

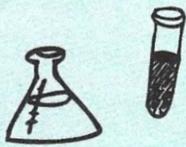


# STEM Careers

## Extension Activity

Technical occupations are defined as those related to science, technology, engineering, and mathematics. STEM occupations need workers with the ability to think logically and creatively when solving problems. Not every STEM job requires a four-year college degree. Educational requirements range from a high school diploma to a doctorate. Most STEM workers, however, have strong math and science abilities and skills that demand high wages in the job market. If you want to get ahead, stay ahead, and remain valuable to an employer, you must be prepared to keep learning. A variety of STEM careers appear below.

### Science



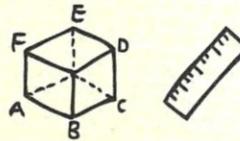
Geological Engineer  
Chemist  
Field Biologist  
Marine Biologist  
Scientist  
Physicist  
Doctor  
Nurse  
Dentist  
Health Science,  
Agricultural, Food,  
or Forest  
Technician

### Technology



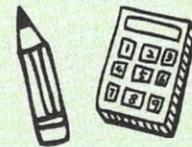
Computer Support  
Specialist  
Computer Software  
Engineer  
Network and  
Systems  
Administrators  
3-D Printing  
Engineer  
Manufacturing  
Materials  
Manager  
Information  
Security Analyst

### Engineering



Aerospace Engineer  
Electrical Engineer  
Draftsperson  
Architect  
Mechanical Engineer  
Civil Engineer  
Environmental  
Engineer  
Auto and Aerospace  
Mechanic  
Construction  
Manager

### Mathematics



Statistician  
Accountant  
Auditor  
Business Teacher  
Operations  
Researcher  
Mathematician  
City Planner

- Assignment: Put on your STEM inventor cap! Using the STEM skills of creativity and problem solving, create a pencil holder from a single sheet of paper without using tape or staples. Your holder can be a vertical or a horizontal product. Either way, it should keep one or more pencils, pens, or markers from rolling off your desk. Be sure to test your invention. Consider forming a rolled tube, using accordion folds, or tearing paper strips and weaving them together to design the holder you want. Folding or rolling the paper reinforces it, giving it strength under tension. By changing the shape of the paper, you change the way it resists force.



# Social Security and Medicare

## Extension Activity

The largest tax deducted from gross income is federal income tax. Income tax is used to pay for national defense, national parks, and other programs that benefit all citizens.

In the United States, income is taxed on a graduated scale. This means that people who earn more generally have to pay a larger portion of their income in taxes. It's a complicated formula. If you want to play with the numbers, you can use the chart below, which shows how federal income tax is calculated for a single person in 2017, with taxes due in 2018.

### Calculating Federal Income Tax

If taxable income is over	But not over	The tax is	% Of the amount over
\$0.00	\$9,325.00	10%	n/a
\$9,326.00	\$37,950.00	\$932.50 +	15% over \$9,325
\$37,951.00	\$91,900.00	\$5,226.25 +	25% over \$37,951
\$91,901.00	\$191,650.00	\$18,713.75 +	28% over \$91,901
\$191,651.00	\$416,700.00	\$46,643.75 +	33% over \$191,651
\$416,701.00	\$418,400.00	\$120,910.25 +	35% over \$416,701
\$418,401.00	or above	\$121,505.25 +	39.6% over \$418,401

### Did You Know?

- In mid-19th century America, families living in rural areas took financial responsibility for older members. By the 1920s, with more people moving away from farms to work and live in cities, the elderly found themselves without any means of support.
- The Great Depression in 1929 increased their plight.
- In August 1935, President Franklin D. Roosevelt signed the Social Security Act into law, creating a pension plan for older Americans.
- The government added spousal and survivor benefits in 1939.
- The Federal Insurance Contribution's Act (FICA) gives congress the power to tax workers and employers to fund Social Security and Medicare.
- The official age to receive full benefits is 65 to 67, depending on the year the recipient was born.
- In 1965, Congress created Medicare, a social insurance program designed to provide older adults with affordable health care coverage. Together, Social Security and Medicare are intended to furnish modest pension and health protection for senior citizens.



# Social Security and Medicare

## Extension Activity

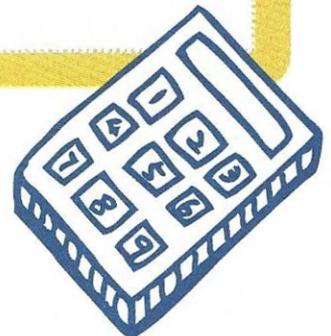
### Did You Know?

The social welfare programs called Social Security and Medicare are not free. Workers, even the self-employed, are required to contribute a portion of their wages to fund pension and medical care for older Americans. The workers' portion of what is called the FICA tax has increased over the years. In 2017, the employees' portion of the Social Security tax was 6.2 percent of their gross earnings up to \$127,200. They pay an additional 1.45 percent of their gross pay to fund Medicare. That means that 7.65 percent of a worker's paycheck is withheld to fund these government programs. Employers pay a matching amount. Self-employed workers pay the entire cost of the two taxes, 12.4 percent for Social Security and 2.9 percent for Medicare.

Assignment: Fill in the correct federal income tax for the incomes below.

**How much federal income tax, Social Security tax, and Medicare tax would you pay in 2017 if your income was:**

	Income tax	Social Security tax	Medicare tax
\$190,000			
\$70,000			
\$25,000			





# Sales Tax Overview

Extension Activity

## WHAT IS IT?

A percentage tax imposed on the retail price of most items.

A source of income for governments.

## USES

Human services, health care, police, jails, courts, transportation, colleges, schools, libraries, parks, and recreation.

# SALES TAX

## WHO PAYS IT?

Consumers and businesses.

## TAXABLE ITEMS

Household goods, restaurant food, furniture, gasoline, utilities, motels and hotels, liquor, and tobacco.

## Nontaxable (exempt) items

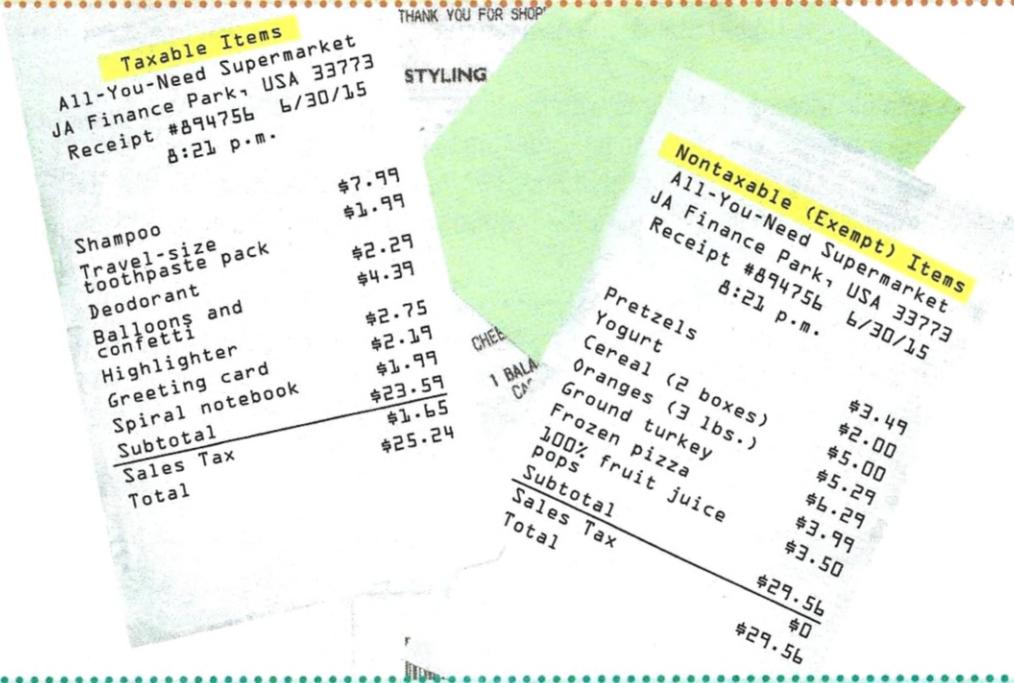
Groceries (most states), medicine, medical services, insurance



# Sales Receipt Analysis

## Extension Activity

All but a handful of states have a sales tax. Each state determines its own tax rate. The following receipts are from a state where the sales tax rate is 6 percent and there is an additional county sales tax of 1 percent. In this county, consumers pay a total of 7 percent in sales taxes. As in many states, nonfood items are taxable, but food and drugs are not. Sales tax is charged only on taxable items. Examine the two sample sales receipts. Compute the sales tax and final cost for the items found in your shopping cart at the bottom of the page.



### How to Compute Sales Tax

- Convert the percent (%) to a decimal. Example: 7% = .07
- Multiply the subtotal by .07. Example: \$23.59 x .07 = \$1.65
- Add the computed sales tax to the subtotal for the total that the consumer pays.  
 Example: \$23.59 + \$1.65 = \$25.24

- |   |                         |                        |
|---|-------------------------|------------------------|
| 1. Deodorant  | 7% sales tax = \$ _____ | Final price = \$ _____ |
| 2. Greeting card  | 7% sales tax = \$ _____ | Final price = \$ _____ |
| 3. Shampoo  | 7% sales tax = \$ _____ | Final price = \$ _____ |
| 4. Spiral notebook  | 7% sales tax = \$ _____ | Final price = \$ _____ |
| 5. Highlighter  | 7% sales tax = \$ _____ | Final price = \$ _____ |
| 6. Oranges  | 7% sales tax = \$ _____ | Final price = \$ _____ |
| 7. What is 7% sales tax on a used car that costs \$8,099? |                         | \$ _____               |
| 8. What is the total cost of the car including sales tax? |                         | \$ _____               |



# How to Complete a 1040-EZ Income Tax Form Extension Activity

On any given day, the government provides you with services. For example, you brush your teeth with government-provided water and you ride a bus to school provided by the city school board and that travels on government-constructed roads and highways. On the way to school, you may see a police officer directing traffic and pass a fire station. Citizens pay a variety of taxes to governments so that these services can be provided. Some taxes are based on the value of things we purchase, while others are based on the value of things we own. In the United States, the best known tax is based on what we earn: the income tax.

Each year most adults file income tax returns with the Internal Revenue Service (IRS) and pay taxes based on their income. Even students who have income from jobs or interest from savings accounts must file a return. Filing a tax return can be a complicated task. For that reason, many people use the services of accountants and other professionals to prepare their returns. The 1040-EZ, however, is simple to prepare.

- Assignment: Calculate the income tax for a student named Cory Spencer. Enter her personal information, identify her expenses and deductible income, and make the necessary calculations to find the taxable income. Use the tax forms and the tax table in the 1040-EZ Instruction Guide provided by your teacher to find the tax owed or the refund due.

Form 1040EZ (2017) Department of the Treasury—Internal Revenue Service

**1040EZ** **2017**

Your first name and initial: \_\_\_\_\_ Last name: \_\_\_\_\_ Your social security number: \_\_\_\_\_

If a joint return, spouse's first name and initial: \_\_\_\_\_ Last name: \_\_\_\_\_ Spouse's social security number: \_\_\_\_\_

Home address (number and street). If you have a P.O. box, see instructions. Apt. No. \_\_\_\_\_

City, town or post office, state, and ZIP code. If you have a foreign address, also complete spaces below (see instructions).

Foreign country name: \_\_\_\_\_ Foreign province/state/county: \_\_\_\_\_ Foreign postal code: \_\_\_\_\_

**Income**

1 Wages, salaries, and tips. This should be shown in box 1 of your Form(s) W-2. Attach your Form(s) W-2. 1

2 Taxable interest. If the total is over \$1,500, you cannot use Form 1040EZ. 2

3 Unemployment compensation and Alaska Permanent Fund dividends (see instructions). 3

4 Add lines 1, 2, and 3. This is your adjusted gross income. 4

5 If someone can claim you (or your spouse if a joint return) as a dependent, check the applicable box(es) below and enter the amount from the worksheet on back.  
 You  Spouse  
 If no one can claim you (or your spouse if a joint return), enter \$10,400 if single; \$20,800 if married filing jointly. See back for explanation. 5

6 Subtract line 5 from line 4. If line 5 is larger than line 4, enter -0-. This is your taxable income. 6

**Payments, Credits, and Tax**

7 Federal income tax withheld from Form(s) W-2 and 1099. 7

8a Earned income credit (EIC) (see instructions). 8a

8b Nonrefundable combat pay election. 8b

9 Add lines 7 and 8a. These are your total payments and credits. 9

10 Tax. Use the amount on line 8 above to find your tax in the tax table in the instructions. Then, enter the tax from the table on this line. 10

11 Health care: individual responsibility (see instructions). Full-year coverage  11

12 Add lines 10 and 11. This is your total tax. 12

**Refund**

13a If line 9 is larger than line 12, subtract line 12 from line 9. This is your refund. If Form 8889 is attached, check here  13a

b Routing number: \_\_\_\_\_ c Type:  Checking  Savings

d Account number: \_\_\_\_\_

**Amount You Owe**

14 If line 12 is larger than line 9, subtract line 9 from line 12. This is the amount you owe. For details on how to pay, see instructions. 14

**Third Party Designee**

Do you want to allow another person to discuss this return with the IRS (see instructions)?  Yes. Complete below.  No

Designee's name: \_\_\_\_\_ Personal identification number (PIN): \_\_\_\_\_

Under penalties of perjury, I declare that I have examined this return and, to the best of my knowledge and belief, it is true, correct, and accurately lists all amounts and sources of income I received during the tax year. Declaration of preparer (other than the taxpayer) is based on all information of which the preparer has any knowledge.

Your signature: \_\_\_\_\_ Date: \_\_\_\_\_ Your occupation: \_\_\_\_\_ Daytime phone number: \_\_\_\_\_

Spouse's signature (if a joint return, both must sign): \_\_\_\_\_ Date: \_\_\_\_\_ Spouse's occupation: \_\_\_\_\_

**Sign Here**

Preparer's name: \_\_\_\_\_ Preparer's signature: \_\_\_\_\_ Date: \_\_\_\_\_ Preparer's occupation: \_\_\_\_\_

Firm's name: \_\_\_\_\_ Firm's address: \_\_\_\_\_ Firm's EIN: \_\_\_\_\_ Firm's phone: \_\_\_\_\_

For Disclosures, Privacy Act, and Paperwork Reduction Act Notices, see separate instructions. Cat. No. 11329W Form 1040EZ (2017)

Form 1040EZ (2017) Page 2

**Use this form if**

- You are filing as single or married filing jointly. If you are not sure about your filing status, see instructions.
- You (and your spouse if married filing jointly) were under age 65 and not blind at the end of 2017. If you were born on January 1, 1953, you are considered to be age 65 at the end of 2017.
- You do not claim any dependents. For information on dependents, see Pub. 501.
- Your taxable income (line 6) is less than \$100,000.
- You do not claim any adjustments to income. For information on adjustments to income, use the Tax Topics listed under Adjustments to Income at [www.irs.gov/irs/topics](http://www.irs.gov/irs/topics) (see instructions).
- The only tax credit you can claim is the earned income credit (EIC). The credit may give you a refund even if you do not owe any tax. You do not need a qualifying child to claim the EIC. For information on credits, see the Tax Topics listed under Tax Credits at [www.irs.gov/irs/topics](http://www.irs.gov/irs/topics) (see instructions). If you received a Form 1098-T or paid higher education expenses, you may be eligible for a tax credit or deduction that you must claim on Form 1040A or Form 1040. For more information on tax benefits for education, see Pub. 970.
- Caution: If you can claim the premium tax credit or you received any advance payment of the premium tax credit in 2017, you must use Form 1040A or Form 1040.
- You had only wages, salaries, tips, taxable scholarship or fellowship grants, unemployment compensation, or Alaska Permanent Fund dividends, and your taxable interest was not over \$1,500. But if you earned tips, including allocated tips, that are not included in box 5 and box 7 of your Form W-2, you may not be able to use Form 1040EZ (see instructions). If you are planning to use Form 1040EZ for a child who receives Alaska Permanent Fund dividends, see instructions.
- You are not claiming an increased standard deduction due to a loss you suffered related to property in a Presidentially declared disaster area. If you can increase your standard deduction due to such a loss, use Form 1040 instead. See Pub. 976 for more information.

**Filing in your return**

If you received a scholarship or fellowship grant or tax-exempt interest income, such as on municipal bonds, see the instructions before filing in the form. Also, see the instructions if you received a Form 1099-INT showing federal income tax withheld or if federal income tax was withheld from your unemployment compensation or Alaska Permanent Fund dividends.

**For tips on how to avoid common mistakes, see instructions.**

**Remember, you must report all wages, salaries, and tips even if you do not get a Form W-2 from your employer. You must also report all your taxable interest, including interest from banks, savings and loans, credit unions, etc., even if you do not get a Form 1099-INT.**

**Worksheet for Line 5—Dependents Who Checked One or Both Boxes**

Use this worksheet to figure the amount to enter on line 5 if someone can claim you (or your spouse if married filing jointly) as a dependent, even if that person chooses not to do so. To find out if someone can claim you as a dependent, see Pub. 501.

A. Amount, if any, from line 1 on front \_\_\_\_\_ Enter total ▶ A. \_\_\_\_\_

B. Minimum standard deduction \_\_\_\_\_ B. 1,050

C. Enter the larger of line A or line B here \_\_\_\_\_ C. \_\_\_\_\_

D. Maximum standard deduction. If single, enter \$6,350; if married filing jointly, enter \$12,700 \_\_\_\_\_ D. \_\_\_\_\_

E. Enter the smaller of line C or line D here. This is your standard deduction \_\_\_\_\_ E. \_\_\_\_\_

F. Exemption amount.  
 • If single, enter -0-.  
 • If married filing jointly and—  
 —both you and your spouse can be claimed as dependents, enter -0-.  
 —only one of you can be claimed as a dependent, enter \$4,050.

G. Add lines E and F. Enter the total here and on line 5 on the front \_\_\_\_\_ G. \_\_\_\_\_

(Keep a copy for your records)

If you did not check any boxes on line 5, enter on line 5 the amount shown below that applies to you.  
 • Single, enter \$10,400. This is the total of your standard deduction (\$1,350) and your exemption (\$4,050).  
 • Married filing jointly, enter \$20,800. This is the total of your standard deduction (\$12,700), your exemption (\$4,050), and your spouse's exemption (\$4,050).

**Mailing**



# How to Complete a 1040-EZ Income Tax Form Extension Activity

Last year, Cory Spencer earned \$8,812.00. Cory is a single, full-time student.

Her employer deducted \$826.80 in withholding taxes and sent it to the Internal Revenue Service (IRS), where it was credited to her account. Cory also earned \$15.00 in interest on her savings account.

Now that the year is over, she will have to calculate how much she earned and how much of that sum needs to be paid to the government. If the amount she owes is greater than the amount deducted by her employer, she'll have to pay the difference to the IRS. If that amount is less than the amount collected, the IRS will refund the difference. The calculations will be made on Form 1040-EZ and the results reported to the government.

## Name and Address

- Print Cory's name and address (1035 Pine Circle Way, Anytown, NY, 22222) in the spaces indicated.
- Check the Presidential Election Campaign box if you want \$3 of Cory's taxes to go toward financing the next presidential election. Checking this box will not cost any additional money.
- Cory's Social Security number, 555-12-1201, goes in the space indicated.

## Report Cory's Income

Line 1: Enter Cory's total wages here (\$8,812.00).

Line 2: Last year she earned \$15.00 in interest on her savings. Enter that amount here.

Line 3: Cory did not receive Unemployment Compensation. Enter \$0.00 here.

Line 4: Add lines 1, 2, and 3 and enter the total here. This is Cory's adjusted gross income.

Line 5: Since Cory is a full-time student, she can be claimed as a dependent on her parents' tax return. Check "You" and fill out the worksheet on the second page of the tax form. Enter the amount from line G here.

Line 6: Subtract line 5 from line 4. This is Cory's taxable income.

## Calculate Cory's Tax

Line 7: Enter the federal income tax withheld here (\$826.80).

Lines 8a, b: Earned Income Credit is available to individuals who earned low income. To qualify, Cory must be able to claim herself. Since her parents can claim Cory as a dependent, she does not qualify for the Earned Income Credit. Enter \$0.00 here.

Line 9: Add lines 7 and 8a. Enter the amount here.

Line 10: You now need to determine the amount of tax due. Use the amount on line 6 to find Cory's tax in the Tax Table that is in the 1040-EZ Instruction Guide. Enter the amount.

Line 11: Health care: because Cory is claimed as a dependent by her parents, she does not have to check the box, claim a coverage exemption, or report a payment.

Line 12: Add lines 10 and 11. This is Cory's total tax.

## Refund or Amount Cory Owes

Line 13a: If line 9 is larger than line 12, subtract line 12 from line 9. Enter the amount here. This is Cory's refund.

Lines 13b, c, d: (Routing number) If Cory provides a bank account routing number, the IRS will deposit the refund directly into Cory's bank account. If not, leave this blank; the IRS will send a check to her home.

Line 14: If line 12 is larger than line 9, subtract line 9 from line 12. Enter that amount here. This is the amount Cory owes the IRS.

Cory signs her 1040-EZ form in the space indicated and attaches her W-2 form. She includes a check, credit card number, or authorizes an electronic funds withdrawal if she owes income tax.



### Work Experience

*Please list ALL work experience beginning with your most recent job held. Attach additional sheets if necessary.*

Company	Name of last supervisor	Hrs/week
Address	Start Date	Starting Salary
City, State, and Zip Code	End Date	Final Salary
Phone number	Your last job title	

Reason for leaving (be specific)

List the jobs you held, duties performed, skills used or learned, advancements or promotions while you worked at this company.

May we contact this employer?     Yes     No

Company	Name of last supervisor	Hrs/week
Address	Start Date	Starting Salary
City, State, and Zip Code	End Date	Final Salary
Phone number	Your last job title	

Reason for leaving (be specific)

List the jobs you held, duties performed, skills used or learned, advancements or promotions while you worked at this company.

May we contact this employer?     Yes     No

**Work Experience (continued)**

Company	Name of last supervisor	Hrs/week
Address	Start Date	Starting Salary
City, State, and Zip Code	End Date	Final Salary
Phone number	Your last job title	
Reason for leaving (be specific)		
List the jobs you held, duties performed, skills used or learned, advancements or promotions while you worked at this company.		
May we contact this employer? <input type="checkbox"/> Yes <input type="checkbox"/> No		

**References**

*Please include name, phone number, and circumstances of your acquaintance. Exclude relatives and former employers.*

1.
2.
3.
4.

*I certify that all answers and statements on this application are true and complete to the best of my knowledge. I understand that, should this application contain any false or misleading information, my application may be rejected or my employment with this company terminated.*

Signature	Date
-----------	------

## INTERVIEW QUESTIONS

NAME \_\_\_\_\_

- Tell me about yourself
- What are your strengths/weaknesses?
- Why do you want this Job?
- Why should we hire you?
- Can you describe a time when your work was criticized?
- If I were your supervisor and asked you to do something that you disagreed with, what would you do?

- How do you handle working with people who annoy you?
- If you found out your company was doing something illegal, like fraud, what would you do?
- What is your personal mission statement?
- List five words that best describe your character
- What are the qualities of a good leader? Bad leader?
- Tell me the difference between good and exceptional
- What is your greatest fear?

## How to Write a Thank You Note

- ➔ When you receive a gift, no matter how small, send a handwritten thank you note, not an email or a text.
- ➔ Send the thank you note as soon as possible. Ideally, send the note within 3-5 days. If for some reason you are a bit behind, remember it is never too late to send the note. Hop to it and just do it.
- ➔ Mention the gift and how you plan to use it in your note.
- ➔ You can also send thank you notes for special actions. Example: Your math teacher stays after class to help with your homework.
- ➔ Say thanks at the beginning and ending of your note.

### More Tips

- ➔ Send the note on stationery.
- ➔ A thank you note needs to be only 4-5 sentences. Now is not the time to write a novel.
- ➔ If your handwriting skills are not the best, do the best you can. Write and send the note anyway. It is the thought that counts.
- ➔ Keep in mind the time, thought and cost this person put into your gift. It only takes a few minutes to write a thank you note and mail it.

**CONFIDENCE | CHARACTER | COURAGE**



## Example of a Thank You Note

*Dear Aunt Barbara,*

*It was so nice of you to remember my birthday. I received your gift in the mail yesterday. The sweater is absolutely perfect. I especially love the color. We are having a party next week after school and I plan to wear it then.*

*Thanks again and I hope to see you soon.*

*Love,*

*Anna*

### Take note:

1. The note is short.
2. The gift is mentioned.
3. Anna tells her aunt how she plans to use it.
4. She writes the note and gets it in the mail as soon as possible.



