

**Cost of Living Calculators:
Maintain Your Standard of Living
Student Document**

Objective

Throughout the lesson, you will be introduced to using online cost of living calculators. These will be used to determine the relative increase or decrease in salary that must be achieved in a new location to maintain the current standard of living.

Directions

1. Look at the statements below that direct your attention to areas on the map.
 - a. Somewhere on this map is where you live.
 - b. Somewhere on this map is where you will graduate from high school and further your education in pursuit of a career by attending college or by some other means of educational preparation.
 - c. Somewhere on this map is where you will land your first position, establish yourself and develop a lifestyle with a standard of living you can afford.



2. Once you've gotten started, now think about:
 - a. What's next?
 - b. Where will opportunity knock?
 - c. Where will life take you?

3. Read and complete the activity:

We will be comparing the cost of living in different cities, in different states, in different parts of the country. There are calculators available to assist us in comparing cost of living in different places.

These calculators take into account the comparative costs for: housing, energy, health care, food, common services, mortgage rates, etc.

Let's say you currently live in Abilene, Texas; you are working and you currently earn a salary of \$30,000/year. In Abilene, your standard of living is, in part, based on the salary you earn. You have a place to live, transportation, food and other expenses.

Now, let's say you wish to relocate to San Francisco, California, or maybe you are currently evaluating a job offer in San Francisco. What is the cost of living in San Francisco compared to Abilene? Is San Francisco a more expensive place to live? Less expensive? About the same?

It would be prudent to know the answer to that question when evaluating the practicality of a move to California. For one thing, California has a state income tax rate of 13.3% as of 2014, while Texas has no state income tax at all. It would be useful to know what a comparative salary would look like in San Francisco that would keep your standard of living the same as it is in Abilene.

Now, if I told you that it will take a salary of \$52,875.40 to maintain the same standard of living in San Francisco as you have earning \$30,000 in Abilene, does that help? As it turns out, it is more expensive to live in San Francisco than in Abilene. By how much? Why?

Let's do a little math.

4. Below is the formula used to determine the percent change between two salaries that provide the same standard of living:

$$\text{Percent Change} = \left(\frac{\text{New Salary} - \text{Old Salary}}{\text{Old Salary}} \right) \times 100$$

5. Look over each scenario below:

- a. Because moving from Abilene to San Francisco requires an *increase* in salary to maintain the same standard of living, the formula looks like this:

$$\text{Percent Change} = \left(\frac{\text{New Salary} - \text{Old Salary}}{\text{Old Salary}} \right) \times 100$$

$$\text{Percent Change} = \left(\frac{52,875.40 - 30,000}{30,000} \right) \times 100$$

$$\text{Percent Change} = \left(\frac{22,875.40}{30,000} \right) \times 100$$

$$\text{Percent Change} = (.762513) \times 100$$

$$\text{Percent Change} = 76.25\% \text{ increase required}$$

- b. If the situation were reversed, and you were considering a move from San Francisco to Abilene, and because the cost of living in Abilene is *less than* the cost of living in San Francisco, the percent change required to maintain the same standard of living would be negative:

$$\text{Percent Change} = \left(\frac{\text{New Salary} - \text{Old Salary}}{\text{Old Salary}} \right) \times 100$$

$$\text{Percent Change} = \left(\frac{30,000 - 52,875.40}{52,875.40} \right) \times 100$$

$$\text{Percent Change} = \left(\frac{-22,875.40}{52,875.40} \right) \times 100$$

$$\text{Percent Change} = -(.43262) \times 100$$

$$\text{Percent Change} = 43.26\% \text{ decrease required}$$

6. Note that this is not a difficult formula, but the information it provides is valuable. Knowing what the cost of living in a new location is can be very useful when evaluating a job offer or when planning a tactical move to a new place.
7. Now, it might seem we simply pulled the new, San Francisco equivalent salary out of the air (\$52,875.40), but we didn't. There are cost of living calculators available that compare two locations and supply that number. These calculators take into account the comparative costs for housing, energy, health care, food, common services, mortgage rates, etc. Of course, the comparative costs for these items are an estimate, as prices for goods and services are changing all the time. The cost of gasoline, for example, can and does change on a daily basis.
8. Please be sure to note that you can get different cost of living estimates from different cost of living calculators. The formulas and data each calculator uses to determine estimates may be different, yielding different results; however, as you will see, the message is usually the same. These calculators can give you a relative estimate that helps in your decision-making process.
9. There are several cost of living calculators available. The first one we will use is from BankRate.com. Please go to the link below:

www.bankrate.com/calculators/savings/moving-cost-of-living-calculator.aspx

10. When you arrive at the calculator webpage, you will see this:

The screenshot shows the Bankrate website's Cost of Living Calculator. The header includes the Bankrate logo and navigation links for Home, Rates, Calculators, and Mobile. A secondary navigation bar lists categories: MORTGAGES, BANK RATES, CREDIT CARDS, INSURANCE, AUTO, INVESTMENTS, and TAXES. The main heading is "Cost of Living Calculator". Below this is a brief instruction: "Use the calculator below to compare the cost of living in two cities. Simply enter your current income, select your current city, as well as the city you are relocating to and click calculate. The cost of living calculator will provide you with the equivalent income needed to maintain your current standard of living." A sub-heading reads "Change the values below and refresh listing to view the comparison." The form contains three input fields: "City you are moving from:" with a dropdown menu showing "Abilene TX Metro"; "City you are moving to:" with a dropdown menu showing "San Francisco-Redwood City-South San Francisco CA Metro Div."; and "Enter your current income:\$" with a text box containing "30000". A blue "Refresh Listing" button is positioned below the form.

10. Notice the following:

- a. **"City you are moving from:"** dropdown box is already programmed with **Abilene, TX**.

11. Now complete the tasks below:

- a. Open the **"City you are moving to:"** dropdown box and select **San Francisco**.
- b. In the **"Enter your current income:\$"** box, change the value to **30,000** and then press the **"Refresh Listing"** tab.

12. The calculator returns:

The screenshot shows the results of the calculator. At the top, there is a blue "Refresh Listing" button. Below it, the text reads: "Equivalent income in the city you are moving to: \$52875.40." and "Percent increase to maintain standard of living: 76.25%." A red arrow points to the "76.25%" value. Below this is a table comparing costs between Abilene TX Metro and San Francisco-Redwood City-South San Francisco CA Metro Div.

Product	Abilene TX Metro	San Francisco-Redwood City-South San Francisco CA Metro Div.	Difference
Home Price	\$278,302.00	\$936,360.00	\$658,058.00
Payment + Interest	\$1,007.00	\$3,448.00	\$2,441.00
Apt. Rent	\$904.00	\$3,086.00	\$2,182.00
Lipitor	\$271.52	\$252.67	\$18.85
Total Energy	\$130.12	\$192.66	\$62.54

13. Notice the red arrow above, which was added in this document.

- a. The results show that an equivalent salary of \$52,875.40 is needed in San Francisco to maintain the same standard of living that a \$30,000 salary provides in Abilene, TX. This is a 76.25% increase. We did the math earlier to verify that percent increase.
- b. The table directly below these results shows a long list of comparison prices: from housing and rent to energy, food, goods and services.
- c. Note: the **difference** column shows the difference in prices from Abilene to San Francisco in dollars, not by percent.

14. Look closely at some of the prices. Prices that are higher by only a few dollars actually represent a large percentage of change. For example:

Dentist Visit: \$69.33 in Abilene and \$120.50 in San Francisco

The price difference is \$51.17, which is: $51.17/69.33 = .7380$ or 73.8% higher.

This is an estimate, as stated earlier, because the price of things changes, but the message is that San Francisco is a more expensive place to live than Abilene.

15. As an exercise, the table below contains potential new cities to compare with Abilene.

16. Complete the following:

- a. Use the BankRate.com calculator to find the data for the **New Salary** column for each city in the table.
- b. Record the **% Difference** from Abilene to the new destination.
- c. Look at the **Difference** column in the calculator results. Using the **Of Note** column, record any significant differences in the price of the items listed in the calculator results.

Bankrate.com Cost of Living Calculator

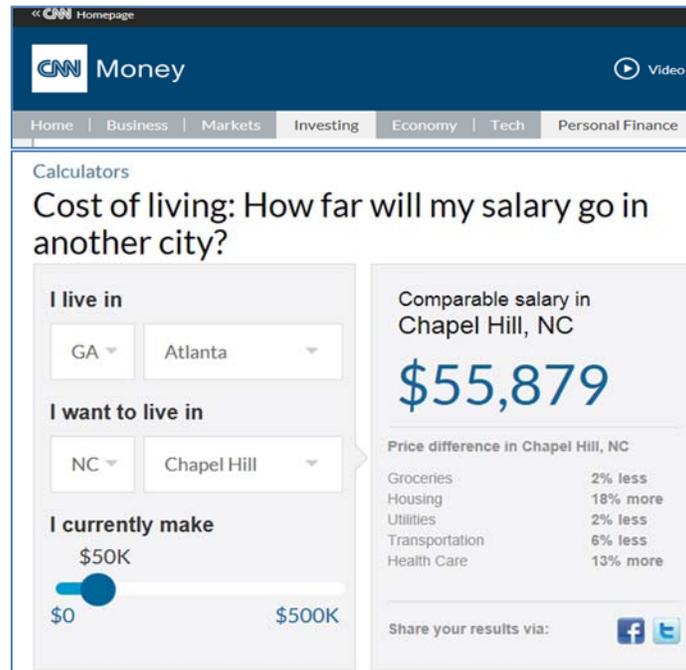
From City	Salary	To City	New Salary	% Difference	Of Note
Abilene, TX	\$30,000	Seattle, WA			
Abilene, TX	\$30,000	San Diego, CA			
Abilene, TX	\$30,000	Las Vegas, NV			
Abilene, TX	\$30,000	Salt Lake City, UT			
Abilene, TX	\$30,000	Denver, CO			
Abilene, TX	\$30,000	Phoenix, AZ			

From City	Salary	To City	New Salary	% Difference	Of Note
Abilene, TX	\$30,000	Topeka, KS			
Abilene, TX	\$30,000	Minneapolis, MN			
Abilene, TX	\$30,000	Chicago, IL			
Abilene, TX	\$30,000	Indianapolis, IN			
Abilene, TX	\$30,000	Pittsburgh, PA			

17. As stated, there are several cost of living calculators available, and each may use different data sources and/or different formulas. Therefore, it won't be a surprise to get different values if we use a different calculator. However, the overall big picture should remain the same.

18. Now, we'll run the same exercise using another calculator from CNN Money:
<http://money.cnn.com/calculator/pf/cost-of-living/>

19. When you arrive at the calculator webpage, you will see this:



20. Notice the following:
 - a. The “**I live in**” dropdown boxes default to **GA** and **Atlanta**.
 - b. Change **GA** to **TX**. The city will change to **Abilene** as the default. We can make a side-by-side comparison of calculators this way.
21. Open the **state** dropdown box under “**I want to live in**” and select “**CA**.” Bakersfield becomes the default city.
 - a. Find and select: **San Francisco**.
22. There is a slide bar in the “**I currently make**” area indicating current salary and defaulting to \$50,000. Slide the bar and change the value to **\$30,000**. The calculator automatically does the calculation and displays the result:

23. Notice the **CNN** calculator determines the comparable San Francisco salary to be \$52,079, or a $(52079 - 30000)/30000 = 0.7359 \times 100 = 73.59\%$ increase.
24. Now, notice the **CNN** calculator determines the comparable San Francisco salary to be \$52,079, but **BankRate.com** determines the number to be \$52,875. CNN says there is a 73.59% increase required, and BankRate.com says the increase needs to be 76.25%.
 - a. Why the difference? Different data, most likely; however, both calculators agree that it is more expensive to live in San Francisco than in Abilene.
25. As an exercise, the table below contains potential new cities to compare with Abilene.
26. Complete the following:
 - a. Use the CNN Money calculator to find the **New Salary** for each city in the table.
 - b. Calculate the **% Difference** change from Abilene to the new destination.
 - c. Look at the **Price Difference** list. Using the **Of Note** column, record any significant differences in the prices of the items listed in the calculator results.

CNN Money Cost of Living Calculator

From City	Salary	To City	New Salary	% Difference	Of Note
Abilene, TX	\$30,000	Seattle, WA			
Abilene, TX	\$30,000	San Diego, CA			
Abilene, TX	\$30,000	Las Vegas, NV			
Abilene, TX	\$30,000	Salt Lake City, UT			
Abilene, TX	\$30,000	Denver, CO			
Abilene, TX	\$30,000	Phoenix, AZ			
Abilene, TX	\$30,000	Topeka, KS			
Abilene, TX	\$30,000	Minneapolis, MN			
Abilene, TX	\$30,000	Chicago, IL			
Abilene, TX	\$30,000	Indianapolis, IN			
Abilene, TX	\$30,000	Pittsburgh, PA			

27. Cost of living calculators can be a useful tool when planning a career change. Whether you are searching for a great place to live, “going where the work is,” or evaluating an exciting job offer, use the calculator to gather relevant information in order to make the most informed decision.

Exit Ticket:

Use the blank table below to plan a move that is relevant to you. Determine where you might be starting from once you are actively engaged in a career. Are you going to start close to home, or are you going to start wherever you get your first job offer?

1. Enter the “**From City**” where you might be starting from.
2. Estimate the **Salary** you will be (or hope to be) earning at that time.
3. Select a city of interest to potentially relocate to.
 - a. Choose a city you think you would enjoy living in.
 - b. Choose a city where you think you are most likely to find a position.
 - c. Choose a city where you think your career/lifestyle would flourish.
4. Use the calculator to determine the **New Salary** necessary to maintain your lifestyle.
5. Calculate the **% Difference**, increase or decrease, of the required salary in the new location.
6. Fill in the **Of Note** column noting any significant price differences.
7. After you have completed the table, indicate which **choice** you’d be inclined to pursue.

Your Name:

Date:

From City	Salary	To City	New Salary	% Difference	Of Note