In **Unit One**, students studied graphs to learn the big picture of employment today, and used career database websites to conduct research based on their own interests.

In **Unit Two**, they learned how careers relate to one another and can lead to advancement, using the CUNY’s Labor Market Information Service Career Maps and other documents.

In **Unit Three**, students read and heard personal narratives from workers in writing and video. They wrote responses, discussed video interviews, and conversed with workers in person during a career panel.

In **Unit Four**, they narrowed their scope to learn about a career and find a job. They read help wanted ads, compared job offers and created a budget to know how much money they need to earn.

In **Unit Five**, students learned about life as a worker, including how to prepare income taxes, whether to choose a check cashing facility or a checking account, and how to determine eligibility for the Earned Income Tax Credit.

In **Unit Six**, students look at healthcare from a patient’s perspective. Regardless of their interest in pursuing healthcare as a career choice, they use charts, articles, videos and role plays to expand vocabulary, practice reading comprehension and recall, solve problems using percents, fractions, multiplication, division and calculating averages. Texts include a *New York Times* article and organizational data.
1. **VOCABULARY AND COMMUNICATION FOR ACCESSING HEALTHCARE SERIES**

Students develop vocabulary that is used in healthcare settings. They do role plays using these terms to practice accessing services in healthcare settings.

1.1 • Clarifying Questions and Helpful Phrases for Healthcare Settings

Students brainstorm the factors that make some medical encounters difficult, then generate questions and phrases that can be used to clarify these situations.

1.2 • A Patient’s Terminology

Students learn terminology relevant to medical appointments, pharmacies, and insurance interactions through working in pairs, discussing definitions, writing and presenting sentences.

1.3 • Role Plays Using New Questions, Phrases and Terms

Using their newly acquired phrases and vocabulary, students role play difficult medical scenarios, as a method of problem solving.

2. **PREVENTIVE CARE SERIES**

Students consider the role of preventive care through a number of activities: brainstorms, True/False questionnaire, an analysis of data from a social service agency that implemented preventive care measures for its residents, a video of the residents at the agency, and a research study published in the *New York Times*.

2.1 • Preventive Care Brainstorms

Students list preventive care measures, discussing ones they currently do and ones they would like to do more often.

2.2 • Preventive Care Myths and Facts

Students complete a True/False worksheet, learning about the realities of preventive care.

2.3 • Calculating with Percents: A Case Study of Brooklyn Community Housing and Services

Students examine data from a social service organization, making a variety of calculations based on the data from an increase in preventive care measures.

2.4 • Video Case Study

Students watch a short video from the organization, highlighting clients and staff, then consider the careers that exist within the organization.

2.5 • New York Times Article: *How Walking in Nature Changes the Brain*

Students read a New York Times article about a research study on how walking in nature can positively impact health, write, then discuss their responses to it.
Vocabulary and Communication for Accessing Healthcare Series

Students practice language and strategies for accessing healthcare by expanding vocabulary and discussing scenarios.

ACTIVITIES IN THIS SERIES

1.1 • Clarifying Questions and Helpful Phrases for Healthcare Settings

1.2 • A Patient’s Terminology

1.3 • Role Plays Using New Questions, Phrases and Terms
In preparation for healthcare role plays, students will generate phrases that can help them clarify their understanding, communication, and advocate for themselves in healthcare settings. They will later use these phrases when doing role plays about difficulties encountered in healthcare settings.

DISCUSS

1. We’re going to think about our experiences in healthcare settings, and how we can potentially improve the quality of the care we receive. First of all, what do we mean by “healthcare settings?”
   - Examples: Medical offices, hospitals, pharmacies, ambulances, nursing homes, at home with home health aides or nurses, Medicaid/Medicare offices or phone calls.

2. What has made some of these encounters difficult? Teacher writes responses on the board in one column under the heading Challenges.
   - Examples: busy/rude receptionists, the provider misunderstood me, I had to wait a long time to be seen, I misunderstood the provider.

3. What can a patient or consumer do to alleviate these problems?
   - Examples: Ask clarifying questions, ask for information to be repeated, to be written down, ask for a translator.

4. What are some phrases that the patient could say that might be helpful in some of these situations? Write a few of them on the board under the heading Helpful Phrases.
   - Examples:
     - Do you accept ____________________ insurance?
     - Can you repeat that, please?
     - Can you write that down for me?
Students generate phrases of their own, writing them down. Ask students to share some of their phrases and add them to the list on the board.

**Other examples of helpful phrases include:**

- Hello. My name is ___________________. I’m here for a ____ o’clock appointment with _____________________.
- I don’t understand. Can you explain that again?
- Do I need to fast before the blood draw?
- Is it safe to take if I’m pregnant or breastfeeding?
- Can you write a letter for my employer/school/caseworker?
- Do you have a business card/brochure with the phone number?
- Do you accept ____________________ insurance?
- Do you know what time I’ll be seen?
- Is it safe to take with ____________________? *(medication)*
- Are there any side effects?
- Do I need a follow-up appointment?
- Are there any other treatment options?
- What are the risks?
- Do I need a referral?
- Do you have an interpreter who speaks ____________________?
A Patient’s Terminology

Students learn and practice using terminology common to medical offices, pharmacies and insurance companies. Once they learn the definitions, they practice them in small groups by writing and presenting sentences using the words.

PREP

- Be prepared to explain the following terms: **Primary care provider**, **Insured member**, **Dependent**, **Prescription**, **Coverage**, **Treatment**, **Confirm**, **Immunization**, **Well visit**, **Diagnose**, **Symptom**, **Urgent care**, **Recurring**, **Chronic**, **Pediatrician**, **Referral**.

MATERIALS

- **A Patient’s Terminology** worksheet

EXPLAIN

1. In addition to helpful phrases, specific vocabulary is needed to navigate healthcare situations successfully. Part of what can make a healthcare experience challenging is not understanding the words a provider uses, or not knowing how to communicate one’s own questions or concerns. Health providers often use terms that patients don’t know, and that can cause a lot of confusion and even lead patients to be unable to follow instructions. Have you ever misunderstood terms in a healthcare setting? In groups, you will write your understanding of various healthcare terms, then the class will discuss.

2. Divide the class into groups of three, distribute the worksheets and ask students to write down what they think the words mean in the center column.

3. The class reviews the definitions together and students write the correct definitions on their worksheets.

4. Each group is then assigned four of the words and as a group, they write two sentences using each of the assigned vocabulary terms. The sentences should demonstrate their understanding of the term.

5. Each group then presents to the class one or two of the sentences for each vocabulary word.
## A Patient’s Terminology

<table>
<thead>
<tr>
<th>Term</th>
<th>What I Think it Means</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary care provider</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Insured member</td>
<td></td>
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<tr>
<td>Dependent</td>
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<tr>
<td>Prescription</td>
<td></td>
<td></td>
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<tr>
<td>Coverage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
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<tr>
<td>Confirm (confirmation)</td>
<td></td>
<td></td>
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<tr>
<td>Immunization</td>
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</tbody>
</table>
### Section 1.2

<table>
<thead>
<tr>
<th>Term</th>
<th>What I Think it Means</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Well visit</td>
<td></td>
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<tr>
<td>Diagnose (diagnostic)</td>
<td></td>
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<tr>
<td>Symptom</td>
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<td>Urgent care</td>
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<td>Recurring</td>
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<td>Chronic</td>
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<td>Pediatrician</td>
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</table>
Role Plays Using New Questions, Phrases and Terms

Students have generated phrases helpful in medical contexts and have learned healthcare terminology. They will now put them to use in role plays.

PREP

- Consider which students will work together in role play groups.
- Be prepared to explain vocabulary: **Goal**, **Complication**, **Strategy**, **Protagonist**.
- Cut paper into eighths, with enough for each student to have three 1/8 page slips.

MATERIALS

- Three 1/8 page slips of paper per student

EXPLAIN

1. We’ve generated helpful phrases and questions, and learned healthcare terminology. Now we will put these phrases and words into practice by using them to solve problems common in healthcare situations, including some of the challenges you discussed earlier.

2. Distribute three slips of paper to each student. On each slip, students should write a communication goal, such as filling a prescription, understanding a surgery, explaining symptoms, understanding a diagnosis. They should also write a complicating factor. This is something that made the communication difficult or made the goal impossible to achieve, such as misunderstanding the receptionist, arriving late to an appointment or needing a translator.

3. Collect the slips and quickly scan to select the ones you think will work well as role plays. Explain that groups of students will act out the scenes, using the helpful phrases and vocabulary terms learned earlier to try to solve the problems.
Divide the students into groups you have pre-selected before class, and distribute one scenario to each group, asking them to prepare a scene 2-3 minutes in length. First they should choose roles for the group participants, then start planning their scene. The scene must use some of the helpful phrases, questions and terms. Students should keep the goal in mind and try to use the phrases, questions and terms to reach their goals.

Once groups have prepared, students will perform their role plays. Hopefully, the protagonist will be successful, but this doesn’t always happen. The scene should be true to life, based on students’ experiences.

**DISCUSSION FOLLOWING ROLE PLAYS**

Once a group has performed, lead the audience to discuss their responses to what they’ve seen. Use the questions below and ones you create to lead the discussion. The goal is to identify the problem and the strategies the actors took in solving it.

1. Who was the healthcare consumer?
2. What was his/her goal?
3. What was the complicating factor?
4. What strategies did the protagonist use to reach his/her goal?
5. Was s/he successful?
6. Has this ever happened to you as a patient?
7. Are there other strategies you could or would use if this happened to you as a patient?
8. Has this happened to someone you were accompanying on a healthcare visit?
9. What advice do you have for the healthcare provider?
10. What would you do differently if you were the healthcare provider?

**Resource for English Language Learners**

Students engage in a number of activities around the idea of preventive health care. They make calculations using data from a supportive housing organization in Brooklyn with a healthcare component. Then they watch a video from this organization, getting a glimpse into the healthcare careers that exist in such an organization. They test their knowledge of personal preventive healthcare steps through a True/False quiz. And they read a *New York Times* article on recent research into recreation as preventive healthcare.

**ACTIVITIES IN THIS SERIES:**

- 2.1 • Preventive Care Brainstorms
- 2.2 • Preventive Care Myths and Facts
- 2.3 • Calculating with Percents: A Case Study of Brooklyn Community Housing and Services*
- 2.4 • Video Case Study*
- 2.5 • New York Times Article: *How Walking in Nature Changes the Brain*

**DISCUSS**

In recent years, healthcare costs have been increasing. Some employees who receive health insurance through their jobs have had to contribute more to their healthcare plans than they used to. The amount of time we spend with doctors seems to be getting shorter, as doctors have to squeeze in more patients than they used to in order to earn enough money to keep their facilities operating. Some people delay going to the doctor because wait times are often long, waiting rooms are crowded, or they feel worried about potential bad news or are uncomfortable with their English skills. One remedy most people agree on is that preventive care can improve health and reduce the need for emergency room visits. Preventive care means doing things to improve and maintain good health. Some preventive care can be done by families at home, such as eating healthy, regular meals and getting exercise. Other preventive care involves doctors and nurses, such as getting regular check-ups, especially for children, pregnant and elderly patients. There is so much research these days showing the value of preventive care, whether it is done by individuals or at medical facilities.
Preventive Healthcare Brainstorm

As an introduction to thinking about preventive healthcare, students brainstorm preventive measures they currently take and identify ones they might add.

**ASK**

1. What are some preventive healthcare measures you take? They can be ones you do on a regular, even daily, basis, or ones that you do infrequently. Write responses on the board.
   
   *Examples:*
   
   - Brushing teeth
   - Getting more than 6 hours of sleep
   - Participating in annual checkups
   - Receiving immunizations (especially for children)

2. What are some preventive actions you don’t currently do, but know would improve your health, and would like to start doing? Teacher writes list on board.

   *Examples:*
   
   - Eating more vegetables
   - Going to sleep earlier
   - Quitting smoking
Preventive Care Myths and Facts

Students learn which preventive healthcare measures experts recommend by taking a true/false quiz, then reading the recommendations.

PREP
• Be prepared to explain vocabulary: hospitalization, mole, birthmark, check-up, annual(ly), resident, health screening, in-patient, remedy, prevent.

MATERIALS
• Preventive Care Myths and Facts worksheet
• True/False Preventive Care Answer Key

EXPLAIN
1. Distribute the Preventive Care Myths and Facts worksheet and ask students to complete it with a partner.
2. Distribute the True/False Preventive Care Answer Key and ask students to exchange their quiz with another pair group and correct that pair’s quiz.

VOCABULARY
hospitalization
mole
birthmark
check-up
annual(ly)
resident
health screening
in-patient
remedy
prevent
Preventive Care Myths and Facts Worksheet

With a partner, write True or False based on your understanding of the following statements.

1. _________ Adults aged 22-29 are recommended to have a medical check-up every 1-3 years.

2. _________ Most moles or birth marks should be removed to prevent skin cancer.

3. _________ Pregnant women should not drink coffee.

4. _________ People who brush and floss their teeth three times daily do not need to get their teeth cleaned by a dentist twice a year.

5. _________ Walking does not do much to control weight and maintain good health. Stronger exercise is required.

6. _________ Checking for possible cancerous lumps in a breast can be done at home without a doctor or nurse.

7. _________ Seeing an eye doctor annually to check for vision and eye health is recommended.

8. _________ Colleges require students to prove they have received immunizations.

9. _________ Hand sanitizer is more effective at preventing disease than washing hands with soap and water is.
**True/False Preventive Care Answer Key**

1. **TRUE** Young adults in good health can wait 1-3 years between appointments if they don’t have any questions or concerns and are feeling healthy.

2. **FALSE** Moles and birthmarks should be watched to make sure they are not changing. Moles or birthmarks that are changing should be discussed with a doctor or nurse.

3. **FALSE** Experts do not agree on the exact amount of caffeine that is safe, but most agree that at least one 12-ounce cup is safe.

4. **FALSE** Having teeth cleaned professionally twice a year is recommended. Brushing and flossing 2-3 times daily is also recommended.

5. **FALSE** Even if no other exercise is possible, walking is recommended as a way to lose weight, strengthen muscles and bones, prevent heart disease and high blood pressure, and improve mood.

6. **TRUE** Becoming familiar with one’s body is one of the best ways to catch small problems before they become big problems. Doctors recommend that women check their breasts monthly at home for any lumps. If any lumps are found, patients should discuss the finding with their gynecologist or general practitioner.

7. **TRUE** Eyesight can change slightly, or a lot, from year to year. When people, especially students who read a lot, strain their eyes by trying to see things that are difficult for them to see, it can damage their eyes and cause other problems such as headaches. Having annual vision check-ups is a good way to keep glasses or contact lens prescriptions current, and to check for eye disease.

8. **TRUE** Colleges require that students show proof of immunizations before they register for classes. Some even offer free immunizations on campus to help students stay current in their immunizations.

9. **FALSE** Research shows that hand sanitizer should be used only when soap and water are not available, because washing with soap and water is more effective at killing harmful bacteria that can cause disease.

Selections from Massachusetts Health Quality Partners, Adult Preventive Care Guidelines, 2015
Calculating with Percents:
A Case Study of Brooklyn Community Housing and Services*

Students analyze data about preventive care from a housing organization in Brooklyn to practice calculating averages, percents, fractions, multiplication and division.

PREP

• Complete a Preventative Care at Brooklyn Community Housing and Services worksheet and create an answer key to correct student work.

MATERIALS

• Preventive Care at Brooklyn Community Housing and Services worksheet
• Healthy Aging at Oak Hall SRO chart

EXPLAIN

1 During the first week you looked at national and local data related to employment and salaries. The numbers represented people nationwide and in New York City. Now we will look at information that is even more local, from one agency called Brooklyn Community Housing and Services. This organization gathered some interesting data about preventive care from within their own agency, and shared their data for students and others to learn from.

2 Brooklyn Community Housing and Services (BCHS) provides temporary and long-term housing and support to the elderly, young mothers and their babies, and people with mental illness who used to be homeless. They realized that their residents were spending a lot of time in emergency rooms and encountering a lot of the problems commonly found in emergency rooms—long waits and over-crowding, for example. They wondered how they could help the residents have access to better healthcare. They wondered if doing more preventive care would help decrease the number of times residents would have to go to the emergency rooms. A lot of the residents have trouble getting to doctor’s offices because they are elderly, have disabilities, or have young babies. So the agency hired a nurse and doctor to come to the residence and tracked the number of emergency room visits before and after they hired medical personnel to work on site.

3 Divide the class into groups of three to work on the following math problems.
Worksheet: Preventive Care at Brooklyn Community Housing and Services

Use the chart on the following pages to answer the questions below.

1. One of the buildings, Oak Hall, housed 74 people with mental illness. In 2006, 1/3 of them were over 55 years old. How many were over 55 years old?

   Show your work here:

2. Before there was a nurse or doctor on site at the residence, 20% of the older residents received an annual check-up or health screening. How many was that?

   Show your work here:

   Explain the steps you took to answer this question.

3. Once the nurse and doctor were on site, 83% of the older residents had annual check-ups and health screenings. How many was that?

   Show your work:

   Now write the math problem that checks your work:
Getting check-ups is great, but Brooklyn Community Housing and Services wondered if it would really affect the number of hospital stays. Before the doctor and nurse visits, residents made 415 hospital stays in one year. If you wanted to figure out the average number of times a resident visited the hospital that year, how would you find it?

Now do the math to find the average and write the answer in sentence form below. 

**Show your work:**

The average number of times

After several years of having doctor and nurses on site, there were only 14 hospital stays in one year. What was the average number of times a resident went to the hospital during that year?

**Show your work:**
The chart on the next page shows the data BCHS collected about hospital stays over a 9 year period. Read the chart and describe any trends regarding the number of hospital visits over time.

Is the trend consistent? Explain. Use the word trend in your answer.

The numbers from which years seem surprising? Why do they seem surprising?

Make three educated guesses that might explain these surprising numbers.

1. 
2. 
3. 

After studying this data, what conclusions can you make about preventive care at BCHS?
# Chart: Healthy Aging at Oak Hall SRO

<table>
<thead>
<tr>
<th>Geriatric Program</th>
<th>Fiscal Year (FY) 2015</th>
<th>9 Year Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geriatric Participants</td>
<td>22</td>
<td>46</td>
</tr>
<tr>
<td>Males</td>
<td>83%</td>
<td>72%</td>
</tr>
<tr>
<td>Females</td>
<td>17%</td>
<td>28%</td>
</tr>
<tr>
<td>Average Age</td>
<td>63</td>
<td>62</td>
</tr>
<tr>
<td>Incarceration History</td>
<td>60%</td>
<td>50%</td>
</tr>
<tr>
<td>Serious Mental Health Diagnosis</td>
<td>78%</td>
<td>78%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Inpatient Hospitalization</th>
<th>Fiscal Year 2015</th>
<th>Annual Totals 2007–2015</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>14 days</td>
<td>FY 2007: 415 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2008: 125 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2009: 104 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2010: 67 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2011: 13 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2012: 31 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2013: 30 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2014: 59 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td>FY 2015: 14 days</td>
</tr>
</tbody>
</table>

"Healthy Aging at the Oak Hall SRO," Brooklyn Community Housing and Services, 2015

SRO stands for Single Room Occupancy. It refers to a building that has several single bedrooms with shared bathrooms, instead of entire apartments.
Section 2.4

**Video Case Study: Brooklyn Community Housing and Services**

Students learn more than the numbers of Brooklyn Community Housing and Services by watching a video featuring residents and employees and considering the required jobs and required skills at such an organization.

**PREP**

- The following video was made for promotional purposes. It highlights a number of the BCHS residents, as well as staff members.

  The video can be found at: [https://www.youtube.com/watch?v=Rerl8virms#t=96](https://www.youtube.com/watch?v=Rerl8virms#t=96)

**WRITE**

Write the following questions on the board and ask students to write their responses once they have seen the video. You can play the video a second time if necessary.

1. What are some of the challenging situations residents have been in before they arrive at Brooklyn Community Housing and Services?

2. List as many jobs at the residence that you can think of. Include workers you see as well as workers you don’t see.

3. What are some of the skills you think employees of Brooklyn Community Housing and Services should have?

   - *Example: Patience, understanding of trauma, good communication skills, training in social work, psychology, substance abuse counseling, community health.*

4. If you wanted to work with this organization, what are some questions you would ask?

5. If you knew an elderly person who was homeless and looking for housing, what are some questions you would ask Brooklyn Community Housing and Services to find out if the elderly person could become a resident there?

6. Many people think of physical health when they think of jobs in healthcare, but what careers exist in the mental or emotional healthcare fields? Is this a field you would want to work in? Why or why not?
Recreational Preventive Care Brainstorm*

Before reading an article about a study of the benefits of recreational preventive care, students brainstorm recreational activities that they think might have health benefits.

DISCUSS

1 The residents at Brooklyn Community Housing and Services drastically improved their health by having regular check-ups and healthcare screenings. It’s not surprising that these preventive measures are good for our long term health. Going to the doctor isn’t especially fun, but it’s a simple act that can prevent problems in the future. But can healthy activities be fun too? List as many activities as you can that are fun and might be good for our health too. Teacher writes responses on the board.

   > Example: Riding a bicycle, laughing, playing with kids.

2 If you were to choose one to do more frequently, what would it be and why?
Reading: How Walking in Nature Changes the Brain

Students read and discuss a *New York Times* article about a study examining the impact of walking in nature.

**PREP**
- Be prepared to discuss the terms: *brooding, delay, contribute, reduce*

**MATERIALS**
- *How Walking in Nature Changes the Brain* reading

**EXPLAIN**

1. Researchers noticed that walking in nature made them feel different—positive and calm—and wondered if there were any health benefits from it that could be scientifically proven. They decided to study it and find out.

2. Read the *New York Times* article, *“How Walking in Nature Changes the Brain.”* Read it once to find out the main conclusions their study showed. Don't worry about any parts you don’t understand just yet. Read it for the big, main ideas. You’ll have the opportunity to read it a second time.

**DISCUSSION QUESTIONS (25 minutes)**

Once students are finished reading, write the following questions on the board and ask students to discuss with a partner, before discussing as a class. During class discussion, ask students to describe where in the text they found their answers.

- What big questions were the researchers hoping to answer with the study?
- How did they study this?
- What did they find?
- What questions do they still have?
- Have you ever walked in nature? Where and when?
  Try to recall how it made you feel.
- What kind of nature exists in New York City?

**CLOSER READING (25 minutes)**

If time remains, ask students to underline any words, phrases or paragraphs they did not understand. Ask them to discuss their uncertainties with a partner, then discuss as a class.
How Walking in Nature Changes the Brain


A walk in the park may soothe the mind and, in the process, change the workings of our brains in ways that improve our mental health, according to an interesting new study …

Most of us today live in cities and spend far less time outside in green, natural spaces than people did several generations ago. City dwellers also have a higher risk for anxiety, depression and other mental illnesses than people living outside urban centers, studies show.

These developments seem to be linked … according to a growing body of research. Various studies have found that urban dwellers with little access to green spaces have a higher incidence of psychological problems than people living near parks and that city dwellers who visit natural environments have lower levels of stress hormones immediately afterward than people who have not recently been outside.

But just how a visit to a park or other green space might alter mood has been unclear. Does experiencing nature actually change our brains in some way that affects our emotional health?

That possibility intrigued Gregory Bratman, a graduate student at the Emmett Interdisciplinary Program in Environment and Resources at Stanford University, who has been studying the psychological effects of urban living… He and his colleagues found that volunteers who walked briefly through a lush, green portion of the Stanford campus were more attentive and happier afterward than volunteers who strolled for the same amount of time near heavy traffic.

But that study did not examine [why].

So for the new study… Bratman and his collaborators decided to closely [examine] what effect a walk might have on a person’s tendency to brood. Brooding … is a mental state familiar to most of us, in which we can't seem to stop chewing over the ways in which things are wrong with ourselves and our lives. This broken-record fretting is not healthy or helpful. It can be a precursor to depression and is disproportionately common among city dwellers compared with people living outside urban areas, studies show.

Perhaps most interesting for the purposes of Mr. Bratman and his colleagues, however, such rumination also is strongly associated with increased activity in a portion of the brain known as the subgenual prefrontal cortex.

If the researchers could track activity in that part of the brain before and after people visited nature, Mr. Bratman realized, they would have a better idea about
whether and to what extent nature changes people’s minds. Mr. Bratman and his colleagues first gathered 38 healthy, adult city dwellers and asked them to complete a questionnaire to determine their normal level of morbid rumination.

The researchers also checked for brain activity in each volunteer’s subgenual prefrontal cortex, using scans that track blood flow through the brain. Greater blood flow to parts of the brain usually signals more activity in those areas.

Then the scientists … assigned half of the volunteers to walk for 90 minutes through a leafy, quiet … portion of the Stanford campus or next to a loud, hectic, multi-lane highway in Palo Alto. The volunteers were not allowed to have companions or listen to music… Immediately after completing their walks, the volunteers … repeated both the questionnaire and the brain scan.

As might have been expected, walking along the highway had not soothed people’s minds. Blood flow to their subgenual prefrontal cortex was still high and their broodiness scores were unchanged.

But the volunteers who had strolled along the quiet, tree-lined paths showed slight but meaningful improvements in their mental health, according to their scores on the questionnaire. They were not dwelling on the negative aspects of their lives as much as they had been before the walk.

They also had less blood flow to the subgenual prefrontal cortex. That portion of their brains were quieter.

These results “strongly suggest that getting out into natural environments” could be an easy and almost immediate way to improve moods for city dwellers, Mr. Bratman said.

But of course many questions remain, he said, including how much time in nature is sufficient or ideal for our mental health, as well as what aspects of the natural world are most soothing. Is it the greenery, quiet, sunniness, loamy smells, all of those, or something else that lifts our moods? Do we need to be walking or otherwise physically active outside to gain the fullest psychological benefits? Should we be alone or could companionship amplify mood enhancements?

“There’s a tremendous amount of study that still needs to be done,” Mr. Bratman said.

But in the meantime, he pointed out, there is little downside to strolling through the nearest park, and some chance that you might beneficially muffle, at least for awhile, your subgenual prefrontal cortex. •
Choose people who lift you up.

— Michelle Obama

MICHELLE OBAMA was born on January 17, 1964, in Chicago, Illinois. She attended Princeton University, graduating cum laude in 1985, and went on to earn a degree from Harvard Law School in 1988. Following her graduation from Harvard, she worked at a Chicago law firm, where she met her husband, future U.S. President Barack Obama. As first lady, she has focused her attention on current social issues, such as poverty, healthy living and education.

http://www.biography.com/people/michelle-obama-307592