility: 9.2.12.F.2

National Standards in K – 12 Personal Finance Education (from Jump$tart Coalition):

Income and Careers:
- Standard 3: "Describe factors affecting take-home pay."

Saving and Investing
- Standard 5: "Explain how taxes affect the rate of return on investments."

National Content Standards in Economics (from Council for Economic Education):

Standard 16: economic role for government

Rationale: This lesson is intended for high school students in 9th through 12th grades during a 40 - 50 minute time period. The lesson teaches students how to understand federal and state income taxes.

Lesson Objectives: Students will be able to:
- Explain the purpose of taxation.
- Differentiate between marginal and average tax rates.
- Understand how taxes play a role in financial (investment) planning.
- Differentiate between tax avoidance and tax evasion.

Materials:

- Worksheet, without answers (Student version)
- Worksheet, with answers (Teacher version)
- Optional: Consult the IRS website for Educators at http://www.irs.gov/app/understandingTaxes/index.jsp

**Materials not attached to this file may be found in a separate resource file.*

State the Objective: Tell the students what they will be able to do upon conclusion of the lesson.

"Today we are going to learn about federal and state income taxes, why we pay them, how to make sense of tax rates, and how to consider them in financial planning."

The Lesson Procedure:

Introduction

When we have a job and earn income, we need to complete and file tax forms. Americans generally do not like having to take the time to file tax returns and pay taxes by April 15th in each calendar year. Paying taxes is not popular. But without the revenue from collecting taxes, the government would not be able to provide a wide variety of services.

Throughout the year, our employer is required to withhold income tax payments from our paychecks. These are based on estimates of how much we will owe at the end of the year. At the end of the year, if we have overpaid taxes because too much was withheld, we complete an income tax return and then we are issued a refund. However, if not enough has been withheld during the year, we need to pay the balance when we file our return by April 15th.

U.S. or federal income taxes became public policy in 1913 with the ratification of the 16th Amendment of the U.S. Constitution that gave the Congress the right to charge and collect taxes. Over 40 U.S. states also levy and collect state income taxes. Even local governments may collect local income taxes.

This lesson will help demystify the ins-and-outs of federal and state income taxes.

Why Taxes?

The federal government uses tax revenue to provide services and protections for U.S. residents. Funded by tax revenue, some of the largest shares of expenses in the federal budget each year are national defense and homeland security, health care and other social safety net programs such as food stamps (now called SNAP), education, veterans' affairs, transportation safety, space exploration, scientific and medical research, promotion of U.S. business, consumer protection, interest on the national debt, etc.

State governments collect income (and sales) taxes to provide services such as state police, state parks and beaches, road maintenance, and unemployment compensation, but the lion's share of state spending supports P/K – Grade 12 education.

Through our elected representatives, the American people decide which goods and services are best provided and paid for with pooled funds (that is, taxes). Imagine if there were no tax dollars with which to build roads. What if everyone was responsible for paving the space in front of their house—or not? What would your ride to school today have been like: one part blacktop, one part dirt or mud, one part pebbles . . .?

Key Tax Lingo:

Adjusted Gross Income (AGI): the amount of gross (total) minus your deductions.

Tax deduction: an amount subtracted from Adjusted Gross Income to lower the amount of tax owed. Home mortgage interest, local property tax payments, contributions to charity, and health or business expenses are the most common.

Tax credit: a direct reduction from the amount of taxes owed (not a deduction from income); tax credits are usually targeted to a policy or objective such as a child care tax credit, a residential energy improvement tax credit, a credit for certain education expenses, or a business tax credit for starting an employee pension program.

Personal exemption: a dollar amount provided by the federal government (e.g. $3,700 in 2011) that is deducted from income for yourself and each "dependent" such as a child.

Taxable income: the amount of income that is taxed after all deductions but before tax credits.

Flat tax: a percentage tax rate that is the same across all levels of income.

Progressive tax: tax rates that increase as income rises.

Marginal tax rate: the rate at which the last (highest) dollar of income is taxed. Margin means "extra" or "added."

Marginal tax bracket: the dollar range in income that corresponds to a marginal tax rate.

Average tax rate: the amount of total taxes paid/owed divided by total income; this gives a sense of what the average income tax burden for an individual.

Exclusions: dollar amounts of income that are tax-exempt, or not subject to federal income tax. An example would be interest on most U.S. state and municipal bonds.

Tax-deferred income: income to be taxed at a later date, such as interest/earnings from a traditional Individual Retirement Account (IRA).

Personal exemptions, deductions, and certain investments that can exclude or defer income will lower your income tax liability. It is perfectly legal to try to lower your taxes by investing in bonds with tax-exempt interest, saving in IRAs for your own retirement, taking the proper number of personal exemptions, and other tax credits. This is called “tax avoidance.”

What is *not* legal and is a federal crime is tax evasion. Tax evasion means evading taxes through illegal means. Normally, this includes not reporting or under-reporting earned income, even the smallest amount of income. Just because you do not report income does not mean your employer has not reported it to the Internal Revenue Service. Penalties and interest owed on unpaid taxes piles up very fast. It is best to try to reduce taxes through legal means only.

Marginal vs. Average Tax Rates

One of the most misunderstood concepts with income taxes is being able to explain “What tax bracket am I in?” and “What is my average tax rate?”

To answer these questions, let’s start with state income taxes because they are a bit simpler. That is because many state income taxes are a “flat tax,” an equal percentage tax rate on all taxable income. For example:

> If my taxable income = $10,000 and the state income tax is 3%, then the tax owed = ($10,000 x .03) = $300
>
> This means that my state tax bracket is 3%; I pay 3% at the marginal for every dollar earned, and my average tax rate is also 3%.

Federal income taxes are not flat; they are progressive. That is, the marginal tax rate rises as income rises. This means a higher proportion of income is taxed from wealthier people than from poorer people. “Marginal” means on the border or edge. A person pays one rate on part of their income and a higher rate on income above a threshold. The top marginal tax rate is the percent paid on only the income above a certain amount.

In 2011, the United States has 6 marginal tax rates for income, ranging from 10% to a top rate of 35%.

Some interesting historical highlights:

- When the U.S. income tax was instituted in 1913, the top marginal tax rate was 7.0%
- By 1921, the top marginal tax rate rose to 73.0%.
- In 1922, it was lowered to 56.0% and in 1925 to 25.0%.
- With the country's economic needs during the Great Depression and the wartime needs during World War II, the top marginal income tax rate again increased gradually from 63.0% in 1932 to 94.0% in 1945.
- In 1979, the top rate was lowered to 70.0% and in 1982 to 50.0%.
- Since 1987, the top marginal tax rate has hovered near the 30s, and in 2003 became 35%, where it is today.

To best understand how the marginal federal income tax rates work in practice, have students complete the Worksheet about tax rates and the difference between marginal tax brackets and the average tax burden.

After they complete the Worksheet, review the answers.

Closing the Lesson:

Review with students the importance of taxes, what they fund and why it is important to pay them. Also review the most-often-misunderstood concept that federal income is taxed at marginal rates, but that one's average tax rate is lower. See the suggestions page for "Ways to End and Review Lessons" for additional ideas.

Ways to End and Review Lessons

Quizbowl: Separate the students into two teams and ask questions related to the lesson, i.e. What are the potential financial risks of avoiding taxes illegally? What is the difference between a marginal tax rate and an average tax rate?

Debate: Two groups of students could debate whether a certain tax (named by the instructor), tax deduction, or tax credit is fair. For example, is fair to award a tax credit to a person for buying an electric car that gets 40 miles a gallon but not a clean diesel fuel car that gets 40 miles a gallon?

Jigsaw: Jigsaw students into three groups and assign each a specific question from the lesson to answer together, with one person from each team acting as the spokesperson.

Sample questions:

Describe why it is important to pay federal income taxes, state income taxes. What services are funded by these taxes?

What can you do to try to save money on taxes? Remember, trying to reduce your taxes is legal, but evading taxes is not.

Peer Education through Skits, Videos: Often learning is reinforced or students learn best by teaching others. Have students write a script and act it out in class with the objective of teaching each other (their peers) about the lesson. A skit or a student-produced video could show a citizen asking a tax question over the phone, in person, or in an online chat.

Misinformation: Quote information from the day's lesson that is purposely erroneous. Call on various students to restate the information correctly.

What's left out? Supply students with statements that have some information missing. This can be done orally or it can be done on a blackboard/whiteboard. Ask students to provide the missing information.

Pair and Share: Group students into pairs and ask each pair to exchange two or three new things learned during the day's lesson. Call on select pairs to share with the whole class what has been learned.

Worksheet: Calculating Marginal vs. Average Taxes

Federal Tax Brackets and Rates in 2011 for Single Persons

From:	To:	Taxed at Marginal Rate of:
$0	$8,500	10%
$8,501	$34,500	15%
$34,501	$83,600	25%
$83,601	$174,400	28%
$174,401	$379,150	33%
$379,151+		35%

Directions: Answer the following questions using the 2011 U.S. marginal income tax rates for a single individual.

If Jaime earns $10,000 from a job that he works after school and during the summer, how much federal income tax does he owe given the table above?

What is Jaime's marginal tax rate, that is on the highest dollar?

What is Jaime's average tax rate?

Suppose the personal exemption for Jaime is $3,700. How much federal tax would he owe?

How does this change Jaime's marginal tax rate? Average tax rate? How much taxes does he now owe?

If Tameka earns $50,000 from her job as an accountant, how much federal income tax does she owe based on the above table?

What is Tameka's marginal tax rate, that is, on the highest dollar?

What is Tameka's average tax rate?

Suppose the personal exemption for Tameka is $3,700 for herself and $3,700 for each of her 3 children. How much federal tax would she owe?

How does this change Tameka's marginal tax rate? What is her new average tax rate? How much in taxes does she now owe?

Worksheet: Calculating Marginal vs. Average Taxes

Worksheet, with answers (Teacher Copy)

Federal Tax Brackets and Rates in 2011 for Single Persons

From:	To:	Taxed at Marginal Rate of:
$0	$8,500	10%
$8,501	$34,500	15%
$34,501	$83,600	25%
$83,601	$174,400	28%
$174,401	$379,150	33%
$379,151+		35%

Directions: Answer the following questions using the 2011 U.S. marginal income tax rates for a single individual.

If Jaime earns $10,000 from a job that he works after school and during the summer, how much federal income tax does he owe given the table above?

- Jaime's first $8,500 is taxed at 10%
- Jaime's last $1,500 is taxed at 15%

($8,500 x .10) + ($10,000 - $8,500 x .15), or
($8,500 x .10) + ($1,500 x .15), or
($850 + $225) = $1,075 owed in taxes

What is Jaime's marginal tax rate, that is on the highest dollar?

15%. This means that Jaime is in the "15% tax bracket."

What is Jaime's average tax rate?

This is $1,075 ÷ $10,000 = 10.75%. Jaime's average tax rate (liability) is less than is marginal tax rate because not every dollar of income was taxed at the highest rate. The first $8,500 was taxed at 10% and the next $1,500 was taxed at 15%.

Suppose the personal exemption for Jaime is $3,700. How much federal tax would he owe?

Taxable income = ($10,000 - $3,700) = $6,300

How does this change Jaime's marginal tax rate? Average tax rate? How much taxes does he now owe?

Jaime's marginal tax rate is now 10% for all of his taxable income.
($6,300 x .10) = $630 owed in taxes.
Jaime's new average tax rate is = $630/$6,300 or 10%, equal to his marginal rate because all of his taxable income is in the lowest tax bracket.

If Tameka earns $50,000 from her job as an accountant, how much federal income tax does she owe based on the above table?

- Tameka's first $8,500 is taxed at 10%
- Tameka's next (34,500 - $8,500) or $26,000 is taxed at 15%
- Tameka's last (50,000 - $34,500) or $15,000 is taxed at 25%

($8,500 x .10) + ($26,000 x .15) + ($15,500 x .25)
($850 + $3,900 + $3,875) = $8,625 owed in taxes

What is Tameka's marginal tax rate, that is, on the highest dollar?

25%. This means that Jaime is in the "25% tax bracket."

What is Tameka's average tax rate?

This is $8,625 ÷ $50,000 = 17.25%. Tameka's average tax rate (liability) is less than is marginal tax rate because not every dollar of income was taxed at the highest rate. The first $8,500 was taxed at 10%, the next $26,000 was taxed at 15%, and the final $15,000 was taxed at 25%.

Suppose the personal exemption for Tameka is $3,700 for herself and $3,700 for each of her 3 children. How much federal tax would she owe?

Taxable income = ($50,000 - $3,700 x 4) = ($50,000 - $14,800) = $35,200.

How does this change Tameka's marginal tax rate? What is her new average tax rate? How much in taxes does she now owe?

Tameka's marginal tax rate for $35,200 is now just 15%. Her tax liability is also less because of the exemptions:

($8,500 x .10) + ($26,700 x .15)
($850 + $4,050) = $4,900 owed in taxes

Her new average tax rate is = $4,900/$35,200 or 13.9%, less than her marginal tax rate.

Note: Upon completing her income tax forms, Tameka would find that her tax bill would be reduced even further (lower than $4,900) when she includes the allowed federal standard deduction or alternatively if she itemizes deductions.