

Money and Finance

Unit 16 Overview: 6 lessons

Students learn the four kinds of taxes and add sales tax to a price, find gross and net income, compare paying by check, debit card, credit card and electronic payment, and keep a record of deposits and payments with a running balance. Then they find what helps when a family’s expenses are more than its income, and balance a simple budget. Every lesson in this unit is taught in 5th grade in some states only, so teach the ones your state lists; the unit can be spread through the year. The people, banks and businesses in the lessons are made up, and the lessons teach how money works, not what to choose.

THE UNIT, DAY BY DAY

Day 1	Pre-Check	What students already know, before the first lesson.
Day 2	16.1 Taxes and sales tax	I can tell the kinds of taxes and add sales tax.
Day 3	16.2 Gross income and net income	I can find gross income and net income.
Day 4	16.3 Ways to pay	I can compare ways to pay.
Day 5	16.4 Keep a financial record	I can keep a running balance.
Day 6	16.5 When expenses are more than income	I can fix a budget when expenses are too high.
Day 7	16.6 Balance a budget	I can balance a simple budget.
Day 8	Unit Review	The review, to go over together.
Day 9	Unit Test	Form A; Form B (other numbers) is for a retest.

GET READY FOR THE UNIT

- Play bills and coins, and price tags for a class store
- A made-up pay stub, a blank account register and a bank statement
- Tax cards, statement cards and story cards for sorting
- Budget cards for made-up families, and whiteboards and markers

HOW EACH LESSON GOES

- 1. Warm up** (5 min)
- 2. Teach** (10 min)
- 3. Try it together** (10 min)
- 4. Practice** (15 min)
- 5. Exit ticket** (5 min): a quick check on the lesson.

Each lesson page ends with the Animal Math sheets, makers, tools and quizzes for it. “Sheet 3” is the third worksheet of a pack; a color pack prints each sheet again in black and white.

CHECKING AS YOU GO

PRINTABLE

Pre-Check: Day 1, with a key

PRINTABLE

Unit Review: the day before the test

EXIT TICKET

Exit Tickets: one a lesson, two to a page

PRINTABLE

Unit Test: Forms A and B, with keys

Money and Finance

Lesson 16.1: Taxes and sales tax

GOAL Students tell the four kinds of taxes apart (income, payroll, sales and property) and find the sales tax on a price as so many cents for every dollar, then the total.

About 45 minutes

I can tell the kinds of taxes and add sales tax.

THE LESSON

- 1 Warm up** (5 min) Mental math: 8×7 cents, 20×5 cents, and 135 cents written in dollars and cents.
- 2 Teach** (10 min) Name the four taxes, with an example of each.
Income tax: once a year, a plumber pays a share of all she made that year. Payroll tax: money for Social Security and Medicare comes out of every paycheck. Sales tax: added at the register. Property tax: paid each year on a house or land. Then a lamp costs \$30 and sales tax is 7 cents for every \$1: 30×7 cents = 210 cents, or \$2.10, so the total is $\$30 + \$2.10 = \$32.10$.
Say: "Sales tax is so many cents for every dollar of the price. I multiply, write the cents as dollars, and add the tax to the price."
- 3 Try it together** (10 min) Partners sort tax cards: a tax added to a \$12 kite, a tax a family pays each year on its cabin, Social Security money on a bus driver's pay stub, a tax on what a dentist made in a year. Then they price the class store at 5 cents for every \$1: \$8, \$19, \$40 and \$63.
- 4 Practice** (15 min) Students match six stories to the four taxes and find the sales tax and the total for five prices at 8 cents for every \$1 on sheet 1 of Income, Taxes and Budgets.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 16.1** and circle a face beside the "I can" line. On question 1, look for property tax for Ann's land and payroll tax for Al's Medicare; income tax for Al means a paycheck tax and a tax on a year's earnings were mixed up. On question 2, look for a tax of \$1.50 (25×6 cents) and a total of \$26.50; \$31 adds 6 dollars, not 6 cents for every dollar.

Need help? Count the tax on a small price with coins first: on a \$4 price at 7 cents for every \$1, put 7 pennies on each of 4 play dollars.

Ready for more? A \$50 jacket costs \$53.50 with tax. How many cents for every \$1 is the sales tax?

GET READY

- Tax cards to sort into four groups
- Price tags for a class store
- Whiteboards and markers

WORDS TO USE

tax: money people pay the government for schools, roads and other services

income and payroll tax: a tax on what a person earns in a year; money for Social Security and Medicare taken from each paycheck

sales tax: tax added to the price of things you buy

property tax: tax paid each year on a house or land

ASK

- Who pays this tax, and when?
- How many dollars is the price? How many cents for each dollar?
- Why is the total more than the price?

WATCH FOR

Mixes up income tax and payroll tax. Payroll tax comes out of every paycheck; income tax is worked out on a whole year's earnings.

Adds the rate as dollars: \$30 + \$7. The rate is cents for every dollar: 30 dollars at 7 cents is 210 cents, \$2.10.

Gives the tax as the total. The total is the price plus the tax.

ON ANIMAL MATH

PRINTABLE

Income, Taxes and Budgets: sheet 1

EXIT TICKET

5th Grade Money and Financial Literacy Exit Tickets: Exit Ticket 16.1

Money and Finance

Lesson 16.2: Gross income and net income

GOAL Students find gross income (the hours times the pay an hour), see what is taken out of a paycheck for taxes and other deductions, and find net income: gross minus deductions. They find a missing gross by adding back.

About 45 minutes

I can find gross income and net income.

THE LESSON

- 1 Warm up** (5 min) Mental math: $10 \times \$14$, then $20 \times \$14$ and $30 \times \$14$. How does each answer help with the next?
- 2 Teach** (10 min) Show a pay stub: Sam works 25 hours at \$16 an hour, so his gross pay is $25 \times \$16 = \$400$. Taken out: income tax \$30.00, Social Security \$24.80 and Medicare \$5.80, \$60.60 in all. His net pay is $\$400.00 - \$60.60 = \$339.40$. Then a missing gross: a net income of \$1,350 with \$250 taken out came from a gross of $\$1,350 + \$250 = \$1,600$.
Say: "Gross is everything earned. Net is what is left after taxes and deductions are taken out, so net is always less than gross."
- 3 Try it together** (10 min) Partners make a pay stub for a made-up job, 30 hours at \$14 an hour with \$42 taken out for taxes, and find the gross (\$420) and the net (\$378). Then they fill in a table: gross \$900 with \$135 taken out (net \$765), and net \$1,190 with \$210 taken out (gross \$1,400).
- 4 Practice** (15 min) Students read two pay stubs, find the missing gross, deductions or net in a table, and explain the difference on sheet 2 of Income, Taxes and Budgets.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 16.2** and circle a face beside the "I can" line. On question 1, look for a gross of \$300 ($20 \times \$15$) and a net of \$255; \$345 adds the taxes, and \$35 adds the hours and the pay. On question 2, look for \$1,200 ($\$1,020 + \$180$); \$840 subtracts, which would make the gross less than the net.

Need help? Draw a bar for the gross pay, split into what is taken out and the net, and write the amounts you know on it.

Ready for more? A job pays \$18 an hour. How many hours make a gross pay of \$540? If \$81 is taken out, what is the net?

GET READY

- A made-up pay stub on chart paper
- Blank pay stubs for pairs
- Whiteboards and markers

WORDS TO USE

gross income: all the money earned, before anything is taken out

net income: the money you take home: gross income minus taxes and other deductions

deduction: money taken out of a paycheck, like taxes or health insurance

ASK

- How do you find the gross pay from the hours and the pay an hour?
- Which is bigger, gross or net? Why?
- If you know the net and what was taken out, how do you find the gross?

WATCH FOR

Adds the deductions to the gross. Taxes are taken out: net is gross minus deductions, so it is smaller.

Subtracts to find a missing gross. The gross is the whole: the net plus what was taken out.

Lines up \$400 and \$60.60 by their last digits. Write \$400 as \$400.00 and line up the points.

ON ANIMAL MATH

PRINTABLE

Income, Taxes and Budgets: sheet 2

EXIT TICKET

5th Grade Money and Financial Literacy Exit Tickets: Exit Ticket 16.2

Money and Finance

Lesson 16.3: Ways to pay

GOAL Students compare paying by check, debit card, credit card and electronic payment by where the money comes from, name an advantage and a disadvantage of each, and tell which fits a story.

About 45 minutes

I can compare ways to pay.

THE LESSON

- 1 Warm up** (5 min) List ways people pay at a store or pay a bill: cash, card, phone, check.
- 2 Teach** (10 min) Fill the chart by asking where the money comes from. A check is a written order to your bank: it leaves a record but is slow. A debit card takes money from your account right away: you spend only what you have, but a lost card can be used by someone else. A credit card borrows from the bank: you can pay today, but interest is added if the bill is not paid in full. An electronic payment is quick, but a typing mistake can send money to the wrong person.
Say: "Every way to pay has a good side and a bad side. First I ask: is it money I have, or money I borrow?"
- 3 Try it together** (10 min) Partners sort statement cards under the four ways and mark each A or D (quicker than counting out cash at the register: debit card, A), then match story cards to a way (Raj sends his aunt \$20 from his bank's app: electronic payment).
- 4 Practice** (15 min) Students circle advantages and disadvantages, match ways to pay to stories and find what credit adds on sheet 3 of Income, Taxes and Budgets. Writing Checks sheets 1 and 3 review the parts of a check.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 16.3** and circle a face beside the "I can" line. On question 1, look for credit card for Mo and check for Rosa; debit card for Mo mixes up paying now with paying later. On question 2, look for A for the debit card and D for the credit card; A for the credit card treats borrowing as free money.

Need help? Act it out with play money: a check handed over, bills taken from a bank box at once (debit card) or borrowed (credit card).

Ready for more? Write a story for each of the four ways, then trade and sort.

GET READY

- A chart of the four ways to pay: advantages, disadvantages
- Statement cards and story cards to sort
- Play money and a made-up sample check

WORDS TO USE

debit card: a card that takes money from your bank account right away

credit card: a card that borrows money from a bank, to pay back later

advantage and disadvantage: a good side; a bad side

ASK

- Where does the money come from: your account now, or a loan to pay back later?
- Advantage or disadvantage? For whom?
- Which way fits this story? Why not the others?

WATCH FOR

Thinks a debit card and a credit card work the same way. A debit card spends money you have; a credit card borrows it.

Thinks a credit card is free money. The bank must be paid back, with interest if the bill is not paid in full.

Calls a way all good or all bad. Name one good side and one bad side of each.

ON ANIMAL MATH

PRINTABLE

Income, Taxes and Budgets: sheet 3

PRINTABLE

Writing Checks: sheets 1 and 3, a review

EXIT TICKET

5th Grade Money and Financial Literacy Exit Tickets: Exit Ticket 16.3

Money and Finance

Lesson 16.4: Keep a financial record

GOAL Students keep a record of an account: they write each deposit and payment, find the balance after every line, and check the last balance as the start plus all deposits minus all payments.

About 45 minutes

I can keep a running balance.

THE LESSON

- 1 **Warm up** (5 min) On whiteboards: $\$34.60 + \$12.00$, then $\$46.60 - \$8.95$.
- 2 **Teach** (10 min) Start a register with $\$47.80$ on November 1. Nov 2, a $\$30.00$ deposit for dog walking: $\$47.80 + \$30.00 = \$77.80$. Nov 6, a $\$12.45$ payment for an art kit: $\$77.80 - \$12.45 = \$65.35$. Nov 9, $\$8.90$ for lunch: $\$56.45$. Nov 15, a $\$15.00$ gift: $\$71.45$. Check: deposits $\$45.00$, payments $\$21.35$, and $\$47.80 + \$45.00 - \$21.35 = \$71.45$.
Say: "Each line starts from the balance above it. Money in, I add; money out, I subtract."
- 3 **Try it together** (10 min) Partners make a record of a made-up week from event cards: a start of $\$23.15$, $\$12.00$ earned raking leaves, a $\$6.80$ book, $\$4.25$ of snacks and $\$10.00$ of birthday money. They find each balance ($\$35.15$, $\$28.35$, $\$24.10$, $\$34.10$) and check the last one with the start plus deposits minus payments.
- 4 **Practice** (15 min) Students fill in a register with a running balance and totals and make a record from a list on sheet 4 of Income, Taxes and Budgets, then find the missing balances on a bank statement on sheet 2 of Checking and Savings Accounts and follow two accounts through a month on sheet 3.
- 5 **Exit ticket** (5 min) Students do **Exit Ticket 16.4** and circle a face beside the "I can" line. On question 1, look for $\$87.40$, $\$68.65$ and $\$78.65$; a balance that goes down after Mowing means a deposit was subtracted. On question 2, look for $\$48.75$; $\$66.25$ adds the book too.

Need help? In the Money tool, lay out the starting balance, add each deposit and take away each payment, and read the total after every line.

Ready for more? Make a record of a made-up month with 6 lines where the balance never drops below $\$10$, and check it the second way.

ON ANIMAL MATH

- PRINTABLE** **Income, Taxes and Budgets:** sheet 4
- PRINTABLE** **Checking and Savings Accounts:** sheets 2-3
- TOOL** **Money:** set Money to Coins and Bills, Show Total
- EXIT TICKET** **5th Grade Money and Financial Literacy Exit Tickets:** Exit Ticket 16.4

GET READY

- A blank account register on chart paper
- Event cards for a made-up week
- Whiteboards and markers

WORDS TO USE

deposit and payment: money put in (add it); money paid out (subtract it)

balance: the money in the account now

register: a record of every deposit and payment, with the balance after each

ASK

- Deposit or payment? Does the balance go up or down?
- Which balance does this line start from?
- How can you check the last balance?

WATCH FOR

Starts each line from the first balance. Each new balance starts from the balance on the line above.

Subtracts a deposit or adds a payment. Say "money in, add; money out, subtract."

Loses the cents or the point. Write whole dollars with .00 and line up the points.

Money and Finance

Lesson 16.5: When expenses are more than income

GOAL Students add a family's expenses, compare them with its income to find how much the budget is over, and tell which actions help (spending less on wants, earning more) and which do not (skipping needs, borrowing every month).

About 45 minutes

I can fix a budget when expenses are too high.

THE LESSON

- 1 Warm up** (5 min) Ask students to name things a family pays for each month, then sort them into needs and wants.
- 2 Teach** (10 min) The Hale family earns \$2,700 a month. Expenses: rent \$1,250, food \$725, car \$450, phone \$150 and fun \$300. Add them: $\$1,250 + \$725 + \$450 + \$150 + \$300 = \$2,875$, more than the income, so the budget is over by $\$2,875 - \$2,700 = \$175$. What helps? Spending less on wants, earning more, or both: \$100 less on fun and \$75 less on food covers it. What does not help? Skipping a need, like the car insurance, or borrowing \$175 every month: a loan must be paid back.
Say: "When expenses are more than income, a family can spend less, earn more, or both. Borrowing only moves the problem to next month."
- 3 Try it together** (10 min) Partners get a budget card: income \$3,300; rent \$1,450, food \$875, car \$600, bills \$350 and fun \$250. They find the total (\$3,525) and how much it is over (\$225), sort action cards into helps and does not help (drop an unused streaming service, take a weekend job, take a costly trip), and find changes that cover \$225.
- 4 Practice** (15 min) On sheet 5 of Income, Taxes and Budgets (questions 1 to 5 and 7 to 9), students decide whether three budgets balance, find how much the Reyes family is over, and sort what helps.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 16.5** and circle a face beside the "I can" line. On question 1, look for expenses of \$3,450 and over by \$250; \$6,650 adds the income to the expenses. On question 2, look for cooking at home; borrowing each month covers the gap now but must be paid back.

Ready for more? Find two other sets of changes that balance the Hale budget.

GET READY

- A made-up family budget on chart paper
- Budget cards and action cards for pairs
- Whiteboards and markers

WORDS TO USE

income and expenses: money that comes in, like pay; money that goes out

needs and wants: things a family must have; things it would like to have

over budget: expenses more than income

ASK

- Are the expenses more than the income? By how much?
- Which are needs? Which are wants?
- Does this cut expenses, add income, or only put off the problem?

WATCH FOR

Leaves an expense out of the total. Tick each line as it is added, and add again to check.

Thinks borrowing fixes the budget. A loan covers this month, but it must be paid back, often with interest.

Cuts a need first. Ask: can the family do without it? Look at the wants first.

Need help? Circle the needs in one color and the wants in another, then look for savings among the wants.

ON ANIMAL MATH

PRINTABLE

Income, Taxes and Budgets: sheet 5, questions 1 to 5 and 7 to 9

EXIT TICKET

5th Grade Money and Financial Literacy Exit Tickets: Exit Ticket 16.5

Money and Finance

Lesson 16.6: Balance a budget

GOAL Students balance a simple budget, where the expenses and the savings add up to the income: they find the savings that balance a budget, and pick a change that covers the whole amount a budget is over.

About 45 minutes

I can balance a simple budget.

THE LESSON

- 1 Warm up** (5 min) Ask: a family earns \$2,000 and plans to spend \$1,850. Is the budget balanced? How much is left to save?
- 2 Teach** (10 min) The Moss family earns \$3,000 a month: housing \$1,350, food \$700, car \$400 and bills \$250, then savings. The four expenses add up to \$2,700, so savings of $\$3,000 - \$2,700 = \$300$ balance the budget and use all the income. Then a budget that is over: income \$2,200, expenses \$2,280, over by \$80. Which one change balances it? Spending \$60 less on fun is not enough, nor is earning \$40 more; spending \$85 less on food covers the \$80.
Say: "A balanced budget uses the income and no more. A change balances it only if it covers the whole amount over."
- 3 Try it together** (10 min) Partners balance a weekly plan for a \$25 allowance (spend \$11, save \$6, college \$5, share the rest: \$3), then a family budget: income \$2,500; housing \$1,150, food \$650, gas \$200, phone \$100, fun \$150, and savings to balance it (\$250).
- 4 Practice** (15 min) Students finish question 6 on sheet 5 of Income, Taxes and Budgets, the two changes that balance the Reyes budget exactly, then find missing parts and make fraction plans on sheet 4 of Expenses, Profit and Saving, a 4th grade review.
- 5 Exit ticket** (5 min) Students do **Exit Ticket 16.6** and circle a face beside the "I can" line. On question 1, look for \$450 ($\$2,400 - \$1,950$); \$4,350 adds the income to the expenses. On question 2, look for spend \$150 less on fun, the only change that covers \$150; \$100 less on food leaves it \$50 over.

Need help? Draw a bar for the income and split it into a part for each expense; the part left is the savings.

Ready for more? Write a budget that is over by \$140, and two ways to balance it.

ON ANIMAL MATH

PRINTABLE

Income, Taxes and Budgets: sheet 5, question 6

PRINTABLE

Expenses, Profit and Saving: sheet 4, a review

EXIT TICKET

5th Grade Money and Financial Literacy Exit Tickets: Exit Ticket 16.6

GET READY

- Budget cards for made-up families
- Envelopes labeled Spend, Save, College, Share
- Whiteboards and markers

WORDS TO USE

balanced budget: a plan where expenses are not more than income

savings: money set aside and not spent; a planned part of a budget

ASK

- What do the parts you know add up to?
- How much is left to save? How do you check?
- Does this change cover the whole amount over?

WATCH FOR

Adds the income to the expenses. The parts add up to the income: subtract the known parts from it.

Picks a change that covers only part of the amount over. Compare each change with the amount over: it must be at least that much.

Leaves savings out of the plan. Savings is a planned part of the budget, like any expense.