SREB Readiness Courses

Ready for High School: Literacy

Academic Notebook

English Unit 2 How the Brain Functions and What It Means To Be Human

Literature and Informational Texts The Academic Notebook Ready for High School: Literacy . English Unit 2

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Course Overview

Welcome to the second English literacy unit of the SREB Readiness Course, Literacy Ready. What does English literacy mean? English literacy is based on an understanding that texts — both literary and informational — enable us to understand human experiences and that literary texts are open to dialogue between and among readers and texts. In this course, you will take part in several activities aimed at improving your literacy, specifically as literacy is used in English. While certainly the content covered in this course is important, a principal purpose of this course is to equip you with the tools necessary to be more successful in your high school coursework. To that end, the creators of the course have developed this academic notebook.

The theme for this six-week English course is "How do conditions of the brain affect us emotionally, physically, and intellectually?" The reading text for this course will be Daniel Keyes' *Flowers for Algernon*. This course focuses on the kinds of disciplinary literacy you will be expected to undertake in a high school setting. The course includes six units, with two in each of English, science, and history.

In this unit, students will be expected to do the following:

- Read and analyze Flowers for Algernon and supplemental readings.
- Learn vocabulary from the text.
- Summarize complex texts and see how audience, speaker, and purpose interact in those texts.
- Read closely to annotate and analyze a variety of texts.
- Develop stances on ideas from the central and supplemental texts.
- Participate in a Socratic seminar and write a response/reaction paper.

Purposes of the Academic Notebook

The Academic Notebook has several roles in this course. First, you will keep a record of your reading of the central text, *Flowers for Algernon*, by making reading log entries for assigned readings. The notes that you take in the reading log will be used to help you make sense of the central text and the changes the main character, Charlie, undergoes.

A second role of the notebook is to provide you with opportunities to reflect on your readings and to connect with Charlie through progress reports similar to those that Charlie keeps. A third role is to provide you with opportunities to make note of new vocabulary that you encounter in the text and collect information about the meanings of those words. To carry out this role, you will use vocabulary charts to make note of words that are new to you, write the context in which you find the word, rate your understanding of the word, and write a dictionary definition for the word, along with your own understanding of that definition.

The final role of the notebook is that of an assessment tool. Your instructor may periodically take up the notebooks and review your work to ensure that you are

remaining on task and to assist you with any material that is causing you difficulty. At the end of this six-week module, your instructor will review the contents of this notebook as part of your overall grade. Thus, it is important that you take this work seriously, as this notebook becomes the record of your activity in this course.

You will notice that some of the work involved in this course will need to be done as homework. For some of you, this amount and level of difficulty of homework may be a challenge. As the purpose of this course is to prepare you for the types of reading and writing you will do in high school, and as high school courses typically require significant amounts of homework, it is important that you commit yourself to maintaining consistency in your homework.

The Academic Notebook is organized by lesson, and your teacher will give you instructions on which pages you should attend to during class and for homework.

Lesson 1 Using Your Brain: A Gateway Activity

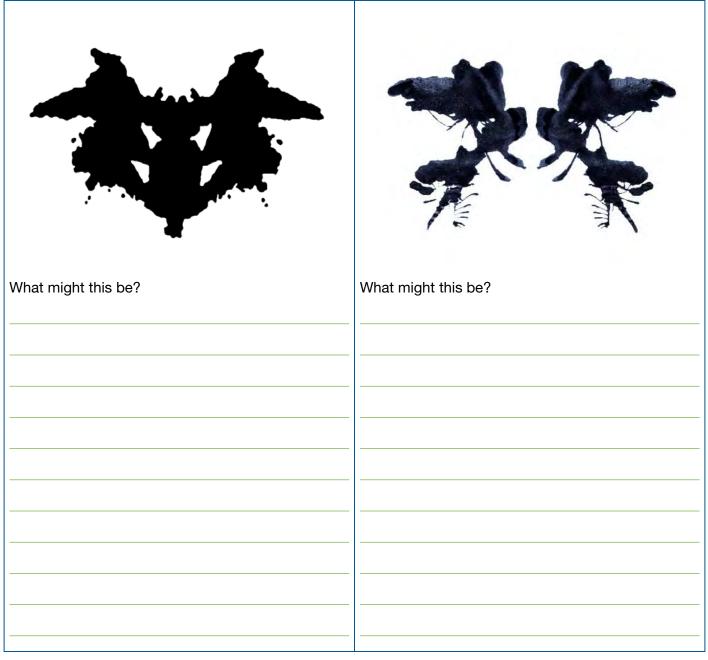
In this lesson you will

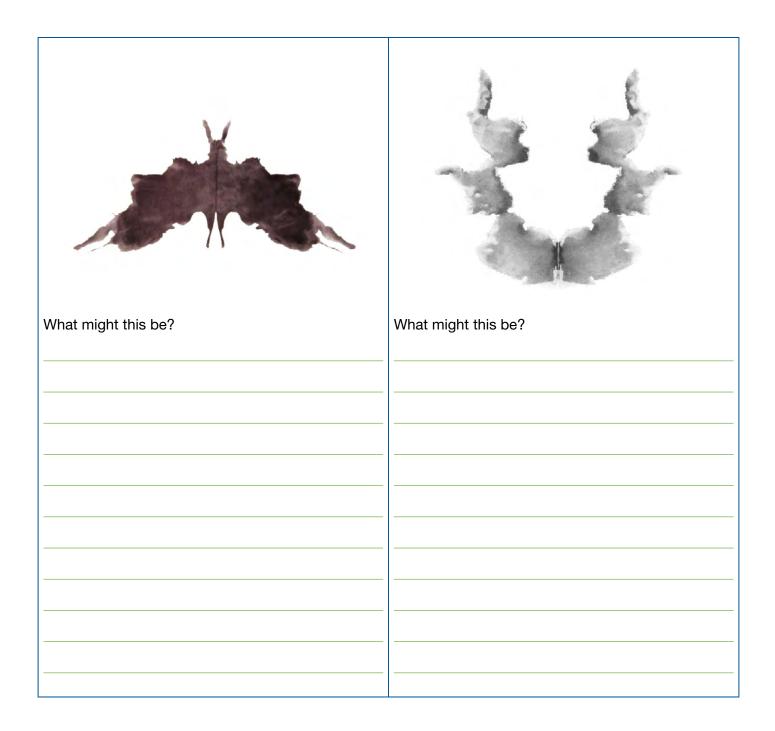
- Participate in an activity designed to engage you with the content of the unit and to help you relate to the main character, Charlie Gordon.
- Explore the nature of disciplinary literacy in English/language arts classes, as well as the goals and purposes of the course.
- Read informational text and practice the skill of annotation so as to understand the concept of multiple intelligences.
- Take a multiple intelligences assessment and write a reflection based on your results.
- Create a visual representation of yourself as a learner based on your reading and experiences.
- Read and annotate two articles about intellectual disabilities and then write a prediction about the main character based on these articles.
- Draw conclusions and make predictions based on your reading.
- Learn sentence types and identify them in the central text.

Activity What do you see?

The Rorschach test, named after the Swiss psychologist Hermann Rorschach, who created it, is often used to examine a person's psychological aspects, such as personality traits, emotional characteristics, creative abilities, thought processes and intelligence. While psychologists commonly used it with their patients in the last century, it is no longer as common, largely due to the controversies surrounding its reliability and validity. Still, examining Rorschach's inkblots may give us some insights into ourselves as well as others.

The chart below contains four of Rorschach's original inkblots. Look carefully at each image in the chart. Below the image, write an answer the question, "What might this be?"





2 Understanding Intelligence

Throughout the story, Charlie Gordon, the protagonist, undergoes significant changes in his intelligence. One measure of a person's intelligence is a multiple intelligences test, which was developed by Howard Gardner, a Harvard professor. Read the following excerpts from articles on Edutopia.com in which Gardner's theory is explained, and annotate as you read. Use the six symbols provided below, marking each symbol, and adding its corresponding notes in the margins or between lines. Feel free to use a dictionary or thesaurus to assist you.

Annotating Symbols with Actions

Symbol	Meaning/Action	Symbol	Meaning/Action
<u>Underline</u>	Underline phrases or a sentence that stands out as interesting or important. Why do you think this is worth 'carrying' through the text?	Text to Self – TS	Place a TS next to characters or events in which you can relate. Arrow out and explain connection.
Circle	Circle unfamiliar words/ phrases; define in margin.	Text to Text – TT	Place a TT to connect this text to another text (anything that is interpreted for meaning). Arrow out and explain the connection.
Question ?	Place a question mark next to passages you do not understand or want to further examine. In the margin, write your specific question about the text.	Text to World – TW	Place a TW to connect your reading to world events/issues in the past or present. Arrow out and explain the connection.

Article 1: From "Multiple Intelligences: What Does the Research Say?"

Proposed by Howard Gardner in 1983, the theory of multiple intelligences has revolutionized how we understand intelligence. Learn more about the research behind his theory.

Howard Gardner's Eight Intelligences

The theory of multiple intelligences challenges the idea of a single IQ, where human beings have one central "computer" where intelligence is housed. Howard Gardner, the Harvard professor who originally proposed the theory, says that there are multiple types of human intelligence, each representing different ways of processing information:

- Verbal-linguistic intelligence refers to an individual's ability to analyze information and produce work that involves oral and written language, such as speeches, books and emails.
- Logical-mathematical intelligence describes the ability to develop equations and proofs, make calculations and solve abstract problems.
- Visual-spatial intelligence allows people to comprehend maps and other types of graphical information.
- Musical intelligence enables individuals to produce and make meaning of different types of sound.
- Naturalistic intelligence refers to the ability to identify and distinguish among different types of plants, animals, and weather formations found in the natural world.

- Bodily-kinesthetic intelligence entails using one's own body to create products or solve problems.
- Interpersonal intelligence reflects an ability to recognize and understand other people's moods, desires, motivations, and intentions.
- Intrapersonal intelligence refers to people's ability to recognize and assess those same characteristics within themselves.

Everyone has all eight types of the intelligences listed above at varying levels of aptitude — perhaps even more that are still undiscovered — and all learning experiences do not have to relate to a person's strongest area of intelligence. For example, if someone is skilled at learning new languages, it doesn't necessarily mean that he or she prefers to learn through lectures. Someone with high visual-spatial intelligence, such as a skilled painter, may still benefit from using rhymes to remember information. Learning is fluid and complex, and it's important to avoid labeling students as one type of learner. As Gardner states, "When one has a thorough understanding of a topic, one can typically think of it in several ways."

What Multiple Intelligences Theory Can Teach Us

While additional research is still needed to determine the best measures for assessing and supporting a range of intelligences in schools, the theory has provided opportunities to broaden definitions of intelligence. As an educator, it is useful to think about the different ways that information can be presented; however, it is critical to not classify students as being specific types of learners nor as having an innate or fixed type of intelligence. People have many different intelligences, and strength in one area does not predict weakness in another.

From "Big Thinkers: Howard Gardner on Multiple Intelligences"

3. On the Theory of Multiple Intelligences

The idea of multiple intelligences comes out of psychology. It's a theory that was developed to document the fact that human beings have very different kinds of intellectual strengths and that these strengths are very, very important in revealing how kids learn and how people represent things in their minds, and then how people use them in order to show what it is that they've understood.

If we all had exactly the same kind of mind and there was only one kind of intelligence, then we could teach everybody the same thing in the same way and assess them in the same way, and that would be fair. But once we realize that people have very different kinds of minds, different kinds of strengths — some people are good in thinking spatially, some in thinking in language, others are very logical, and other people need to be hands-on and explore actively and try things out — then education that treats everybody the same way is actually the most unfair kind of education. It's unfair because it picks out one kind of mind, which I call the law professor mind — somebody who's very linguistic and logical — and says, "If you think like that, great; if you don't think like that, there's no room on the train for you."

4. On Technology and Multiple Intelligences

If we know that one child has a very spatial or visual-spatial way of learning, another child has a very hands-on way of learning, a third child likes to ask deep philosophical questions, and the fourth child likes stories, we don't have to talk very fast as a teacher. We can actually provide software, we can provide materials, we can provide resources that present material to a child in a way in which the child will find interesting and will be able to use his or her intelligences productively and, to the extent that the technology is interactive, will actually be able to show his or her understanding in a way that's comfortable to the child.

We have this myth that the only way to learn something is to read it in a textbook or hear a lecture on it. And the only way to show that we've understood something is to take a short-answer test or maybe occasionally with an essay question thrown in. But that's nonsense. Everything can be taught in more than one way. And anything that's understood can be shown in more than one way. I don't believe because there are eight intelligences we have to teach things eight ways. I think that's silly. But we always ought to be asking ourselves, "Are we reaching every child, and? If not, are there other ways in which we can do it?"

Now you will take a test to learn what type of multiple intelligences you possess. Take the test that follows, answering questions as honestly as you can.

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The Connell Multiple Intelligence Questionnaire for Children

Put a check next to each sentence that describes you.

Area 1	I like to listen to songs on the radio or a CD.
	I like to watch music videos on TV.
	I like to go to music concerts and hear live music.
	I can easily remember tunes, raps, or melodies.
	I take music lessons, singing lessons, or play a musical instrument.
	I can learn new songs easily.
	I like to sing.
Area 2	I like art classes.
	I like to draw, paint, and make things with clay.
	I enjoy putting puzzles together.
	I like to build things using blocks, Legos, and models.
	It is fun to play video games.
	I can create a picture in my mind to help me think things through.
	I notice the different styles of things, such as clothes, cars, and hairstyles.
Area 3	I like to read books, magazines, and comic books.
	I have a good vocabulary and like to learn new words.
	I enjoy writing e-mails to my friends.
	I like to write.
	It is fun to play word games such as Scrabble and Mad Libs, do crossword puzzles,
	and acrostics.
	I think it would be fun to keep a journal of my thoughts and ideas.
	I like to talk to my friends on the telephone.
Area 4	I like to play with animals and take care of them.
	I like going to zoos, parks, or aquariums.
	I like being outside.
	I like to hike, walk, or run outdoors.
	I like to observe nature's changes, such as thunderstorms, rain, snow, and sunshine.
	I help to recycle and take care of our environment.
	I pay close attention to things in my environment such as trees, rocks, flowers, birds,
	bugs, and squirrels.

Area 5	I like to do science experiments and go to science museums.
	I find arithmetic and math problems interesting.
	It is fun to solve mysteries.
	Numbers are really interesting to me.
	I like games like chess or computer games where you have to think a lot.
	I like TV shows like ZOOM, National Geographic, and Nova that talk about science
	and math.
	I can do math problems in my head and make good estimates.
Area 6	I like to dance.
	I like to play sports such as baseball, soccer, hockey, or football.
	I like to build models or do beading, sewing, macramé, or carpentry.
	I enjoy acting in plays or skits or playing charades.
	I like to move when I am thinking about things.
	I like activities such as the martial arts, tennis, running, jogging, biking,
	skateboarding, or gymnastics.
	I can sometimes "feel" the right answer.
Area 7	I like to be with my friends often.
	I like to help those who need help.
	I like to read books or see movies about people and their lives.
	I can usually tell how other people are feeling.
	It is fun for me to organize activities at home and at school.
	I would rather spend time with others than spend time alone.
	I like to talk in class discussions.
Area 8	I like doing things by myself.
	I would rather work by myself than with other students.
	I like to spend time thinking or writing about things that matter to me.
	I like to play computer games.
	I usually know what my feelings are.
	I like to write my thoughts and feelings in a diary or journal.
	I know what things I am good at, and what things I am not so good at.
C	
U	ount up the number of responses you had for each area. The areas that you check show how you e smart in the different areas.
	_ = Area 1 (Music Smart) = Area 5 (Math Smart)
	_ = Area 2 (Picture Smart) = Area 6 (Body Smart)
	= Area 3 (Word Smart) = Area 7 (People Smart)
	_ = Area 4 (Nature Smart) = Area 8 (Self Smart)

A score of 5 or more indicates a very strong area; a score of 3-4 indicates a moderate area; and a score of less than 3 indicates a developing area.

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Write a short reflection for your first "progress report." Your report should address these questions: What did you learn about yourself based on this test? Do you agree with the results? Why or why not? How important do you think this type of test is for students? For teachers? How does the article add to your understanding of this test?

Progress Report #1	Date:

Activity **3** Learning Through Drawing

In this activity, you will create a visual representation on the cover of your Academic Notebooks to reflect what you have learned about yourself through the Rorschach test and multiple intelligences test.

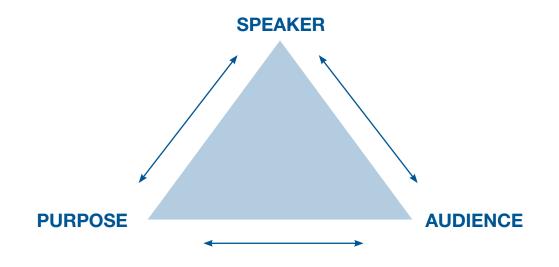
This image should reflect your personality and thought processes. It can be a self-portrait, an abstract representation, a landscape, etc.

As you draw your representation, consider the following questions:

- Which types of intelligences define me?
- What do those intelligences look like in a concrete form?
- What does the Rorschach test reveal about how I see the world?
- What beliefs do I have about my intelligence?
- What beliefs do I have about my personality?

Activity Defining and Predicting

Whenever we read an informational text or listen to a speech, we must understand not only the words the writer or speaker uses, but also the rhetorical situation: speaker, audience, and purpose. The speaker in a text is the voice that tells the story or shares the information. Readers should consider gender, race, culture, bias, and other characteristics of the person speaking. The audience is the group of readers for whom the piece is written. Consider the following questions to identify audience: Is the audience knowledgeable about the topic? Will the audience be friendly or hostile? Is there a particular age or gender the writer has in mind? Is the writer want the audience to think or do as a result of reading the text? These three parts of the rhetorical situation interact to help us understand a text. The relationship among them can be pictured as a triangle:



People are often labeled in ways that stigmatize and stereotype. One of these labels is in the terminology people use to identify those who have below-average intelligence or a mental disability. Read the following articles on these terms. As you read, annotate the text. Refer to the annotation chart. After you read each article, identify speaker, audience, and purpose in the graphic organizer provided.

Article #1: Intellectual Disability

Intellectual disability (ID), once called mental retardation, is characterized by below-average intelligence or mental ability and a lack of skills necessary for day-to-day living. People with intellectual disabilities can and do learn new skills, but they learn them more slowly. There are varying degrees of intellectual disability, from mild to profound.

What is intellectual disability?

Someone with intellectual disability has limitations in two areas. These areas are:

- Intellectual functioning. Also known as IQ, this refers to a person's ability to learn, reason, make decisions, and solve problems.
- Adaptive behaviors. These are skills necessary for day-to-day life, such as being able to communicate effectively, interact with others, and take care of oneself.

IQ (Intelligence Quotient) is measured by an IQ test. The average IQ is 100. A person is considered intellectually disabled if he or she has an IQ of less than 70 to 75.

To measure a child's adaptive behaviors, a specialist will observe the child's skills and compare them to other children of the same age. Things that may be observed include how well the child can feed or dress himself or herself; how well the child is able to communicate with and understand others; and how the child interacts with family, friends, and other children of the same age.

Intellectual disability is thought to affect about 1% of the population. Of those affected, 85% have mild intellectual disability. This means they are just a little slower than average to learn new information or skills. With the right support, most will be able to live independently as adults.

What are the signs of intellectual disability in children?

There are many different signs of intellectual disability in children. Signs may appear during infancy, or they may not be noticeable until a child reaches school age. It often depends on the severity of the disability. Some of the most common signs of intellectual disability are:

- Rolling over, sitting up, crawling, or walking late
- Talking late or having trouble with talking
- Slow to master things like potty training, dressing, and feeding himself or herself
- Difficulty remembering things
- · Inability to connect actions with consequences
- Behavior problems such as explosive tantrums
- Difficulty with problem-solving or logical thinking

In children with severe or profound intellectual disability, there may be other health problems as well. These problems may include seizures, mood disorders (anxiety, autism, etc.), motor skills impairment, vision problems, or hearing problems.

What causes intellectual disability?

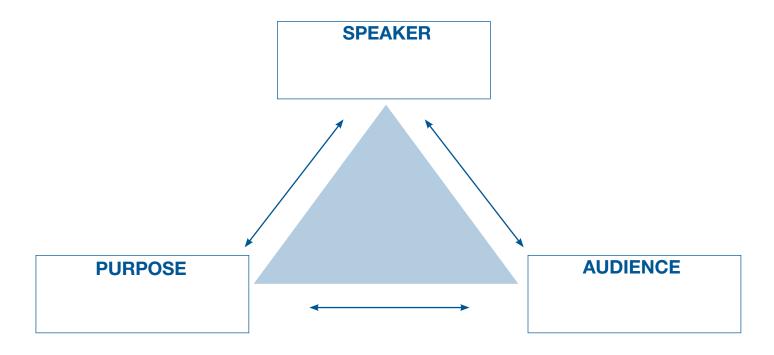
Anytime something interferes with normal brain development, intellectual disability can result. However, aspecific cause for intellectual disability can only be pinpointed about a third of the time.

The most common causes of intellectual disability are:

- Genetic conditions. These include things like Down syndrome and fragile X syndrome.
- Problems during pregnancy. Things that can interfere with fetal brain development include alcohol or drug use, malnutrition, certain infections, and preeclampsia.

- Problems during childbirth. Intellectual disability may result if a baby is deprived of oxygen during childbirth or born extremely premature.
- Illness or injury. Infections like meningitis, whooping cough, or the measles can lead to intellectual disability. Severe head injury, near-drowning, extreme malnutrition, exposure to toxic substances such as lead, and severe neglect or abuse can also cause it.
- None of the above. In two-thirds of all children who have intellectual disability, the cause is unknown.

Now identify the rhetorical situation in "Article #1: Intellectual Disability."



Article #2: Rosa's Law Changed Words — Now Let's Change the Prejudice

By Jill E. Thomas | October 26, 2010

On the rare occasion that I spend time with people who are not educators, it's inevitable that someone will drop the word "retarded." The "R-word" has been used colloquially for decades to describe and degrade anyone or anything out of the ordinary, inferior, or somehow slow. I can still hear the snickers from my own classmates back in 10th-grade health class when we read the words "fire retardant" in our textbook.

This word is so loaded it's no wonder that Rosa Marcellino, a 9-year-old with Down syndrome from Maryland, wanted it removed for good. With the help of her brother, her devoted parents, a congresswoman and finally Barack Obama, she succeeded in doing just that.

Rosa's Law was signed by the president on Oct. 5. Under the new law, the classification "mentally retarded" (MR) has been changed to "intellectually disabled" (ID). The criteria used to determine if a person is considered intellectually disabled is the same. Already individualized education plans (IEPs) are being updated to reflect the new language, making "mentally retarded" obsolete.

This is good news to some, a sign that we've progressed as a society. To them, "retarded" can go the way of its predecessors — "moron," "idiot" and "imbecile." Just as they can be glad that women are no longer considered hysterical, people with cognitive disabilities are no longer retarded. Remove the label and remove the prejudice.

Others are not as optimistic. "ID will be the new MR," says Autumn Yoakum, the Special Day Class teacher at my school. "And we will have spent a ton of time and energy trying to soften the effect of a label instead of truly teaching tolerance of learning differences." Moreover, she feels like MR is more narrow in scope and "still has a place within the category of ID. MR usually includes students that have issues socially and with self-care. ID seems more appropriate considering students who are low cognitively."

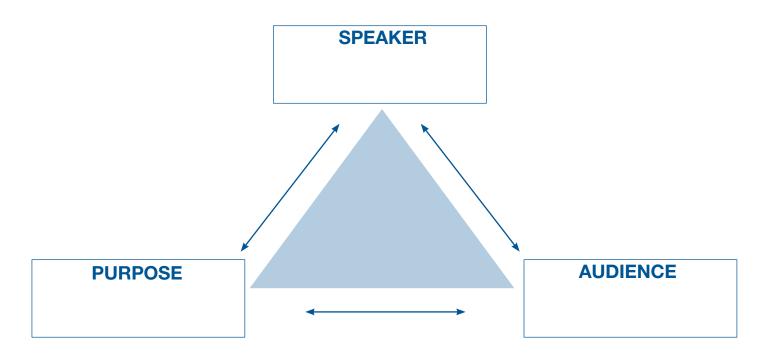
Yoakum's point is well taken. Simply changing the name will have little impact on the perception of people with cognitive disabilities if understanding and tolerance are not taught in tandem with these changes.

I should know.

Just the other day during passing period I heard a student say, "That's hella retarded." I stopped and said, "I think you know that word can be hurtful. What's a word that better describes what you are trying to say?" The student looked at her feet with shame and thought for a moment. She clearly hadn't meant any harm but was just using a familiar expression. After a few moments she looked up at me and said, "That's hella weird!"

Without the time or presence of mind to take the conversation further, I declared, "Thank you. That's better." But it wasn't. And it won't be until educators like myself do more than just tell students not to use a particular word.

Now identify the rhetorical situation in "Article #2: Rosa's Law Changed Words — Now Let's Change the Prejudice."



Based on what you have learned about the subject of intellectual disabilities, use prediction to write a brief description of the main character of the story that addresses these questions: What would he look like? What personality traits will he possess? What job, if any, will he have? What relationships will he have with others? Where will he live?

Activity **5** Examining the Expo Card for the Symposium

Let's look at the prompt and task.

"How do conditions of the brain affect us emotionally, physically, and intellectually?" After reading Flowers for Algernon and other informational texts on brain function and intelligence, participate in a Socratic seminar in which you will discuss conditions and their effects. Support your position with evidence from the texts. After participating in the seminar, you will write a response/reaction paper in which you respond to your peers' comments from the seminar.

Answer the following questions:

Based on the assignment description and rubric, what ideas and views do I hold so far about conditions of the brain?

What challenges might I face as I prepare for this assignment?

Now examine the rubric below. You will base part of your response/reaction paper on it. After you read it, write down any questions you have.

Review the rubric by which you will evaluate your performance before the Socratic Seminar begins, assemble your notes, and have your ideas ready. When finished, use the rubric and following questions as an evaluation tool.

Socratic Seminar Self-Evaluation Rubric

Socratic Seminar Rubric	Understands the texts	Participates in discussion	Supports ideas with evidence	Demonstrates critical mindedness	Demonstrates tolerance for uncertainty	Listens and respects others
Above Target	Uses parts of the texts in the discussion and shows understanding of the texts. Shows command of vocabulary.	Demonstrates active participation throughout circle time.	Makes specific references to texts and regularly defends ideas with evidence.	Questions others during discussion in a way that makes sense and adds to the group's discussion.	Is able to listen to and accept others' opinions different from his/her own.	Makes comments reflecting active listening and respect of others.
Target	Uses texts during the discussion but does not show understanding of them. Uses some text vocabulary.	Demonstrates active participation in at least half of the circle time.	Makes references to texts and at times defends ideas with evidence when	Questions and comments to others make sense but do not add to the group's discussion.	Is able to listen to others' opinions different from his/her own but does not use them in remaining discussion.	Generally listens, but is not attentive to details.
Below Target	Does not use any of the texts in the discussion. Does not use text vocabulary.	Demonstrates some participation, but off-task most of the circle time.	Makes no references to texts or does not defend ideas.	Does not question others or questions don't make sense.	Does not accept others' opinions and is unwilling to hear them.	Is consistently inattentive.

What I did do well	
What I didn't do well	
What I will do next time	

How the Brain Functions and What it Means to be Human LESSON 1

Questions I have about the rubic:

Lesson 2 Putting Knowledge to the Test

In this lesson you will

- Watch a Power Point presentation on types of sentences and sentence combining, and identify simple sentences and sentence errors in the central text.
- Discuss phonetics and observe how Charlie spells words in the beginning, highlighting misspelled words.
- Participate in partner and class discussions regarding testing.
- Complete a chart and write a comparison/contrast paragraph.
- View a video and complete a paper maze.
- Read a short academic article about mice and research and complete a 3-2-1 graphic organizer.
- Read a short excerpt from an article about the ethics of using animals in research and write a paragraph of argumentation.

Activity Sentence Structures and Errors

Watch the PowerPoint on types of sentences and sentence combining. In early progress reports, Charlie uses a lot of simple sentences and incorrectly combines clauses. As he gets smarter, his sentences become more complex and are grammatically correct.

Now we will read Progress Report #1 as a class. As we read, we will identify simple sentences and sentence errors.

Now look for simple sentences and sentence combining errors in Progress Report #2. Identify simple sentences by underlining them. Circle any sentences in which the clauses have been combined incorrectly.

Locate two of the simple sentences you identified in the text. Correctly combine them into one sentence. Make sure the sentences you select are related.





Reread "progris riport 1-martch 5 1965" and "progris riport 2-martch 6" and write down three important ideas, with page numbers, that help you understand this passage. Then write a two-sentence summary of the main idea of this part of Section One.

Select three significant details from your reading that you feel are important to your understanding	Based on the details you selected, write a two- sentence summary of the main idea of this part of
of the events in this part of the section. For each detail, list the page number on which it appears.	Section One.

Make a prediction. What do you think Charlie will be used for?

Think about how you felt when you first saw the Rorschach images, and imagine how Charlie was feeling. Write a journal entry for Progress Report #2 describing your feelings about the Rorschach images in at least two complete sentences.

Progress Report #2	Date:



Write a paragraph comparing Charlie's feelings about taking tests to yours. First, list evidence from the text describing Charlie's feelings in the chart on the left side. Then add your feelings about tests on the right side.

Charlie's feelings about tests	My feelings about tests

Write a paragraph comparing your feelings with Charlie's, using details from the chart as support. After you write your paragraph, trade papers with a shoulder partner and edit for sentence combining errors.



Complete the maze below from thinkmaze.com. You will be timed. Write your time at the bottom of the maze.Read the following article; then complete the 3-2-1 graphic organizer.



Your Time:

Why Do Medical Researchers Use Mice?

by Remy Melina | November 16, 2010

From formulating new cancer drugs to testing dietary supplements, mice and rats play a critical role in developing new medical wonders. In fact, 95 percent of all lab animals are mice and rats, according to the Foundation for Biomedical Research (FBR).

Scientists and researchers rely on mice and rats for several reasons. One is convenience: rodents are small, easily housed and maintained, and adapt well to new surroundings. They also reproduce quickly and have a short lifespan of two to three years, so several generations of mice can be observed in a relatively short period of time.

Mice and rats are also relatively inexpensive and can be bought in large quantities from commercial producers that breed rodents specifically for research. The rodents are also generally mild-tempered and docile, making them easy for researchers to handle, although some types of mice and rats can be more difficult to restrain than others.

Most of the mice and rats used in medical trials are inbred so that, other than sex differences, they are almost identical genetically. This helps make the results of medical trials more uniform, according to the National Human Genome Research Institute. As a minimum requirement, mice used in experiments must be of the same purebred species.

Another reason rodents are used as models in medical testing is that their genetic, biological and behavior characteristics closely resemble those of humans, and many symptoms of human conditions can be replicated in mice and rats. "Rats and mice are mammals that share many processes with humans and are appropriate for use to answer many research questions," said Jenny Haliski, a representative for the National Institutes of Health (NIH) Office of Laboratory Animal Welfare.

Over the last two decades, those similarities have become even stronger. Scientists can now breed genetically-altered mice called "transgenic mice" that carry genes that are similar to those that cause human diseases. Likewise, select genes can be turned off or made inactive, creating "knockout mice," which can be used to evaluate the effects of cancer-causing chemicals (carcinogens) and assess drug safety, according to the FBR.

Rodents also make efficient research animals because their anatomy, physiology and genetics are wellunderstood by researchers, making it easier to tell what changes in the mice's behaviors or characteristics are caused by.

Some rodents, called SCID (severe combined immune deficiency) mice, are naturally born without immune systems and can therefore serve as models for normal and malignant human tissue research, according to the FBR.

Some examples of human disorders and diseases for which mice and rats are used as models include:

- Hypertension
- Diabetes
- Cataracts
- Obesity
- Seizures
- Respiratory problems
- Deafness

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• Parkinson's disease

- Alzheimer's disease
- Cancer
- Cystic fibrosis
- HIV and AIDs
- Heart disease
- Muscular dystrophy
- Spinal cord injuries

Mice are also used in behavioral, sensory, aging, nutrition, and genetic studies, as well as testing anti-craving medication that could potentially end drug addiction.

"Using animals in research is critical to scientific understanding of biomedical systems leading to useful drugs, therapies, and cures," Haliski told Life's Little Mysteries.

Criteria	Your Response
3 List three reasons why scientists use mice.	
2 Describe two disorders mice can be used as models for.	
1 Make one connection between this article and Charlie.	

Now read an excerpt from an article that discusses the ethics of using animals in scientific testing. As you read, complete the graphic organizer below.

"Of Cures and Creatures Great and Small"

by Claire Andre and Manuel Velasquez, excerpted from an article on the website of the Markula Center for Applied Ethics of Santa Clara University

About 20 million animals are experimented on and killed annually, three-fourths for medical purposes and the rest to test various products. An estimated eight million are used in painful experiments. Reports show that at least 10 percent of these animals do not receive painkillers. Animal rights advocates are pressing government agencies to impose heavy restrictions on animal research. But this growing criticism of painful experimentation on animals is matched by a growing concern over the threat restrictions on the use of animals would pose to scientific progress. Whether such experiments should be allowed to continue has become a matter for public debate.

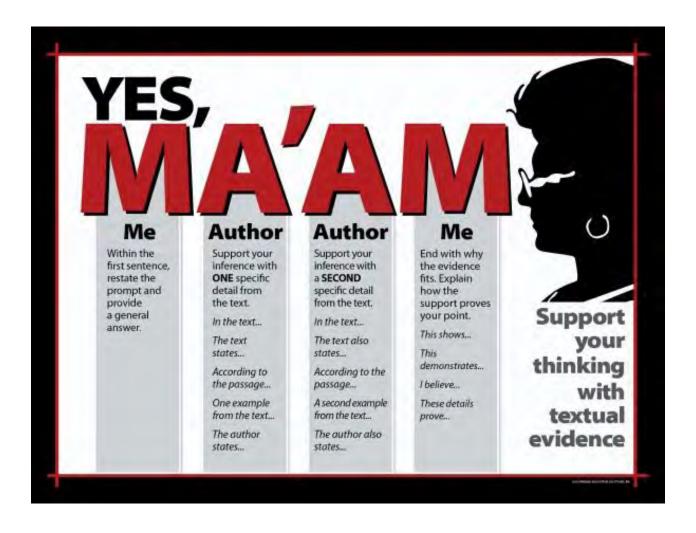
Those who argue that painful experimentation on animals should be halted, or at least curtailed, maintain that pain is an intrinsic evil, and any action that causes pain to another creature is simply not morally permissible. Pointing to the words of the nineteenth-century utilitarian, Jeremy Bentham, animal welfare advocates claim that the morally relevant question about animals is not "Can they reason? nor Can they talk? but, Can they suffer?" And, animals do in fact suffer, and do in fact feel pain. The researcher who forces rats to choose between electric shocks and starvation to see if they develop ulcers does so because he or she knows that rats have nervous systems much like humans and feel the pain of shocks in a similar way. Pain is an intrinsic evil whether it is experienced by a child, an adult, or an animal. If it is wrong to inflict pain on a human being, it is just as wrong to inflict pain on an animal.

Those who argue for the continuation of painful experimentation on animals state that society has an obligation to act in ways that will minimize harm and maximize benefits. Halting or curtailing painful experimentation on animals would have harmful consequences to society. Indeed, pain is an evil to be minimized, and scientists do work to minimize pain when possible. Contrary to sensationalistic reports of animal rights activists, scientists are not a society of crazed, cruel, curiosity seekers. But there are instances when the use of alternatives, such as painkillers, would interfere with research that promises to vastly improve the quality and duration of human lives. Animal research has been the basis for new vaccines, new cancer therapies, artificial limbs and organs, new surgical techniques, and the development of hundreds of useful products and materials. These benefits to humans far outweigh the costs in suffering that relatively few animals have had to endure. Society has an obligation to maximize the opportunities to produce such beneficial consequences, even at the cost of inflicting some pain on animals.

Mice or men? Where do our moral obligations lie? The debate over painful experimentation on animals enjoins us to consider the wrongfulness of inflicting pain and the duty to respect the lives of all creatures, while also considering our obligations to promote human welfare and prevent human suffering, animals aside.

One fact you found surprising or interesting	One argument for using animals in experiments	One argument against using animals in experiments

Now use the knowledge you gained from reading these two articles to write a paragraph in which you argue for or against using mice in experiments. Include at least two details from the texts to support your position. Use the "Yes, MA'AM" paragraph structure you learned in Unit 1. As you write, use a variety of sentence structures and follow the rules for combining sentences.



Now share your paragraph with a partner and use the peer editing checklist to help him or her revise.

Peer Editing Checklist Date: Circle yes or no for each of the following criteria. Date:				
Paper's Author:		Peer Editor:		
Yes 1	No T	The first sentence clearly states the writer's position.		
Yes 1	No T	The second sentence supports the writer's position with one specific detail from the text.		
Yes 1	No T	The third sentence supports the writer's position with a second specific detail from the text.		
Yes N	No T	The last sentence explains how the support proves the writer's point.		
Yes N	No T	The writer includes different sentence types and combines sentences correctly.		
Based on the peer review above, revise your paragraph as needed.				

Finish reading "progris ripport 4-Mar 8" and "progris ript 5-Mar10" and complete Progress Report #3 about a time when you were scared. Then complete the reading log.

Progress Report #3	Date:

Select three significant details from your reading that you feel are important to your understanding of the events in this part of the section. For each detail, list the page number on which it appears.	Based on the details you selected, write a two- sentence summary of the main idea of this part of Section One.

Lesson 3 Change is Inevitable

In this lesson you will

- Read and complete reading logs.
- Complete a Venn diagram.
- Write a character description of Charlie.
- Read an informational text, identify speaker, audience, and purpose, and use the information to determine how Charlie is learning.
- Make predictions and revisit those predictions.
- View a video explaining apostrophes, and complete a grammar activity.
- Create a chart based on previous reading logs, comparing Charlie before and after his operation.
- · View a video on commas and complete a grammar activity



Read "progress report 6 – Mar 15" through "progress report 8 – Mar 29." As you read, write down three significant changes you see in Charlie's character on the left. Then write a two-sentence summary of the main idea of this part of Section Two on the right.

Select three significant changes in Charlie's character since the operation.	Based on the details you selected, write a two- sentence summary of the main idea of this part of Section Two.

Complete a Venn Diagram comparing and contrasting Charlie's character before and after his operation.

Venn Diagram

Using the information from your Venn Diagram, write a character description of Charlie right after his surgery.



Read the following excerpt from an article on theguardian.com and think about how it connects to Charlie after he had his operation. After you read, identify speaker, audience, and purpose. Next, re-read the article and highlight phrases and passages that connect to Charlie after he had his operation.

How Much Can You Really Learn While You're Asleep?

By Jordan Gaines Lewis 6 October 2015

In Aldous Huxley's 1932 novel Brave New World, a Polish boy, Reuben Rabinovitch, falls asleep next to a radio receiver. When he wakes up, he is able to recite the entire broadcast. He has no idea what any of it means, though — it's all in English.

Countless articles today claim that you can actually learn music, hone your foreign language skills, or cram for tomorrow's math exam during sleep. And there is a whole industry trading on this idea. Subliminal message tapes, popularized by the self-help guru Tony Robbins, promise to help you stop smoking, lose weight, and even brush up your golf skills and find love — all the while catching some shut-eye.

The big sell of "sleep learning" is seductive — how lovely it would be to be productive while we lie like lifeless lumps in bed. But is it actually based on any evidence?

What the research says

The idea that you can learn facts and figures while listening to a recording in a "hypnotic state," like sleep, was debunked in a simple 1950s experiment. Researchers Charles Simon and William Emmons attached electrodes to the scalps of participants to observe them as they went in and out of sleep states. While they slept, Simon and Emmons played a tape of a person listing 96 facts about history, science, sports, and other topics. The subjects were asked trivia questions after awakening, but there was no evidence that they'd retained any of the information that was played to them. The researchers concluded that sleep-learning was "impractical, and probably impossible."

More recent research has tied in Ivan Pavlov's notion of classical conditioning — the idea that we respond to new information when it's paired with a stimulus that elicits an innate response. In 2010, Susan Diekelmann and colleagues in Germany published a study in which subjects examined specific patterns of objects on a grid before sleeping in the laboratory. While studying, each subject was exposed to a subtle odour in the room, which was later re-introduced when subjects were in a sleep stage called slow-wave sleep. Subjects remembered 84% of the objects' locations when their memories were paired with the odor during sleep.

What happens in your brain when you make a memory?

Then a 2012 study by a U.S. group reported that participants were more likely to correctly play a melody in a musical video game (similar to Guitar Hero) if the tune had been previously played to them during the slow-wave stage of a 90-minute nap. The authors suggested that learning can occur subconsciously during sleep.

Learning while you sleep, or learning because you sleep?

A study published last year by Swiss researchers suggested that sleep enhances our ability to learn foreign language words. Subjects were presented with a series of Dutch-to-German word pairs at 10 pm, then listened to an audio recording of these word pairs until 2 am. Half of the group, however, was

allowed to sleep during this period. When re-assessed, the researchers found that those who slept recalled significantly more words than those who didn't.

Learning a new language while you sleep makes the story of Huxley's Polish boy seem almost possible. But are the subjects actually learning from the audio recordings during their sleep? Or, rather, are their memories improved simply because they slept?

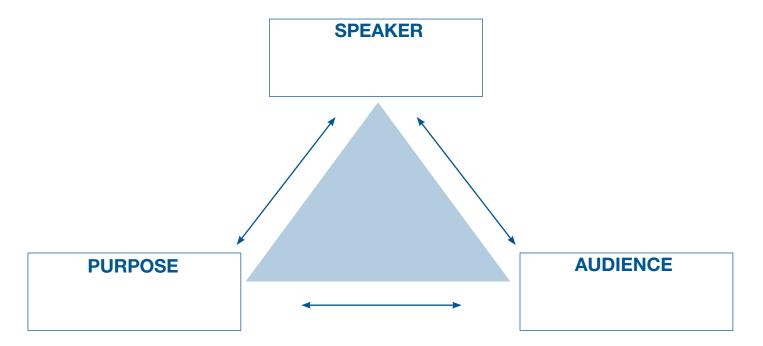
In fact, slow-wave or deep sleep has been recognised for some time as critical for memory consolidation – the stabilisation of memory from short-term to long-term. During slow-wave sleep, which tends to happen during the first half of the night, the firing of our brain cells is highly synchronised. When we measure sleep using electrodes attached to the scalp, slow-wave sleep appears as slow, high-amplitude oscillations. These "slow waves" originate in the neocortex and make a circuit with the hippocampus, the brain structure which encodes new memories. Scientists believe that this connection allows for newly-learned information to be repeatedly activated with each oscillation. It's been shown that patients with insomnia, who experience less slow-wave sleep than normal sleepers, show impaired memory consolidation.

Your best bet? Let sleeping dogs lie

So, yes, we can learn during sleep - a bit. However, this is mostly limited to making subconscious associations, like pairing scents with images. This is not exactly practical in the real world, nor will it likely lead to long-term memory storage. For more complex learning, such as baseball statistics or foreign language vocabulary, it's more likely that sleep is helping to consolidate what we've already learned, not actively processing new incoming signals.

Instead of donning clunky headphones or spritzing your pillow with the same lavender scent you used while studying for your Spanish test, it's probably best to stop trying to "hack" your sleep. Our brains have developed a pretty clever mechanism for helping us learn new information. Be kind to your noggin and give yourself enough sleep to take advantage of it.

Now identify the rhetorical situation in "How Much Can You Really Learn While You're Asleep?"



Based on the article, make a prediction about the progress of Charlie's intelligence. Give one detail from the article or one detail from *Flowers for Algernon* that support your prediction. Does he improve or does he get worse?

Look at the following sentences from several of Charlie's journal entries. Rewrite the sentences using the apostrophe and correct spelling.

Im a slow reeder too in Miss Kinnians class for slow adults but I'm trying very hard. (p. 285)

I told them I dint spill the ink on the cards and I coudnt see anything in the ink. (p. 285)

Im so excited I can hardly write. (p. 286)

Thats why Algernon beats me all the time because he head that operashun too. (p. 288)

I dont know what it says when Im up so how am I going to know when Im sleeping. (p. 289)



Read "PROGRESS REPORT 9" through "April 18" and notice more changes in Charlie. After you read, go back to your previous reading logs and look at some of the changes Charlie has been through. Then complete the reading log below.

Select three new things Charlie is learning.	Based on the details you selected, write a two- sentence summary of the main idea of this part of Section Two.

After reading, think back to Charlie before the operation. What were some things you remember about him? Complete the chart on the next page by comparing these ideas about Charlie before his operation and then after his operation.

	Before	After
People laughing		
Spelling		
Thinking skills		
Language		
Social skills		
Opinion of his doctors		
Opinion of Miss Kinnian		
Impressions of friends		
Self-impression		

Watch a video about commas and	take notes on the four uses of commas.
--------------------------------	--

1.			

2.

3.

4.

Rewrite the journal entry "Apr 16," using the comma correctly.

Lesson 4 The Mind's Potential

In this lesson you will

- Read "Progress Report 9, April 20" "Progress Report 12, April 30" and complete a reading log.
- Read and annotate an article about IQ tests from CNN.
- Re-read Progress Report 11 and complete a graphic organizer based on that progress report.
- Create questions and answers based on your understanding of the CNN article and Progress Report 11.
- Watch a TED Ed video on growth mindset vs. fixed mindset, complete a Listener's 2-1-1, and answer questions about the video.
- Participate in group and class discussions based on the questions you answered about growth and fixed mindsets.
- Complete a graphic organizer based on the three texts in this activity.
- Write an argument paragraph using evidence from your reading.
- Participate in a peer review of your argument paragraphs.
- Apply strategies for locating words in an informational text that are unfamiliar to you and determine the meaning of those words, using both context clues and dictionaries.



Read "Progress Report 9, April 20" – "Progress Report 12, April 30" and complete the reading log entries below.

Identify three new things that are troubling Charlie in this section.	Based on the items you selected, write a short summary about what things are scaring Charlie and making him feel "sick?"

Read the following article from CNN, in which the author asks two experts to answer questions about IQ. As you read, annotate the text using the skills you have used throughout this unit. Refer to the annotation chart in Lesson 1 Activity 2 on page 8 of your Academic Notebook.

(CNN)Three-year-old Alexis Martin reads at a fifth-grade level. She taught herself fluent Spanish using her parents' iPad.

"From 12 to 18 months old, we'd be driving around in the car, and she would recite her bedtime story from the night before," her dad, Ian, told CNN affiliate KNXV. "She didn't just recite them; she recited them exactly."

Alexis is the youngest member of Arizona's Mensa chapter. American Mensa (PDF) is an organization for people with IQs in the top 2%. The average IQ is 100. Martin's tops 160.

Mensa has more than 55,000 members nationally. You'd probably recognize some of the more famous ones: Nolan Gould, who plays Luke on ABC's "Modern Family"; Richard Bolles, the author of "What Color is Your Parachute?"; the Blue Power Ranger (OK, he's a fictional member).

But what does an IQ score really tell us about a person? Will Alexis be a genius for life? And if you still can't speak Spanish at age 50, should you just give up?

What your IQ score means

An Intelligence Quotient, or IQ, is a measure of what psychologists call our "fluid and crystallized intelligence." Put simply, an IQ test measures your reasoning and problem-solving abilities.

There are different kinds of IQ tests, but most analyze your visual, mathematical and language abilities as well as your memory and information processing speed. A licensed psychologist administers a series of subtests; the results are then combined into one score: your IQ.

"Anybody with very high IQ, they have the ability to manipulate, process and interpret information at a deeper level and a higher speed than the average person," explained Mensa's gifted youth specialist, Lisa Van Gemert.

What your specific numerical score means depends on the test you take. IQ is really a measure of how well you do on a test compared with other people your age.

Scores are generally shown on a bell curve. The average score is 100. People to the far left or far right of the curve are outliers. Alexis, for example, is on the far right of the curve for children her age.

What it doesn't mean

"The difficulty with these kinds of tests is that they're a snapshot," Van Gemert said. "We see what the kid looks like on this day, on this particular test, with this particular tester."

An IQ score doesn't measure your practical intelligence: knowing how to make things work, says Richard Nisbett, a professor of psychology at the University of Michigan. It doesn't measure your creativity. It doesn't measure your curiosity.

It doesn't tell your parents or teachers about your emotional readiness. Maybe as a 5-year-old, you can read and understand The Economist. But are you prepared to deal with stories about war-torn countries or prisoners on death row?

It would be a mistake, Van Gemert says, to look at a child with a high IQ as nothing more than a brain. Like any trait — blue eyes, big feet — their IQ is just one part of who they are.

Your IQ can change over time

A lot of factors can affect your IQ score over time. Poverty. Nutrition. Stress. How familiar you are with standardized tests. Nisbett's research has shown that children from lower socioeconomic levels adopted into a middle-class family often increase their IQ scores by 15 to 20 points.

"Heritability is not as great as some people (believe)," Nisbett said. "Environmental factors are very potent."

In one study, researchers tested 33 adolescents' intelligence once and then again four years later. In that short amount of time, some of their IQ scores varied by more than 20 points. The changes matched with structural and functional changes in their brains.

Kids who are geniuses at age 2 rarely stay that way, experts say. It's easier, Van Gemert explains, for young children to distinguish themselves on the curve.

In other words, it's easy to spot a genius 3-year-old when she's reading at a fifth-grade level and speaks fluent Spanish. But what makes one 47-year-old more intelligent than another? Is it education? Life experience? Their ability to put together a piece of furniture from IKEA?

You're smarter than your ancestors

Since the early 1990s, when IQ tests were first standardized, researchers have seen substantial increases in IQ scores with each passing generation. So the average 10-year-old today would score higher on the same test than a 10-year-old from 1954.

This doesn't mean we necessarily have bigger brains than our great-great-grandfathers; it just means we've improved our abilities to think logically, solve problems and/or use our abilities in hypothetical situations.

It's known as the Flynn Effect, for moral philosopher James Flynn.

"The cars that people drove in 1900 have altered because the roads are better and because of technology," Flynn said in a TED Talk last year. "And our minds have altered, too. We've gone from people who confronted a concrete world and analyzed that world primarily in terms of how much it would benefit them to people who confront a very complex world."

For instance, education has changed. We've learned to classify the world, to compare groups like animals or modes of transportation, Flynn said. We've also been taught to accept hypothetical situations (you remember algebra, right?). Our ancestors dealt only with what was right in front of them.

Our jobs have also changed. In the early 1900s, only 3% of Americans had professions that were "cognitively demanding," Flynn said. Today, 35% of us do. As such we're used to solving complex, hypothetical problems, like the ones on an IQ test.

Health factors may have had an influence as well. Studies have shown that early childhood immunization rates are a big predictor of a nation's average IQ score. So decreasing infectious diseases worldwide may have attributed to the overall increase in subsequent generations' IQ scores.

"From an energetics standpoint, a developing human will have difficulty building a brain and fighting off infectious diseases at the same time, as both are very metabolically costly tasks," the authors of one study wrote.

Not a genius? Don't panic

You probably remember the dreaded SAT or ACT test you took in high school. That's a type of IQ test. But Nisbett believes that a student's grade-point average is a better predictor of their success than their test scores.

"GPA is raw smarts times how hard you work times self-control times a lot of other things. That's true for success in life," he said. "I see graduate students with extremely high IQs who can't achieve much because they're lacking in curiosity. ... They're lacking the ability to get along with people."

Having a high IQ is not a guarantee of success, Van Gemert agrees, just as having a lower IQ is not a guarantee of failure. Good habits, perseverance and a strong work ethic are just as important as intelligence.

"If you don't develop those other qualities, you can waste a smart IQ," she said.

Van Gemert recommends that parents view their homes as a petri dish, one where they're trying to grow their children. That means lots of time spent together, interacting, and lots of books, building blocks and board games.

"The most important thing we can do for kids is to play with them," she said.

Reread Progress Report 11 in which Charlie shares his worries and questions about IQ tests. Imagine that Charlie has an opportunity to talk to the experts quoted in the article. How would they answer Charlie's questions and allay his concerns? Complete the graphic organizer below. Based on the Progress Report, write a question that Charlie would have. Based on your reading of the article, provide a response.

Charlie's Question:	Expert's response:
Charlie's Question:	Expert's response:

Activity A Matter of Mindset

Watch the Ted Ed Talk on growth mindset versus fixed mindset. After watching the Ted Ed video, fill out the Listener's 2-1-1 and then answer the questions that follow.

Criteria	Growth Mindset	Fixed Mindset
Beliefs		
List two beliefs a		
person of each type of mindset holds.		
or minuser holds.		
	·	
Goals		
List one goal a person of each		
mindset holds.		
Benefits		
List one benefit of		
having each type of		
mindset.		

Which type of mindset do you possess? Why do you think so?

Which type of mindset do you believe is better? Why do you think so?

What type of mindset do you believe Charlie has? Give support from the text.



Now that you have read an article on IQ tests, watched the TED Ed video on growth vs. fixed mindsets, and read through "PROGRESS REPORT 11" of the Flowers for Algernon text, write a paragraph in which you take one of the following positions:

Intelligence is determined by genetics and cannot be improved.

Intelligence is determined by external factors and can be improved.

Once you have selected a position, gather evidence from the texts. Complete the graphic organizer below. Include at least two pieces of evidence from each text.

My Topic Sentence:	
Evidence from ONN Article	
Evidence from CNN Article	Evidence from TED Ed Video

Review the YES MA'AM paragraph structure you used in Lesson 2. Then write your paragraph. Include at least one complex or compound sentence in your paragraph.

Now share your paragraph with a partner and use the peer editing checklist to help him or her revise.

Peer Editin Circle yes o		hecklist Date: or each of the following criteria.
Paper's Aut	thor:	Peer Editor:
Yes	No	The first sentence clearly states the writer's position.
Yes	No	The second sentence supports the writer's position with one specific detail from the text.
Yes	No	The third sentence supports the writer's position with a second specific detail from the text.
Yes	No	The last sentence explains how the support proves the writer's point.
Yes	No	The writer includes different sentence types and combines sentences correctly.

Based on the peer review above, revise your paragraph as needed.



Choose ONE of the words from the list in the box below and ONE unfamiliar word from "PROGRESS REPORT 9 – PROGRESS REPORT 12 April 30" ending with "...than ever before." For each of your words, complete the chart below. Remember to use the context of the word (the sentence in which it is found) to help you understand the dictionary definition.

Choice words and the page numbers on which they can be found.

Conscious p. 290	Neurosurgeon p. 295	Shrew p. 295	Acquire p. 297
Feeble p. 294	Opportunist p. 295	Petition p. 296	Despised p. 297

Word from the list (all):	Rate My Understanding (check one):		
	Know It	Sort of Know It	Don't Know It at All
My Guess on Meaning:			
Dictionary Definition (include the part of speech):			
Context (the sentence in which the word appears	and the pag	e number):	
Does the dictionary definition fit the context of the in the sentence to help you understand the meani			s fit? What clues are
Restate or explain the new word in your own words:		a representation of the c representation):	word (a picture or

Word from the list (all):	Rate My Understanding (check one):		
	Know It	Sort of Know It	Don't Know It at All
My Guess on Meaning:			
Dictionary Definition (include the part of speech):			
Context (the sentence in which the word appears	and the pag	e number):	
Does the dictionary definition fit the context of the in the sentence to help you understand the meani			s fit? What clues are
Restate or explain the new word in your own words:		a representation of the c representation):	e word (a picture or

Lesson 5 Overcoming Differences

In this lesson you will

- Read an excerpt from Of Mice and Men and complete a comparison-contrast organizer.
- Write a progress report in which you take on the persona of either Charlie or Lennie and reflect on how you feel.
- Re-read progress reports #4 and #12, making note of Charlie's sentence structure, syntax, word choice and spelling, and citing examples.
- Connect stylistic differences to changes in Charlie's personality.
- Read an article about bullies and students with disabilities and identify audience, purpose, and speaker.
- Write a progress report in which you imagine you witness one student bullying another.
- Apply strategies for locating words in a literary text that are unfamiliar to you and determine the meaning of those words, using both context clues and dictionaries.



Read the following excerpt from *Of Mice and Men* by John Steinbeck. It is a story of two migrant ranch workers who drift from job to job and dream of one day owning and farming their own piece of land. One of the men, George, is smart but lacks education. He works with and looks after Lennie, a large, strong man who has some type of mental disability. In this excerpt, George shares with Slim, another ranch hand, how he used to make fun of Lennie. As you read, note the similarities between George's treatment of Lennie and Charlie's co-workers' treatment of him. Then complete the comparison-contrast graphic organizer at the end of the selection.

"It wasn't nothing," Slim repeated. Say, you sure was right about him. Maybe he ain't bright but I never seen such a worker. He damn near killed his partner buckin' barley. There ain't nobody can keep up with him. God awmighty I never seen such a strong guy."

George spoke proudly. "Jus' tell Lennie what to do an' he'll do it if it don't take no figuring. He can't think of nothing to do himself, but he sure can take orders."

There was a clang of horseshoe on iron stake outside and a little cheer of voices.

Slim moved back slightly so the light was not on his face. "Funny how you an' him string along together." It was Slim's calm invitation to confidence.

"What's funny about it?" George demanded defensively.

"Oh, I dunno. Hardly none of the guys ever travel together. You know how the hands are, they just come in and get their bunk and work a month, and then they quit and go out alone. Never seem to give a damn about nobody. It jus' seems kinda funny a cuckoo like him and a smart little guy like you travelin' together."

"He ain't no cuckoo," said George. "He's dumb as hell, but he ain't crazy. An' I ain't so bright neither, or I wouldn't be buckin' barley for my fifty and found. If I was bright, if I was even a little bit smart, I'd have my own little place, an' I'd be bringin' in my own crops, 'stead of doin' all the work and not getting what comes up outa the ground." George fell silent. He wanted to talk. Slim neither encouraged or discouraged him. He just sat back quiet and receptive.

"It ain't so funny, me an' him goin' aroun' together," George said at last. "Him and me was both born in Auburn. I knowed his Aunt Clara. She took him when he was a baby and raised him up. When his Aunt Clara died, Lennie just come along with me out workin'. Got kinda used to each other after a while."

"Umm," said Slim.

George looked over at Slim and saw the calm, God-like eyes fastened on him. "Funny," said George. "I used to have a hell of a lot of fun with 'im. Used to play jokes on 'im 'cause he was too dumb to take care of 'imself. But he was too dumb even to know he had a joke played on him. I had fun. Made me seem God damn smart alongside of him. Why he'd do any damn thing I tol' him. If I tol' him to walk over a cliff, over he'd go. That wasn't so damn much fun after a while. He never got mad about it, neither. I've beat the hell outa him, and he coulda bust every bone in my body jus' with his han's, but he never lifted a finger against me." George's voice was taking on the tone of confession. "Tell you what made me stop that. One day a bunch of guys was just standin' around up on the Sacramento River. I was feelin' pretty smart. I turns to Lennie and says, 'Jump in.' An' he jumps. Couldn't swim a stroke. He damn near drowned before we could get him. An' he was so damn nice to me for pullin' him out. Clean forgot I told him to jump in. Well, I ain't done nothing like that no more."

"He's a nice fella," said Slim. "Guy don't need no sense to be a nice fella. Seems to me sometimes it jus' works the other way around. Take a real smart guy and he ain't hardly ever a nice fella."

Character	Traits	Relationships	How Others Treat Them
Charlie			
Lennie			

Based on the graphic organizer above and your understanding of both texts, write a short narrative in which either Charlie or Lennie talks to a character who has teased him and explains how that makes him feel. Use dialogue between the two characters to convey the men's feelings.



Re-read Progress Report #4. As you do, make note of Charlie's sentence structure, syntax, word choice and spelling. Give examples of each of the following in the text.

Two simple sentences:

Two sentence errors:

Two usage errors (wrong word, i.e., 'their' for 'there'):

Two punctuation errors:

Two spelling errors:

Now re-read Progress Report #12, April 30. Give examples of the following.

Two complex sentences:

Two sentences that correctly combine clauses:

Two examples of higher-level vocabulary words:

How do these stylistic changes reflect the changes in Charlie's personality?

3 Revisiting Rhetorical Situation

As you read the following article on bullying, highlight or underline any information that tells you something about the article's audience, purpose, or speaker. Then complete the rhetorical situation graphic organizer.

For over 13 years, I have been a practicing attorney and advocate for families of children with special needs. There is not a week that goes by where I do not learn of a case of bullying directed toward a child with special needs." – Attorney

Bullying certainly isn't a new problem; it has existed for generations. Historically, many have seen it as a rite of passage, a type of de facto hazing. According to Dr. Peter Raffalli, a pediatric neurologist at the Children's Hospital in Boston, Mass., this attitude is, in many cases, more dangerous than the bullies themselves. "No matter how you look at it, bullying is a form of abuse victimization, plain and simple," said Dr.Raffailli. "It's a case of the strong - or at least the stronger - preying on the weak. It says volumes about where we are as a culture and race."

Bullying has negative effects on all its victims, but kids with special needs are especially vulnerable, according to Nancy A. Murphy, M.D., FAAP and chair of the AAP Council on Children with Disabilities Executive Committee. "Since these children already struggle with self-esteem issues," said Dr. Murphy. "Bullying has a greater impact and they desire to fit in, and are less likely to stand up for themselves."

According to researchers, children with special needs often have a lower social standing among the other students in the classroom which may lead to them so frequently becoming the targets of bullying. (Pepler & Craig, 2000; Dubin, 2007).

"Because of difficulties with social interaction and the inability to read social cues, children with autism and Aspergers syndrome have higher rates of peer rejection and higher frequencies of verbal and physical attacks," said Robin Kowalski, a psychology professor at Clemson University in Clemson, S.C.

For children with special needs, and their parents, these trends present unique challenges that can, at times, overwhelm. "Many parents have a hard enough time dealing with the day-to-day challenges of life with a special needs child. Add bullying into the mix and everybody is just completely overwhelmed," said one parent.

Overall, researchers have concluded that children with special needs are bullied more because:

- They may have a low frustration tolerance. When frustration increases and reaches a threshold, it can lead to a meltdown, which makes the person stand out as being different.
- Students with developmental disabilities may have difficulty paying attention to more than one piece of information, which may cause them to stay "stuck" in a conversation. Such actions can have adverse effects on their social skills and make it difficult for them to hold conversations and make friends.
- Children with motor difficulties have difficulty reading, writing and participating in gym class. As such, they are often made fun of on the playground and in class because they are unable to perform ageappropriate motor skills, such as kicking a ball to the right person or coloring in the lines.
- Children with communication disabilities often have assistive technology devices that other students do not understand and, as such, the other students view them as "weird."
- Students with physical impairments may move slower, have less stamina and an unsteady gait. These conditions, as well as others, may be viewed as signs of weakness and precipitate physical or verbal abuse.

Research conducted has demonstrated conclusively that children with disabilities are significantly more likely than their peers to be the victims of bullying. A study in the British Journal of Learning Support (2008) found that 60 percent of students with disabilities reported being bullied compared to 25% of the general student population. According to researchers Wall, Wheaton and Zuver (2009) only 10 studies have been conducted in the United States on bullying and developmental disabilities. All studies found that children with disabilities were 2 to 3 times more likely to be victims of bullying than their non-disabled peers. In addition, the researchers found that the bullying experienced by these children was more chronic in nature and was most often directly related to their disability."

In a landmark study conducted in 1994, researchers found that children with visible physical conditions or disabilities, such as cerebral palsy and Down syndrome, are more likely to be called names or aggressively excluded from social activities. Other researchers have discovered that students with disabilities were more worried about school safety and being injured or harassed by peers, compared to students without a disability.

In 2009, the Massachusetts Advocates for Children in a survey of nearly 400 parents of children with autism across the state found that 88 percent of children with autism have been bullied at school ranging from verbal abuse to physical contact.

In Connecticut, Julie Swanson, an advocate for families with special needs and her colleague, Jennifer Laviano an attorney in private practice who represents children and families with special needs, joined forces with other parents to persuade the State Department of Education, to begin to track the number of incidents of bullying and the child with special needs. Julie stated that while there is no "official" data being kept on the incidence of bullying among kids with disabilities, the incoming call data reflected a disturbing trend: more than 50 percent of the complaints involved a student with an IEP, or a disability. The unofficial conclusion is that there is a disturbing, disproportionate occurrence of bullying among students with disabilities.

"This is the exact type of data I attempted to identify as an unmet need in special education in my involvement of the State Advisory Council," said Swanson. "However, the state did not recognize this as an unmet need that warranted money allocated to officially track the incidence among kids with disabilities."

Special education programs and inclusion efforts have opened doors for thousands of children with special needs. Yet, those very doors may have also made them vulnerable to bullying. Special classes, extra help and visible assistance given to such students makes them different from other students. As a result, other students too often characterize children with special needs as not smart or too different to be included. Jerome J. Holzbauer at the University of Wisconsin-Milwaukee (2008) reported occurrences of harassment of students with disabilities witnessed from 90 special education teachers in a large public school district. Overall, 96.7 percent of the teacher reported that they observed more than one incident of school-related disability harassment conduct.

"I have a 10-year-old daughter with cerebral palsy, said the father of a child with special needs. "Several days ago, I walked into my daughter's school cafeteria unannounced. The 'normal' kids were throwing food at the children with special needs."

Many classmates choose to not be friends with these children, thus leaving them purposely out of the social fabric in the classroom. Simply stated, students with disabilities stand out by virtue of behavioral, vocal or physical challenges.

	SPEAKER	
PURPOSE		AUDIENCE
	<>	

Now complete a journal entry for Progress Report #4 in which you address the following: Imagine you are in a situation in which you witness one student bullying another. How would you react? Would you take action? Why or why not? Why does Charlie get involved in the scene in the diner?

Progress Report #4	Date:



Choose ONE of the words from the list in the box below and ONE unfamiliar word from "PROGRESS REPORT 9 – PROGRESS REPORT 12 April 30" ending with "...than ever before." For each of your words, complete the chart below. Remember to use the context of the word (the sentence in which it is found) to help you understand the dictionary definition.

Choice words and the page numbers on which they can be found.

Justified p. 297	spectre p. 297	absur	d p. 298	vacuous p. 299	
sensation p. 297	specialization p. 297	refute	p. 298	infuriated p. 299	
tangible p. 297	unacquainted p. 298	invaria	ably p. 298	naiveté p. 299	
Word from the list (all):		Rate	My Understandir	ng (check one):	
		Know It	Sort of Know It	Don't Know It at	All

My Guess on Meaning:

Dictionary Definition (include the part of speech):

Context (the sentence in which the word appears and the page number):

Does the dictionary definition fit the context of the word? If not, what definition does fit? What clues are in the sentence to help you understand the meaning of the word from context?

Restate or explain the new word in your own words:	Create a representation of the word (a picture or symbolic representation):

Word from the list (all):	Rate	Rate My Understanding (check one):		
	Know It	Sort of Know It	Don't Know It at All	
My Guess on Meaning:				
Dictionary Definition (include the part of speech):				
Context (the sentence in which the word appears	and the pag	e number):		
Does the dictionary definition fit the context of the in the sentence to help you understand the meaning			s fit? What clues are	
Restate or explain the new word in your	Create a	representation of the	e word (a picture or	
own words:		c representation):		
	_			
	_			
	_			

Lesson 6 Thinking Like a Scientist

In this lesson you will

- Complete the reading of the unit anchor text, "Flowers for Algernon."
- Cite textual evidence to record the character development (health decline) of the main character.
- Read and map a scientific article about emotional intelligence using a graphic organizer that involves reading comprehension, developing questions, connecting two texts, and making inferences, and compose writing that synthesizes information from the two texts.
- Compare your emotional intelligence skills with those of Charlie, the main character, using a graphic organizer and reflective writing.
- Learn how to compose a proper thank you letter using a prewriting graphic organizer, then compose a letter from one character to another character from the anchor text.
- Review sentence structure and anchor text plot through a collaborative scavenger hunt game.



May 29	oms/ Behaviors with Cited Details from T	Text
June 5		
June 5		
June 15		
June 30		
July 10		
July 22		
July 28		

Activity Read Like a Scientist

Part of reading like a scientist is making those careful observations, the way we did with Charlie in Progress Report 13. Let's take this "reading like a scientist" a few steps further. When you read like a scientist, you are reading to understand, to infer, and to synthesize or combine the information into a new idea or product.

When you read the articles to research for your expo station in the first unit, without even knowing it, you were reading like a scientist. Today, we are going to revisit that type of strategy using an article about emotional intelligence and how that applies to Charlie. Let's read this article together, taking turns with each paragraph.

Article: Emotional Intelligence

More Than One Kind of Intelligence

You may have heard people mention "IQ" when talking about intellect and how smart someone is. (For example, "My brother doesn't need to study as much as I do because he has a really high IQ.") IQ stands for "intellectual quotient." It can help predict how well someone may do academically.

IQ is just one measure of our abilities, though. **There are many other kinds of intelligence in addition to intellect.** For example, spatial intelligence is the ability to think in 3D. Musical intelligence is the ability to recognize rhythm, cadence, and tone. Athletic, artistic, and mechanical abilities are other types of intelligence.

One important type of intelligence is emotional intelligence.

What Is Emotional Intelligence?

Emotional intelligence is the ability to understand, use, and manage our emotions. Emotional intelligence is sometimes called EQ (Emotional Quotient) or EI, for short. Just as a high IQ can predict top test scores, a high EQ can predict success in social and emotional situations. EQ helps us build strong relationships, make good decisions, and deal with difficult situations.

One way to think about EQ is that it's part of being people-smart. Understanding and getting along with people helps us be successful in almost any area of life. In fact, some studies show that EQ is more important than IQ when it comes to doing well in school or being successful at work.

Some people have naturally good EQ skills. Others need to work on them. The good news is that everyone can get better. Unlike IQ, people can actually improve their emotional intelligence — if they know what to do.

Improving Your EQ

Emotional intelligence is a combination of several different skills:

Being Aware of Your Emotions

Most people feel many different emotions throughout the day. Some feelings (like surprise) last just a few seconds. Others may stay longer, creating a mood like happiness or sadness. Being able to notice and accurately label these everyday feelings is the most basic of all the EQ skills.

Being aware of emotions — simply noticing them as we feel them — helps us manage our own emotions. It also helps us understand how other people feel. But some people might go through the entire day without really noticing their emotions. Practice recognizing emotions as you feel them. Label them in your

mind (for example, by saying to yourself "I feel grateful," "I feel frustrated," etc.). Make it a daily habit to be aware of your emotions.

Understanding How Others Feel and Why

People are naturally designed to try to understand others. Part of EQ is being able to imagine how other people might feel in certain situations. It is also about understanding why they feel the way they do.

Being able to imagine what emotions a person is likely to be feeling (even when you don't actually know) is called empathy. Empathy helps us care about others and build good friendships and relationships. It guides us on what to say and how to behave around someone who is feeling strong emotions.

Managing Emotional Reactions

We all get angry. We all have disappointments. Often it's important to express how you feel. But managing your reaction means knowing when, where, and how to express yourself.

When you understand your emotions and know how to manage them, you can use self-control to hold a reaction if now is not the right time or place to express it. Someone who has good EQ knows it can damage relationships to react to emotions in a way that's disrespectful, too intense, too impulsive, or harmful.

Choosing Your Mood

Part of managing emotions is choosing our moods. Moods are emotional states that last a bit. We have the power to decide what mood is right for a situation, and then to get into that mood. Choosing the right mood can help someone get motivated, concentrate on a task, or try again instead of giving up.

People with good EQ know that moods aren't just things that happen to us. We can control them by knowing which mood is best for a particular situation and how to get into that mood.

EQ: Under Construction

Emotional intelligence is something that develops as we get older. If it didn't, all adults would act like little kids, expressing their emotions physically through stomping, crying, hitting, yelling, and losing control!

Some of the skills that make up emotional intelligence develop earlier. They may seem easier: For example, recognizing emotions seems easy once we know what to pay attention to. But the EQ skill of managing emotional reactions and choosing a mood might seem harder to master. That's because the part of the brain that's responsible for self-management continues to mature beyond our teen years. But practice helps those brain pathways develop.

We can all work to build even stronger emotional intelligence skills just by recognizing what we feel, understanding how we got there, understanding how others feel and why, and putting our emotions into heartfelt words when we need to.

Now, my scientist students, let's map this article using the graphic organizer the way a real scientist would compartmentalize information. With a partner, complete Stages 1 and 2 of the report graphic organizer. Keep in mind the outside issue is Charlie's condition. Next, as individual scientists, complete Stage 3 of the report.

Stage 1: Understand

Note 5 to 7 descriptive facts gained from this article.

List 2 questions raised by this text (related to the outside issue).

Stage 2: Infer

Look back to your questions from Stage 1. Make an inference for each question. Use a modified version of the EEK! Conclusion strategy to help. (Your knowledge/ research + detail/ evidence = inference)

Stage 3: Synthesize

Connect the information and inferences from Stages 1 and 2 to describe and rationalize the outside issue. Compose a paragraph synthesizing your facts and inferences.

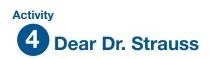
Now, let's use this strategy to find one more article or resource for your expo station. Use the CRAAP Method from Unit 1 and the Scientist Report. Use a search engine or database to locate information. You will include this source in the expo station.

Activity **3** Let's Get Personal about EQ

Let's do a comparative analysis between Charlie and ourselves, using the emotional intelligence skills from the article we read for the last lesson. Complete the graphic organizer as if you were a doctor comparing two patients. Start by filling in notes for each EQ skill from the article. Students with physical impairments may move slower, have less stamina and an unsteady gait. These conditions, as well as others, may be viewed as signs of weakness and precipitate physical or verbal abuse.

EQ Skill	Charlie (Include support from text)	Ме	What do we have in common?
Being Aware of Emotions			
Understanding How Others Feel and Why			
Choosing Your Mood			

Take a look at your results. Compose a reflective paragraph about your emotional intelligence skills; make sure to add some personal examples and any improvements that could be made.



In Progress Report 13, Charlie's increased intelligence and related productivity have allowed him to learn the truth of this future. He writes a letter to Dr. Strauss admitting as much and attaching his thorough research. Today, put yourself in Dr. Strauss' position; compose a thank you letter to Charlie. Use the template on page X of the Academic Notebook for your prewriting. Then write your final copy. Remember to use specific details from the text and use sentence structure variety.

Element	Your Pre-Writing/ Draft
Salutation	
Always use a more formal greeting, using the person's last name preceded with a Ms. or Mr. If you are a closer acquaintance, use the individual's first name.	
Express your appreciation (3–5 sentences)	
Say "Thank you!" for specific things you have or have experienced due to this act of kindness.	

Describe the gift or experience (3–5 sentences) Describe each item you mentioned above with details of its impact on your life and/or the lives of people around you. Don't mention anything negative that takes away from the important message.	
Mention a connection	
(3–5 sentences)	
Describe how this experience reminds you of a past experience or how this experience connects to you. Also, mention how the 'giver' should benefit from their	
actions.	

Thanks Again (1 sentence) Reiterate the initial thank you from earlier.	
Close	
Any one of the following is suitable:	
Sincerely	
Sincerely yours	
Cordially	
Best	
Regards	
Warm Regards	
*Just write your name. Do not include address.	

Final Copy of thank you Letter

Sentence Structure Scavenger Hunt

Now that we have finished reading Flowers for Algernon, let's turn a review of what happened with Charlie over the course of the text and sentence structure into a little fun. Using the game card below, find, quote, and cite the sentences in an order to provide a general review of *Flowers for Algernon*.

As a quick review, a simple sentence is one independent clause; a compound sentence is when two independent clauses are joined using a coordinating conjunction; a complex sentence includes one independent clause and one dependent clause; a compound-complex sentence is the combination of two independent clauses and one dependent clause.

You may work in partners to complete the game card. The rules are, you must find a certain number of each type of sentence, quote and cite at least one sentence from each progress report, and follow the plot of the story. After I count down from five, you and your partner may get started.

Sentence Structure Scavenger Hunt

Game Card

To Win:

- 1. Find, quote, and cite sentences that follow the plot of the story (E for exposition, RA for rising action, C for climax, FA for falling action, and R for resolution).
- 2. Find three of each type of sentence structure (S for simple, CO for compound, CX for complex, and CC for compound-complex).

Sentence Type	Progress Report/ Page	Quoted Sentence	Part of Plot

Sentence Type	Progress Report/ Page	Quoted Sentence	Part of Plot

Sentence Type	Progress Report/ Page	Quoted Sentence	Part of Plot
		·	

Lesson 7 The Socratic Seminar and Response

In this lesson you will

- Revisit the articles and central text from Unit 2 to determine questions and points to include in the Socratic seminar.
- Complete the Socratic seminar planning form.
- Pparticipate meaningfully in a Socratic seminar, using evidence to support your opinions and ideas.
- Write a response/reaction paper that reflects on points made in the Socratic seminar discussion.

Activity

Preparing for the Socratic Seminar

Today, you will begin revisiting the texts to prepare for the Socratic seminar. As you read through the texts, keep the central question in mind: "How do conditions of the brain affect us emotionally, physically, and intellectually?". Complete the Socratic seminar planning form below with questions, details, and reactions to bring up during the discussion. Your selections should be related to the central question and should advance a discussion on this topic.

Questions	Text-Based Question	"So What" Question
In the first box, write a question that is based on one of the texts we read. In the second box, write a question that goes beyond the text and emphasizes "So what?" This question should require the reader to think more abstractly and relate text to real life.		
Concrete Details	Detail #1	Detail #2
Choose specific portions of a text to discuss parts that stand out, grab your attention, are confusing, contain striking language (similes, metaphors), or hint at a deeper meaning.	Text:	Text:
Ideas/Reactions	Reaction #1	Reaction #2
What ideas, connections, or reactions to texts might you introduce to discussion?	Text:	Text:
Write two ideas/ reactions (one per box) based on your readings. Cite the text to which you are referring.		

Activity Participating in the Socratic Seminar

Read the self-evaluation rubric on page 22 in your Academic Notebook and be prepared to discuss what should be demonstrated during the seminar. You will engage in open discussion for the purpose of understanding. You will need to demonstrate your ability to take turns, to actively listen (and take notes on what others say below), and to provide evidence from the texts to support your ideas and to be respectful. You will use the self-evaluation to help you write your response/reaction paper. Remember to refer to your planning forms as you discuss the question.

Take notes in the space below as you participate in the discussion.

1. Write down at least five key ideas. These should be complete sentences. For each idea, note who said it.

2. Reaction: Identify what someone said; write down that person's name as well as his/her comment. React to his/her statement.

3. Explain how the seminar influenced your thinking about the topic or the text(s).

Activity Writing the Response/Reaction Paper

Based on the self-evaluation rubric and the notes you took during the discussion, on the next page you will write a one-page response/reaction paper. Your reaction might consider the following questions:

- What did you want to say but did not have a chance to?
- Did your opinion change during the discussion? If so, why?
- What further questions or views did the discussion raise?
- What views did you agree or disagree with? Why?
- Evaluate the success of the seminar.
- How would you evaluate your participation in the discussion? What did you do well? What can you improve upon?

While this type of writing is informal, you still must follow the conventions of good writing. This includes complete sentence formation, sentence variety, and proper spelling, punctuation, and capitalization. After you have written your paper, you will participate in a peer review. Use the checklist that follows the next page as you edit and review a classmate's paper.

Peer Editing Checklist

Date:

Paper's Author:

Peer Editor:

Check yes or no for each of the following criteria.

Yes	No	The writer discusses the success of the seminar.
Yes	No	The writer reflects on his or her own participation in the seminar.
Yes	No	The writer includes suggestions for improvement.
Yes	No	The writer includes different sentence types and combines sentences correctly.
Yes	No	The writer follows the conventions of proper spelling, punctuation, and capitalization.

Based on the peer review and your partner's comments, on the next page revise your paper as needed.