

DISCOVER[®]



II.

Subject Matter Activities

ACT[®]



English Activity 1: City Reporter Writing a “Hot” News Story

OVERVIEW

Purpose

To have students explore fast-growing occupations and to write a concise news story.

Learning Objective

- Students will research information about “hot” occupations and write a short (3 paragraph) article about them.

Time Required

30 minutes in class to research occupation (can also be done as an out of class assignment)

Materials Needed

- Student worksheet: English Activity 1: “City Reporter”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Math, Science, Social Science, Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. City Reporter Writing a “Hot” News Story

- a. Today you are a journalist for *The Big City News*. Your editor has just told you she wants an article on her desk by press time (which is only a few minutes away). She wants it written about the hottest jobs in the country. Being the smart reporter you are, you will use DISCOVER to do your research.
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don’t already have one).
- c. Click on the “Occupations” tab and select “Hot Occs.” From there decide what slant you will take with the story. Decide whether you will write it from the perspective of highest salary, fastest growing, or largest number of new openings.

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- d. Use the worksheet you have been given to write a first draft of your story using what you've learned from DISCOVER. To make the story interesting to the reader, include some facts about one or more of the hot occupations that you learn about. You have twenty minutes to write your story. The article should be three paragraphs long.

II. Discussion

- a. What did you learn about hot jobs?
 - They can be thought of in different ways: highest salary, fastest growing, or largest number of new openings.
 - Where can you find more information about an occupation.
 - Details about different occupations.
- b. What did you learn about reporting?
 - Was writing an article easier or more difficult than you thought?
 - Is it the kind of job you would enjoy doing?

III. Homework (optional)

- a. Have students edit and submit a finished article by next class period.
- b. Have students use DISCOVER to write another news article of their choosing.
- c. Collect their first drafts, critique them, and have them rewrite them in a polished format.



English Activity 1: City Reporter Writing a “Hot” News Story

HOW TO WRITE A NEWS ARTICLE (For Administrators)

I. Tips for writing a news article:

- a. Start with a headline. The purpose of a headline is to get the reader’s attention. At the most, it should be no more 6 or 7 words long.
- b. Follow this with a byline. That’s you the reporter and whom you write for (e.g., the *Big City News*, MTV, the *Washington Post*).
- c. Begin the story with a lead paragraph, which is the summary of the story. The lead paragraph should include: who, what, when, where, why, and how of the story.
- d. After the lead paragraph comes explanation and amplification, which includes illuminating details. Some details may not be as important as others. Put in order from most important to least important. Don’t include everything you know, but do include everything you feel is important to tell the story. These paragraphs should be three to four sentences in length.
- e. Do not use the first person—no “I” allowed unless you are quoting someone else.
- f. Leave your personal opinion at home. Personal biases should not find their way into the article.

II. Example: Write a draft of your story

- a. What’s your topic? What are the fastest growing jobs in the U.S.?
- b. What’s the headline? “Emergency Medical Technicians are Hot!”
- c. Who wrote this? by Fred Barnes
- d. Lead paragraph elements:
 - Who: Emergency Medical Technicians
 - What: Profession growing by a rate of 3.1% per year or twice the rate of the average job
 - Where: in the U.S.
 - When: now
 - Why: “The number of jobs in this field will grow due to population growth (especially of the elderly) that will lead to greater demand for emergency medical services. Opportunities will be best in municipal governments and private ambulance services.”

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- e. Your lead paragraph (The summary of the story):
The growth rate for Emergency Medical Technicians (EMTs) is expected to be 3.1% per year according to the U.S. Department of Labor. This rate is double the average growth rate for job growth. According to DISCOVER, “The number of jobs in this field will grow due to population growth (especially of the elderly) that will lead to greater demand for emergency medical services. Opportunities will be best in municipal governments and private ambulance services.”
- f. Explanation and Amplification (Two or more paragraphs that support your lead paragraph):
Emergency Medical Technicians provide emergency medical assistance to people who have been in auto accidents, have had accidents at home, or at the scene of a fire. EMTs often have 2-year degrees and earn between \$25,000 and \$45,000 per year.
Besides EMTs, examples of other medical occupations that expect to grow at 3% or higher are Physical Therapist, Physician Assistant, and Veterinarian. Colorado Community College offers this training. Call 817-333-5555 for more information.



English Activity 1: City Reporter Writing a “Hot” News Story

HOW TO WRITE A NEWS ARTICLE (For Students)

I. Tips for writing a news article:

- a. Start with a headline. The purpose of a headline is to get the reader’s attention. At the most, it should be no more 6 or 7 words long.
- b. Follow this with a by line. That’s you the reporter and whom you write for (e.g., the *Big City News*, MTV, the *Washington Post*).
- c. Begin the story with a lead paragraph which is the summary of the story. The lead paragraph should include: who, what, when, where, why, and how of the story.
- d. After the lead paragraph comes explanation and amplification, which deals with illuminating details. Some details may not be as important as others. Put in order from most important to least important. Don’t include everything you know, but do include everything you feel is important to tell the story. These paragraphs should be three to four sentences in length.
- e. Do not use the first person—no “I” allowed unless you are quoting someone else.
- f. Leave your personal opinion at home. Personal biases should not find their way into the article.

II. What’s your topic?

III. What’s the headline?

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IV. Who wrote this?

V. Lead paragraph elements?

Who:

What:

Where:

When:

Why:

VI. Your lead paragraph

(The summary of the story):

VII. Explanation and Amplification

(Two or more paragraphs that support your lead paragraph):



English Activity 2: Interested in My Interests?

OVERVIEW

Purpose

Have students take an interest inventory and write a summary of what they learned.

Learning Objective

- Students will research information about their interests and write a short (4 to 5 paragraph) summary about what they learned.

Time Required

30 minutes in class to take the interest inventory and 30 minutes of homework to write the summary (or 30 minutes of a second class period)

Materials Needed

- Student worksheet: English Activity 2: “Interested in My Interests?”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Math, Science, Social Science, Career Education/Life Skills

Grade Level

9

10

11

12

Activity**I. Interested in My Interests?**

- Today you will be taking an interest inventory. Interest inventories are designed to give you a snapshot of where the kinds of activities and things you like and dislike would put you in the world of work. Interests are one of many things that students like yourselves will use to make career decisions.
- Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- Before you take the inventory, click on the “WWM Tour.”
- Click on the “Inventories” tab and select “Interest Inventory.” From there follow the instructions and complete the inventory. It should take about 20 to 25 minutes to do. Be sure to read the instructions.
- Print out the results of your interest inventory.

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II. Discussion

- a. What did you learn about yourself?
 - Did your results make sense to you?
 - Did the results seem to be accurate?
 - Were you surprised by anything you learned?

III. Homework (optional)

- a. Have students write 4 to 5 paragraphs summarizing what they learned about their interests.



English Activity 2: Interested in My Interests?

FOR ADMINISTRATORS

Instructions: Write a four to five paragraph summary about what you learned about your interests by taking the interest inventory. Be sure to include the following:

- What you thought about the interest inventory generally.
- The career areas that were suggested to you and which ones appeal to you. These are the groupings of occupations that are on the World-of-Work Map listed from A–Z.
- Whether your interests would suggest you should work with people, ideas, things, or data.
- What your interests for a career are at this time.
- Your thoughts on how you can use this information for your educational or career plans.

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English Activity 2: Interested in My Interests?

FOR ADMINISTRATORS

Instructions: Go to www.act.org/DISCOVER/login and type in your user ID and password, take the abilities and/or values inventories and write a four to five paragraph summary about what you learned about your abilities and/or your values by taking the inventory(ies). Be sure to include the following:

- What you thought about the inventory(ies) generally.
- The career areas that were suggested to you and which ones appeal to you. These are the groupings of occupations that are on the World-of-Work Map listed from A–Z.
- Whether your abilities would suggest you should work with people, ideas, things, or data.
- What your interests for a career are at this time and how your abilities and values would be met in doing this work.
- Your thoughts on how you can use this information for your educational or career plans.



English Activity 2: Interested in My Interests?

FOR STUDENTS

Instructions: Write a four to five paragraph summary about what you learned about your interests by taking the interest inventory. Be sure to include the following:

- What you thought about the interest inventory generally.
- The career areas that were suggested to you and which ones appeal to you. These are the groupings of occupations that are on the World-of-Work Map listed from A–Z.
- Whether your interests would suggest you should work with people, ideas, things, or data.
- What your interests for a career are at this time.
- Your thoughts on how you can use this information for your educational or career plans.

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English Activity 2: Interested in My Interests?

FOR STUDENTS

Instructions: Go to www.act.org/DISCOVER/login and type in your user ID and password, take the abilities and/or values inventories and write a four to five paragraph summary about what you learned about your abilities and/or your values by taking the inventory(ies). Be sure to include the following:

- What you thought about the inventory(ies) generally.
- The career areas that were suggested to you and which ones appeal to you. These are the groupings of occupations that are on the World-of-Work Map listed from A–Z.
- Whether your abilities would suggest you should work with people, ideas, things, or data.
- What your interests for a career are at this time and how your abilities and values would be met in doing this work.
- Your thoughts on how you can use this information for your educational or career plans.



English Activity 3: Compare and Contrast Careers

OVERVIEW

Purpose

To have students learn about two different occupations that interest them and to compare and contrast them.

Learning Objective

- Students will research information about two occupations and write a short (4 to 5 paragraph) essay about what they learned, comparing and contrasting the differences and/or similarities.

Time Required

30 minutes in class to take the interest inventory and 30 minutes of homework to write the summary (or 30 minutes of a second class period)

Materials Needed

- Student worksheet: English Activity 3: “Compare and Contrast Careers”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Compare and Contrast Careers

- a. Students will chose two different occupations to compare and contrast and conclude which one they like better and why.
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- c. Click on the “Occupations” tab and select “By World-of-Work Map.” From there select one of the career areas that matched your interests* or select “Alpha List” to look them up alphabetically. Print out the descriptions to write your essay.

*If English Activity 2 was completed

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II. Discussion

- a. What do you need to do to write this essay?

III. Homework (optional)

- a. Have students complete English Activity 3: Compare and Contrast Careers



English Activity 3: Compare and Contrast Careers

FOR ADMINISTRATORS

I. Compare and Contrast Assignment

- a. Write a five paragraph essay comparing and contrasting two occupations of your choice.
- b. Possible things to compare and contrast:
 - Work Tasks
 - Salary and Outlook
 - Training
 - Desirable Personal Qualities
 - Likes and Dislikes
- c. Complete Compare and Contrast Chart
- d. Choose your Formula
 - Similarities and Differences
 - Differences and Similarities
- e. Writing and Editing

Compare and Contrast Chart			
Formulas Similar, different OR Different, similar	Categories Work Tasks Salary and Outlook Training Desirable Personal Qualities Likes and Dislikes	Occupation (1) Topics Compared	Occupation (2) Topics Compared
(Formula)	(Category)	1. 2. 3.	1. 2. 3.
(Formula)	(Category)	1. 2. 3.	1. 2. 3.
(Formula)	(Category)	1. 2. 3.	1. 2. 3.



English Activity 3: Compare and Contrast Careers

(continued)

To organize your paper appropriately, follow the outline below:

I. Introductory Paragraph

- a. Thesis
- b. Formula Used
- c. Two categories to be covered

II. Body Paragraphs

- a. Category
 - Details
 - Details
 - Details
- b. Category
 - Details
 - Details
 - Details

III. Conclusion

- a. Restatement of Thesis
- b. Restatement of three points covered



English Activity 3: Compare and Contrast Careers

FOR STUDENTS

I. Compare and Contrast Assignment

- a. Write a five paragraph essay comparing and contrasting two occupations of your choice.
- b. Possible things to compare and contrast:
 - Work Tasks
 - Salary and Outlook
 - Training
 - Desirable Personal Qualities
 - Likes and Dislikes
- c. Complete Compare and Contrast Chart
- d. Choose your Formula
 - Similarities and Differences
 - Differences and Similarities
- e. Writing and Editing

Compare and Contrast Chart			
Formulas	Categories	Occupation (1)	Occupation (2)
Similar, different OR Different, similar	Work Tasks Salary and Outlook Training Desirable Personal Qualities Likes and Dislikes	Topics Compared	Topics Compared
		1. 2. 3.	1. 2. 3.
		1. 2. 3.	1. 2. 3.
		1. 2. 3.	1. 2. 3.



English Activity 3: Compare and Contrast Careers

(continued)

To organize your paper appropriately, follow the outline below:

I. **Introductory Paragraph**

- a. Thesis
- b. Formula Used
- c. Two categories to be covered

II. **Body Paragraphs**

- a. Category
 - Details
 - Details
 - Details
- b. Category
 - Details
 - Details
 - Details

III. **Conclusion**

- a. Restatement of Thesis
- b. Restatement of three points covered



Math Activity 1: Comparing the Cost of Going to College

OVERVIEW

Purpose

To have students use mathematics to calculate the total expense of a college education.

Learning Objective

- Students will estimate what they think going to college would cost them, research information about two colleges, and then calculate the total estimated cost of attending the colleges. They will then critically evaluate how the costs will impact their planning process.

Time Required

30 minutes

Materials Needed

- Student worksheet: Math Activity 1: “Comparing the Cost of Going to College”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

English, Science, Social Science, Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Comparing the Cost of Going to College

- Today you will be comparing the cost of going to college. Beside the cost of taking classes, there are other costs to consider. What might they be?
- Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- Click on the “Schools” tab and select “Alpha by State.” From there select one of the colleges that you think you'd like to attend. Click on the link “Costs” to see how much going to school would be. What is the annual tuition and fees and room board for the college?
- Then, using the Internet (a good site is <http://www.indo.com/distance>), find out how far it is from here to college. Calculate how much it would cost to drive there and back 4 times a year assuming that you are traveling in a car and the cost per mile is 42 cents.

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- e. Also include in your calculation how much you would estimate you would spend on entertainment, phone service, and other expenses.
- f. Add all the expenses up and calculate your total estimated cost for going to college for one year.
- g. Repeat these steps with a college that is in or near your home. Then calculate the difference in costs between the two schools. How much money, if any might you save by going to a college close to home?

II. Pre-Activity Discussion

- a. What do you think it would cost to go to college?
- b. How much would you estimate 2 or 4 years of college education would cost?
- c. If you started saving money today for college, how long do you estimate it would take you to afford 2 years of college if you were able to save \$50 a week?

III. Post-Activity Discussion

- a. How close were you to the calculated estimated cost of going to college?
- b. How does having more accurate information help you to plan for college?



Math Activity 1: Comparing the Cost of Going to College

FOR ADMINISTRATORS

What are the different possible costs of going to college? List everything you can think of:

Tuition and fees, room and board, travel, entertainment, laundry, books, school materials, phone service, haircuts, etc.

Encourage students to think about the most incidental costs: going to the movies, buying a pizza, etc.

Now choose two colleges: one in the area and another that you think you'd like to go to or have heard a lot about. Compare the costs of going to each school for a year based on what you wrote down above.

If you did not calculate travel expenses, look up the distance to each school and figure the expense if the cost per mile were 42 cents.

What is the overall difference in costs between the two schools you compared?
Be sure to consider the differences between living at home and going to school and going away to school.

What could you do to decrease the cost of going to either school?
Consider the costs that are most incidental or sharing books or choosing a less expensive dorm room.



Math Activity 1: Comparing the Cost of Going to College

FOR STUDENTS

What are the different possible costs of going to college? List everything you can think of:

Now choose two colleges: one in the area and another that you think you'd like to go to or have heard a lot about. Compare the costs of going to each school for a year based on what you wrote down above.

What is the overall difference in costs between the two schools you compared? (Be sure to consider the differences between living at home and going to school and going away to school.)

What could you do to decrease the cost of going to either school?



Math Activity 2: Living on a Budget

OVERVIEW

Purpose

To help students develop realistic expectations about the cost of living based on information about careers.

Learning Objective

- Students will access information about occupations and develop a financial budget to accommodate their lifestyle choice.

Time Required

40 to 50 minutes

Materials Needed

- Student work sheet: Math Activity 2: “Living on a Budget”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Mathematics, Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Living on a Budget

- a. Many students do not have realistic expectations about careers they may consider.
- b. An ice-breaker might be to ask the students to identify high paying careers that they are aware of and how easy or hard it may be to get into that career. Suggest that they consider careers that may be more realistic/attainable. Encourage them to use the time in class to either 1) learn more about an occupation they are familiar with or 2) learn about an occupation they have not heard of.
- c. Have students logon to DISCOVER with their user ID and password (or create a password and account, if they do not currently have one).
- d. Select the “Occupations” tab on the home page and then choose “Search by Characteristics.”
- e. Ask students to select “Educational Level” and click on all educational levels except high school.

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- f. Then have the students select an occupation from the list they create and complete the “Living on a Budget” worksheet.
- g. Encourage the students to look at all the information sections for the occupation they choose to explore.
- h. As time permits, students should be encouraged to share what they have learned with their classmates. If possible, encourage students to continue exploring for other occupations and/or print out the information to take with them.



Math Activity 2: Living on a Budget

FOR ADMINISTRATORS

I. What occupation did you choose to explore?

- a. Why did you choose this occupation?
- b. What is the starting salary?
- c. Do you think you can live on this salary?
- d. Complete the budgeting worksheet.

Monthly Budgeting Worksheet

Total Monthly Gross Income		\$ _____
– Taxes, Health Insurance & Other Payroll Deductions	\$ _____	
– Savings, 401K, etc.	\$ _____	
= Total Monthly ‘Spendable’ Income		\$ _____
<i>(Divide annual salary by 12. Assume you will spend 20% of your annual salary on taxes and save 5%)</i>		
Housing Expenses	Monthly Payments	
Rent or Mortgage	\$ _____	
Utilities	\$ _____	
Insurance (set \$ aside each month if paid annually)	\$ _____	
Repairs (set \$ aside for future expenses)	\$ _____	
Taxes (set \$ aside if paid annually)	\$ _____	
= Total	\$ _____	
<i>(This section should add up to no more than 30% of your annual salary)</i>		
Transportation Expenses		
Loan Payment(s)	\$ _____	
Gas	\$ _____	
Insurance (set \$ aside if paid annually)	\$ _____	
Maintenance & Repairs (set \$ aside for future expenses)	\$ _____	
Parking expense	\$ _____	
Bus, cab or other transportation	\$ _____	
= Total	\$ _____	
<i>(This section should add up to no more than 15% of your annual salary)</i>		

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Debts

Creditor #1 _____	Balance _____	\$ _____
Creditor #2 _____	Balance _____	\$ _____
Creditor #3 _____	Balance _____	\$ _____
Creditor #4 _____	Balance _____	\$ _____
(figure more on back if needed)		
= Total		\$ _____

(This should add up to no more than 10% of your salary)

Other Expenses

(Set \$ aside each month for annual expenses, such as Ins.)

Religious Offerings	\$ _____
Other Charitable Contributions	\$ _____
Groceries, Lunches, Meals Out	\$ _____
Childcare	\$ _____
School Tuition/Supplies	\$ _____
Medical Bills and CoPays	\$ _____
Prescription Medicines	\$ _____
Pet Supplies & Vet Exams	\$ _____
Entertainment, Cable, Video Rentals	\$ _____
Club Dues (Homeowner's Assoc., Fitness, etc.)	\$ _____
Newspaper, Magazine Subscriptions	\$ _____
Clothing	\$ _____
Haircuts	\$ _____
Gifts	\$ _____
Cash	\$ _____
Other (continue on back if needed)	\$ _____
= Total	\$ _____

Monthly Expense Totals

Housing	\$ _____
Car	\$ _____
Debts	\$ _____
Miscellaneous	\$ _____
= Total Expenses	\$ _____

Monthly Surplus or Shortage

\$ _____

(Total Spendable Income *minus* Total Expenses)

- e. How did you do? Can you live on the salary? (Discuss the importance of a budget and thinking through how to afford living on a tight budget.)



Math Activity 2: Living on a Budget

FOR STUDENTS

I. What occupation did you choose to explore?

- Why did you choose this occupation?
- What is the starting salary?
- Do you think you can live on this salary?
- Complete the budgeting worksheet.

Monthly Budgeting Worksheet

Total Monthly Gross Income		\$ _____
- Taxes, Health Insurance & Other Payroll Deductions	\$ _____	
- Savings, 401K, etc.	\$ _____	
= Total Monthly 'Spendable' Income		\$ _____

(Divide annual salary by 12. Assume you will spend 20% of your annual salary on taxes and save 5%)

Housing Expenses	Monthly Payments
Rent or Mortgage	\$ _____
Utilities	\$ _____
Insurance (set \$ aside each month if paid annually)	\$ _____
Repairs (set \$ aside for future expenses)	\$ _____
Taxes (set \$ aside if paid annually)	\$ _____
= Total	\$ _____

(This section should add up to no more than 30% of your annual salary)

Transportation Expenses	
Loan Payment(s)	\$ _____
Gas	\$ _____
Insurance (set \$ aside if paid annually)	\$ _____
Maintenance & Repairs (set \$ aside for future expenses)	\$ _____
Parking expense	\$ _____
Bus, cab or other transportation	\$ _____
= Total	\$ _____

(This section should add up to no more than 15% of your annual salary)



Debts

Creditor #1 _____	Balance _____	\$ _____
Creditor #2 _____	Balance _____	\$ _____
Creditor #3 _____	Balance _____	\$ _____
Creditor #4 _____	Balance _____	\$ _____
(figure more on back if needed)		
= Total		\$ _____

(This should add up to no more than 10% of your salary)

Other Expenses

(Set \$ aside each month for annual expenses, such as Ins.)

Religious Offerings	\$ _____
Other Charitable Contributions	\$ _____
Groceries, Lunches, Meals Out	\$ _____
Childcare	\$ _____
School Tuition/Supplies	\$ _____
Medical Bills and CoPays	\$ _____
Prescription Medicines	\$ _____
Pet Supplies & Vet Exams	\$ _____
Entertainment, Cable, Video Rentals	\$ _____
Club Dues (Homeowner's Assoc., Fitness, etc.)	\$ _____
Newspaper, Magazine Subscriptions	\$ _____
Clothing	\$ _____
Haircuts	\$ _____
Gifts	\$ _____
Cash	\$ _____
Other (continue on back if needed)	\$ _____
= Total	\$ _____

Monthly Expense Totals

Housing	\$ _____
Car	\$ _____
Debts	\$ _____
Miscellaneous	\$ _____
= Total Expenses	\$ _____

Monthly Surplus or Shortage

\$ _____

(Total Spendable Income *minus* Total Expenses)

e. How did you do? Can you live on the salary?



Math Activity 3: Money Matters

OVERVIEW

Purpose

To have students use mathematics to see how much difference there can be between acquiring a college degree or stopping at a high school diploma.

Learning Objective

- Students will use DISCOVER to identify occupations that require no more than a high school diploma and occupations that require a 4-year college degree to prove a hypothesis.

Time Required

30 minutes

Materials Needed

- Student worksheet: Math Activity 3: “Money Matters”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

English, Science, Social Science, Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Money Matters

- a. How much money can you make over your lifetime? One theory is that a lot of it may depend on how much education you decide to pursue and the kind of careers that will be available to you.
- b. Prove the following hypothesis: A person who has a high school education is as likely to earn as much as a person who has a college education.
- c. Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- d. To prove your hypothesis, you will need to create a decision table that will compare your lifetime earnings based on going to work directly after high school and after four years of college.
- e. First, using DISCOVER, click on “Occupations” and select two careers by clicking on “Search by Characteristics” and choosing “Education Levels.” Select two careers, one for each level of education you select.

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- f. Click on “Salary and Outlook” and locate the starting salary. Take into account that your salary will increase by an average of 4.5% per year over your career. Unless you choose a career as a professional athlete, you can expect to continue your career until you retire at the expected retirement age of 72. If you want to be a professional athlete, be aware that the average career is between 5 and 10 years.
- g. Finally, figure the cost of going to college for four years (tuition, room and board). Be sure to subtract the cost of college from your total earnings.

II. Pre-Activity Discussion

- a. How much money does a person make if they stop their education after high school?
- b. How much money does a person make if they complete a 4-year college degree?
- c. In the course of your working life, what would the difference be, after deducting the cost of your college education?

III. Post-Activity Discussion

- a. Did your hypothesis prove to be true or false?
- b. What surprised you about your findings?



Math Activity 3: Money Matters

FOR ADMINISTRATORS

I. Money Matters

- a. How much money can you make over your lifetime? One theory is that a lot of it may depend on how much education you decide to pursue and the kind of careers that will be available to you.
- b. Prove or disprove the following hypothesis: A person who has a high school education is likely to earn as much in a lifetime as a person who has a college education.
- c. Logon to DISCOVER with your user ID and password (or create a password, if you don't already have one).
- d. To prove your hypothesis, you will need to create a decision table that will compare your lifetime earnings based on going to work directly after high school and after college.
- e. First, using DISCOVER, click on "Occupations" and select two careers by clicking on "Search by Characteristics" and choosing "Education Levels." Select two careers, one for each level of education you select.
- f. Next, click on "Salary and Outlook" and locate the starting salary. Take into account that your salary will increase by an average of 45% per year over your career.
Unless you choose a career as a professional athlete, you can expect to continue your career until you retire at the expected retirement age of 72. If you want to be a professional athlete, be aware that the average career is between 5 and 10 years.
- g. Finally, figure the cost of going to college each year (tuition, fees, additional expenses, room and board). Go to "School" and select a college that interests you from the "Alpha List." Select "Cost" to find out what the annual tuition and room and board is. Then, be sure to subtract the cost of college from your total earnings.

DISCOVER®



Hypothesis: A person who has a high school education is likely to earn as much in a lifetime as a person who has a college education.

Degree	Years of Education Y	Annual Cost of Education C	Career/ Occupation	Length of Career L	Annual Starting Salary A	Total Salary S
1. High school	0	0	Fast-food worker	54	\$14,500	\$932,462.21
2. BSN	4	\$17,000	Nurse (registered)	50	\$41,000	\$2,336,390.51

Example Solution:

- $S = A(1+0.045)^{(L-1)} + L(A)$
 $S = \$14,500(1.045)^{53} + 54(\$14,500)$
 $S = \$932,462.21$
- $S = A(1+0.045)^{(L-1)} + L(A) - Y(C)$
 $S = \$41,000(1.045)^{49} + 50(\$41,000) - 4(\$17,000)$
 $S = \$2,336,390.51$

Hypothesis not proven



Math Activity 2: Money Matters

FOR STUDENTS

I. Money Matters

- a. How much money can you make over your lifetime? One theory is that a lot of it may depend on how much education you decide to pursue and the kind of careers that will be available to you.
- b. Prove or disprove the following hypothesis: A person who has a high school education is likely to earn as much in a lifetime as a person who has a college education.
- c. Logon to DISCOVER with your user ID and password (or create a password, if you don't already have one).
- d. To prove your hypothesis, you will need to create a decision table that will compare your lifetime earnings based on going to work directly after high school and after college.
- e. First, using DISCOVER, click on "Occupations" and select two careers by clicking on "Search by Characteristics" and choosing "Education Levels." Select two careers, one for each level of education you select.
- f. Next, click on "Salary and Outlook" and locate the starting salary. Take into account that your salary will increase by an average of 45% per year over your career.
Unless you choose a career as a professional athlete, you can expect to continue your career until you retire at the expected retirement age of 72. If you want to be a professional athlete, be aware that the average career is between 5 and 10 years.
- g. Finally, figure the cost of going to college each year (tuition, fees, additional expenses, room and board). Go to "School" and select a college that interests you from the "Alpha List." Select "Cost" to find out what the annual tuition and room and board is. Then, be sure to subtract the cost of college from your total earnings.

DISCOVER®



Hypothesis: A person who has a high school education is likely to earn as much in a lifetime as a person who has a college education.

Degree	Years of Education Y	Annual Cost of Education C	Career/ Occupation	Length of Career L	Annual Starting Salary A	Total Salary S



Science Activity 1: Careers in Science and Technology

OVERVIEW

Purpose

To have students investigate the types of science and technology careers that exist and the amount of training required.

Learning Objective

- Students will access information about science and technology occupations and differentiate between those requiring less than a 4-year college degree and those that require four years or more.

Time Required

30 minutes

Materials Needed

- Student worksheet: Science Activity 1: “Careers in Science and Technology”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Careers in Science and Technology

- a. Many students don't know the different careers that are available in science and technology. Some only require a high school education or up to two years additional training. Others require at least a 4-year college degree. Today we are going to conduct a scientific investigation to explore the universe of science and technology careers.
(Break students up into teams of investigators; one group will look for careers requiring less than a 4-year degree and the other will look at careers requiring a 4-year degree or higher.)
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- c. Select “Occupations” and then choose “Search by Characteristics.”

DISCOVER®



- d. Select “Education Level” and choose the level of education that is appropriate for your group (high school, some training, and two years of college for Group 1, and four years or graduate for Group 2).
- e. Then select “Career Cluster” and choose “Science and Technology.”
- f. Then, each member of the group should select one science career to look-up and be prepared to tell the class the following:
 - What the job is
 - What you need to study to do it
 - What the future outlook is for it and the starting salary

II. Discussion

- a. How many careers are available if you have a no more than two years of college?
- b. How many careers are available if you have four or more years of college?
- c. Based on the careers you looked at, which jobs pay the best and have the best outlook?

III. Homework (optional)

- a. Write a summary about a science career you looked up in class.
 - What did you like best about it?
 - What did you like least about it?
 - What would you have to study to do it?



Science Activity 1: Careers in Science and Technology

FOR ADMINISTRATORS

Write a summary about the science career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?

(Students would use the "Training" tab in the occupations description to report this.)

DISCOVER®



**Science Activity 1:
Careers in Science and Technology**

FOR STUDENTS

Write a summary about the science career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?



Science Activity 2: Careers in Health and Medical Science

OVERVIEW

Purpose

To have students investigate the types of health and medical science careers that exist and the amount of training required.

Learning Objective

- Students will access information about health and medical science occupations and differentiate between those requiring less than a 4-year college degree and those that require four years or more.

Time Required

30 minutes

Materials Needed

- Student worksheet: Science Activity 2: “Careers in Health and Medical Science”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Careers in Health and Medical Science

- a. Many students don't know the different careers that are available in health and medical science. Some only require a high school education or up to two years additional training. Others require at least a 4-year college degree. Have students explore health and medical science careers.
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- c. Select “Occupations” and then choose search “By World-of-Work Map.”
- d. Then have students select career area Q, R, or W to explore.

DISCOVER®



- e. Then have students narrow the list to occupations requiring only a high school diploma by choosing “Change Level” at the upper left side of the screen. Have them select each level of education and see what choices they have to explore.
- f. Then, each student should select one health or medical science career to look-up and be prepared to tell the class the following:
 - What the job is
 - What you need to study to do it
 - What the future outlook is for it and the starting salary

II. Discussion

- a. How many careers are available if you have a no more than a high school diploma?
- b. How many careers are available if you have a no more than two years of college?
- c. How many careers are available if you have four or more years of college?

III. Homework (optional)

- a. Write a summary about a science career you (optional) looked up in class.
 - What did you like best about it?
 - What did you like least about it?
 - What would you have to study to do it?



**Science Activity 2:
Careers in Health and Medical Science**

FOR ADMINISTRATORS

Write a summary about the health or medical science career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?

(Students would use the "Training" tab in the occupations description to report this.)

DISCOVER®



**Science Activity 2:
Careers in Health and Medical Science**

FOR STUDENTS

Write a summary about the health or medical science career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?



Science Activity 3: Engineering Careers

OVERVIEW

Purpose

To have students investigate the types of engineering careers that exist and the amount of training required.

Learning Objective

- Students will access information about engineering occupations, learn about different types of engineers and differentiate between those requiring less than a 4-year college degree and those that require four years or more.

Time Required

30 minutes

Materials Needed

- Student worksheet: Science Activity 3: “Engineering Careers”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Engineering Careers

- a. Many students don't know the different careers that are available in the engineering field. Some require up to two years additional training. Others require at least a 4-year college degree. Today we are going to explore different types of engineering careers.
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- c. Select “Occupations” and then choose search “By World-of-Work Map.”
- d. Then have students select a career area O to explore.
- e. Then have students narrow the list to occupations requiring only a high school diploma by choosing “Change Level” at the upper left side of the screen. Have them select each level of education and see what choices they have to explore.

DISCOVER®



- f. Then, each student should select one engineering career to look-up and be prepared to tell the class the following:
 - What the job is
 - What you need to study to do it
 - What the future outlook is for it and the starting salary

II. Discussion

- a. How many careers are available if you have a no more than a high school diploma?
- b. How many careers are available if you have a no more than two years of college?
- c. How many careers are available if you have four or more years of college?

III. Homework (optional)

- a. Write a summary about a science career you looked up in class.
 - What did you like best about it?
 - What did you like least about it?
 - What would you have to study to do it?



Science Activity 3: Engineering Careers

FOR ADMINISTRATORS

Write a summary about the engineering career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?

(Students would use the "Training" tab in the occupations description to report this.)

DISCOVER®



Science Activity 3: Engineering Careers

FOR STUDENTS

Write a summary about the engineering career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?



Social Science Activity 1: Careers Now, Careers Then

OVERVIEW

Purpose

Have students consider careers that exist today that would not have existed 50 to 100 years ago.

Learning Objective

- Students will research careers that are in DISCOVER and discuss why or why not they could have existed 50 or 100 years ago. They will write a summary about what they learned.

Time Required

30 minutes

Materials Needed

- Student worksheet: Social Science Activity 1: “Careers Now, Careers Then”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Careers Now, Careers Then

- a. Either connect this exercise to a period of history that students are learning about. *–OR–*
Ask this question: Imagine living 50 or 100 years ago. What would life be like back then? What kinds of careers would people have had?
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don’t already have one).
- c. Have students go to “Occupations” and select “By World-of-Work Map.” Then choose one group of careers to look at (e.g., science and technology). The students’ job is to decide which careers would have and which would not have existed.
- d. Have the students print out the list of occupations for one career area. Then look up any occupations that they do not know about. Then, on their list, have them line through any that they think existed either 50 or 100 years ago.

DISCOVER®



II. Discussion

- a. How many occupations were you left with?
 - Were you surprised by anything you learned?
 - Do you think it would have been more or less difficult to have a career that you might want back then?
- b. Why do you think the jobs could not have existed or will not exist in the future?



Social Science Activity 1: Careers Now, Careers Then

FOR ADMINISTRATORS

Choose one of the six groups of careers in the Occupations section of DISCOVER by clicking on the “By World-of-Work Map” tab.

I looked up:

- | | |
|---|---|
| <input type="checkbox"/> Science and Technology Careers | <input type="checkbox"/> Social Service Careers |
| <input type="checkbox"/> Administrative and Sales Careers | <input type="checkbox"/> Technical Careers |
| <input type="checkbox"/> Business Operations Careers | <input type="checkbox"/> Arts Careers |

Which careers could not have existed 50 years ago?

Why?

Consider the technology of the time, natural resources, materials, and social needs of the time.

Which careers could not have existed 100 years ago?

Why?

Which careers are not likely to exist 100 years from now?

Why?

Consider the future of technology, natural resources, and social needs of the time.

DISCOVER®



Social Science Activity 1: Careers Now, Careers Then

FOR STUDENTS

Choose one of the six groups of careers in the Occupations section of DISCOVER by clicking on the “By World-of-Work Map” tab.

I looked up:

- | | |
|---|---|
| <input type="checkbox"/> Science and Technology Careers | <input type="checkbox"/> Social Service Careers |
| <input type="checkbox"/> Administrative and Sales Careers | <input type="checkbox"/> Technical Careers |
| <input type="checkbox"/> Business Operations Careers | <input type="checkbox"/> Arts Careers |

Which careers could not have existed 50 years ago?

Why?

Which careers could not have existed 100 years ago?

Why?

Which careers are not likely to exist 100 years from now?

Why?



Social Science Activity 2: Social Science Careers

OVERVIEW

Purpose

To have students investigate the types of social science careers that exist and the amount of training required.

Learning Objective

- Students will access information about social science occupations and differentiate between those requiring less than a 4-year college degree and those that require four years or more.

Time Required

30 minutes

Materials Needed

- Student worksheet: Social Science Activity 2: “Social Science Careers”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. Social Science Careers

- a. Many students don't know the different careers that are available in social science. Some only require a high school education or up to two years additional training. Others require at least a 4-year college degree. Have students explore the social science careers.
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don't already have one).
- c. Select “Occupations” and then choose search “By World-of-Work Map.”
- d. Have students select career areas S, W, X, or Y to explore.
- e. Have students narrow the list to occupations requiring only a high school diploma by choosing “Change Level” at the upper left side of the screen. Have them select each level of education and see what choices they have to explore.

DISCOVER®



- f. Then, each student should select one social science career to look-up and be prepared to discuss the following:

II. Discussion

- a. What the job is?
- b. What you need to study to do it?
- c. What the future outlook is for it and the starting salary

III. Homework (optional)

- a. Have students complete worksheet.



Social Science Activity 2: Social Science Careers

FOR ADMINISTRATORS

Write a summary about the social science career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?

(Students would use the "Training" tab in the occupations description to report this.)

DISCOVER®



Social Science Activity 2: Social Science Careers

FOR STUDENTS

Write a summary about the social science career you looked up in class. Be sure to include what career you looked up and the following information:

Occupation I looked up _____

What did you like best about it?

What did you like least about it?

What would you have to study to do it?



Social Science Activity 3: The Real Me

OVERVIEW

Purpose

To have students understand how measuring self-interests helps improve their self-knowledge.

Learning Objective

- Students will gather information about themselves by taking the interest inventory and will discuss how the results fit their self-perception and also how they do not.

Time Required

30 minutes

Materials Needed

- Student worksheet: Social Science Activity 3: “The Real Me”
- DISCOVER tokens printed with logon instructions (if not already issued)

Setting

A classroom with computer workstations and Internet access

Curriculum Areas

Career Education/Life Skills

Grade Level

9

10

11

12

Activity

I. The Real Me

- a. Mini-lecture: Looking at yourself and what you are good at, what you like, and what you value can help you to choose a career. Since early in the 1900s social scientists have used interest assessments to help people identify where their traits would best fit with respect to different kinds of jobs. Assessments like these, called trait and factor assessments, compare your answers to people who do different kinds of work. The idea behind trait/factor assessments is that “birds of a feather, flock together.” This means that if you like the same things as doctors, you should consider medicine as a possible career.
- b. Have students logon to DISCOVER with their user ID and password (or create a password, if they don’t already have one).
- c. Have them select “Inventories” and then select “Interest Inventory.” Have them take the interest inventory and print out their results.
(20 minutes)

DISCOVER®



II. Discussion

- a. How many of you think your interest inventory accurately reflects your interests? (show of hands)
 - Were you surprised by anything you learned?
- b. How many of you think your interest inventory is not accurate? (show of hands)
 - Why do you feel it is wrong?
- c. Besides your interests, what other information do you think is important to deciding what kind of careers might be for you?

III. Homework (optional)

- a. Have the students summarize what they learned and ask them to consider the following:
 - Of the career areas suggested to you from your interest inventory, which ones would you likely explore?
 - Besides your interests, what other information should you consider as you think about your future career or education? Why?
 - If you were designing an assessment to help people to know more about themselves, what would you want to measure?



Social Science Activity 3: The Real Me

FOR ADMINISTRATORS

Summarize what you learned about yourself by taking the interest inventory and address the following:

Of the career areas suggested to you from your interest inventory, which ones would you likely explore?

Besides your interests, what other information should you consider as you think about your future career or education?

Why?

Look for such things as experience, abilities, values, financial barriers, etc.

If you were designing an assessment to help people to know more about themselves, what would you want to measure?

Look for such things as experience, abilities, values, personality, etc.

DISCOVER[®]



Social Science Activity 3: The Real Me

FOR STUDENTS

Summarize what you learned about yourself by taking the interest inventory and address the following:

Of the career areas suggested to you from your interest inventory, which ones would you likely explore?

Besides your interests, what other information should you consider as you think about your future career or education?

Why?

If you were designing an assessment to help people to know more about themselves, what would you want to measure?