

**the.Medic**

Prescription Drug Abuse Series  
“Science of Addiction” Script and Curriculum  
Segment 2

**the.Medic**  
is a feature of

**the.News**

**A daily news broadcast for High School and Middle School students  
now under development by MacNeil/Lehrer Productions**

**This series has been prepared in collaboration with  
the National Association of School Nurses**

**Prescription Drug Abuse Series  
 “Science of Addiction” Script and Curriculum  
 Segment 2**

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Spring, 2008

Dear Educator,

The White House Office of National Drug Control Policy reported this past January that more teens abuse prescription drugs than any illicit drug other than marijuana. According to the report, more than 2.1 million teenagers abused prescription drugs in 2006.

MacNeil/Lehrer Productions is developing *the.News*, an in-school news broadcast for high school and middle school students and teachers that will emphasize 21<sup>st</sup> Century learning objectives. *the.News* will include a regular health awareness feature called *the.Medic*.

As part of our development process we have created a prototype *the.Medic* series that focuses on teenage prescription drug abuse. The series includes five videos, each roughly four minutes long. Four reports are for students, the fifth for parents. The videos are accompanied by lesson plans with curriculum appropriate for middle and high school students in the subject areas of science and language arts. The segments are:

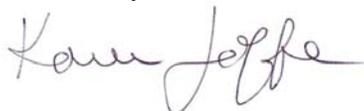
- Segment 1 “Myth Busting”
- Segment 2 “Science of Addiction”
- Segment 3 “Changes for Life”
- Segment 4 “Media Literacy”
- Segment 5 “What Parents Should Know”

The curriculum and video features have been informed by *the.News* instructional design that can be found on the website [www.macneil-lehrer.com/thenews](http://www.macneil-lehrer.com/thenews). The curriculum includes content-based standards, discussion questions, student activities, vocabulary and primary reference sources. This material is presented as options to fit teachers’ instructional needs.

This series was produced in collaboration with the National Association of School Nurses ([www.nasn.org](http://www.nasn.org)), which is also developing prototype school assemblies on teenage drug abuse. Funding was provided by PriCara™, Division of Ortho-McNeil-Janssen Pharmaceuticals, Inc.

For further information and questions about this material contact Lisa Denny at [ldenny@newshour.org](mailto:ldenny@newshour.org).

Sincerely,



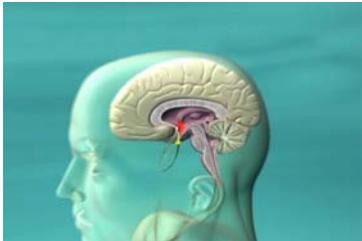
Karen W. Jaffe  
Manager, Education Projects, *the.News*  
MacNeil/Lehrer Productions  
2700 S. Quincy St., Suite 250  
Arlington, Virginia 22206

“Science of Addiction” Script

Segment Two

	TIME	SHOT / TITLE	DESCRIPTION
1.	00:00		<b>ANIMATED OPEN</b>
2.	00:12	On camera	<p><b>NEVES ON CAMERA:</b></p> <p>HI, I’M ANTONIO NEVES FOR THE.NEWS.</p> <p>WHEN YOU HEAR THE WORDS DRUG OVERDOSE YOU MIGHT THINK OF ILLEGAL DRUGS LIKE COCAINE OR HEROIN. BUT A STUDY BY THE NATIONAL CENTERS FOR DISEASE CONTROL SAYS THE LEADING CAUSE OF LETHAL OVERDOSES IS ABUSE OF PRESCRIPTION PAIN MEDICINES.</p> <p>WHEN TAKEN WITHOUT A DOCTOR’S ORDERS PRESCRIPTION PAIN MEDICINES CAN BE HIGHLY ADDICTIVE.</p>
3.	00:32	On camera	<p><b>Kyle:</b></p> <p>The consequences didn’t really matter to me, what... what my biggest fear at that time was how am I going to get high tonight, how am I going to get high tomorrow, you know.</p>
4.	00:41	Voice over Shot Kyle Shot Gabriella	<p><b>VOICE OVER:</b></p> <p>KYLE RUMPLE, FROM INDIANAPOLIS, BECAME ADDICTED TO PRESCRIPTION PAIN MEDICINES WHILE ATTENDING HIGH SCHOOL. SO DID GABRIELLA RIZZO IN NEW YORK CITY.</p>
5.	00:48	On camera	<p><b>Gabriella:</b></p> <p>I didn’t understand what addiction was, I didn’t even know what it meant, but I guess when I was 19, I figured out like... I couldn’t stop doing drugs. I wanted to stop, and I just didn’t, I couldn’t.</p>
6.	01:01	On camera	<p><b>NEVES ON CAMERA:</b></p> <p>DOCTORS TELL US THAT ADDICTION AFFECTS PEOPLE BOTH MENTALLY AND PHYSICALLY. IT’S A CRAVING CAUSED BY THE CHANGES THAT DRUG ABUSE MAKES TO THE BRAIN.</p>

7.	01:09	Jay Geidd at his lab	<p><b>VOICE OVER:</b></p> <p>DOCTOR JAY GEIDD STUDIES BRAIN DEVELOPMENT AT THE NATIONAL INSTITUTES OF HEALTH.</p>
8.	01:13	On Camera	<p><b>Dr. Jay Geidd:</b></p> <p>What these substances of abuse do is they completely hijack the system.</p>
9.	01:19	Graphic of pills and brain	<p><b>VOICE OVER:</b></p> <p>RESEARCHERS LIKE DOCTOR GEIDD BELIEVE TEEN DRUG ABUSE IS ESPECIALLY DANGEROUS BECAUSE THEIR BRAINS ARE STILL DEVELOPING.</p>
10	01:26		<p><b>VOICE OVER:</b></p> <p>HERE'S WHAT HAPPENS:</p> <p>FOR THE FIRST COUPLE OF YEARS OF LIFE THE BRAIN GROWS IN SIZE.</p> <p>THEN THE PARTS NEEDED TO CONTROL THINGS LIKE WALKING AND SPEAKING DEVELOP.</p> <p>THE LAST PART TO DEVELOP IS THE PRE-FRONTAL CORTEX. THAT DOESN'T OCCUR UNTIL THE MID 20'S.</p>
11	01:40	On camera	<p><b>Dr. Jay Geidd: (pointing at monitor)</b></p> <p>In the front here which matures very late and is responsible for controlling impulses, for long range planning, for judgment and it's the part of the brain that is targeted by the substances of abuse.</p>
12	01:54	Graphic of pills and computer	<p><b>VOICE OVER:</b></p> <p>PRESCRIPTION PAIN MEDICINES WHEN USED IMPROPERLY – ACT LIKE COMPUTER VIRUSES. THEY CHANGE, DELETE OR SCRAMBLE THE CODE THE BODY'S COMPUTER – THE BRAIN – USES TO MAKE GOOD CHOICES.</p>

13	02:05	Two Shot in Hallway	<b>VOICE OVER:</b> DOCTOR RALPH LOPEZ SEES THIS WHILE TREATING TEENS AT HIS PRACTICE IN NEW YORK.
14	02:10	On camera	<b>Dr. Lopez:</b> That pain medication which deadens the sensation of thinking properly just makes it harder for the kids to think and solve the problem, and if the problem happens to be something like what do I do in this date situation with this boy or what do I do because I want to drive very fast, it's pretty clear that a disaster can happen very easily
15	02:34		<b>VOICE OVER:</b> GETTING OFF DRUGS IS HARD BECAUSE THEY CHANGE THE CHEMISTRY OF THE BRAIN. HIGH LEVELS OF PRESCRIPTION PAIN MEDICINES SHUT DOWN THE BODY'S ABILITY TO MAKE ENDORPHINS...SOMETHING YOUR BODY NATURALLY MAKES TO FIGHT PAIN.
16	02:46	On camera	<b>Dr. Lopez</b> So if we stop making endorphins, we need a replacement. So the use of the opiates obliterates the need of the brain to makes its own because you're getting it from the outside source, you then stop, the brain doesn't have the capacity to turn on and say, "Ok I have to make some more opiates," because we're supposed to make it so you're now feeling crummy.
17	03:09	On camera	<b>Gabriella:</b> I was sweating, I was shaking, I thought I was hearing stuff, my body felt like a truck hit me, I couldn't really walk that much, and my whole body hurt.
18	03:20	Dr. Hart and Antonio	<b>VOICE OVER:</b> DOCTOR CARL HART OF COLUMBIA UNIVERSITY IS AN EXPERT ON DRUG ABUSE AND ADDICTION. HE SAYS WITHDRAWAL FROM DRUGS IS PHYSICALLY VERY HARD.

19	03:29	On Camera	<p><b>Dr. Carl Hart:</b></p> <p>...increase sweating, nose running, they may have diarrhea, fever, their temperature will increase, heart rate will increase, they get this thing called Piloerection, where the hair on your skin stands up. So a number of those sort of symptoms, but you feel miserable,</p>
20	03:46	Pictures of pills and alcohol	<p><b>VOICE OVER:</b></p> <p>DOCTOR HART ALSO WARNS THAT MIXING HIGH AMOUNTS OF PRESCRIPTION PAIN MEDICINES WITH ALCOHOL OR OTHER DRUGS CAN BE A FATAL MISTAKE.</p>
21	03:55	On camera	<p><b>Dr. Carl Hart:</b></p> <p>If you're taking something else, then that... that's just a whole new ball game, now just really increase the likelihood of you potentially getting in trouble with that... with that medication. Say like you don't cause complete respiratory depression and that you survive from taking all of these things, but you may have caused some brain damage.</p>
22	04:17	Montage of pills	<p><b>VOICE OVER:</b></p> <p>DOCTORS DON'T KNOW HOW MANY TIMES A PERSON CAN ABUSE DRUGS BEFORE THEY BECOME ADDICTED. SUSCEPTIBILITY IS INHERITED – IT'S IN YOUR GENES.</p>
23	04:24	On camera	<p><b>Lopez</b></p> <p>There's a difference in the brain of somebody who has an addictive genetics than the other individual since you may not know which one you are. You're running the risk of lighting a fire... lighting a match in a gasoline factory to see where you are, you could explode.</p>

24	04:40  04:46 04:49	Pictures of students with blur effect  Pictures of pills in hand Pictures of Gabriella, Hayley, Dr. Volkow, Dr. Hart, Kyle and Tim	<p><b>VOICE OVER:</b></p> <p>DESPITE THE DANGERS, STUDIES SHOW ONE IN THREE TEENS STILL BELIEVE THAT THERE IS NOTHING WRONG WITH TAKING MEDICINES ONCE AND A WHILE WITHOUT A PRESCRIPTION. THE RECOVERING ADDICTS AND EXPERTS WE TALKED WITH SAY THAT THIS IS JUST WRONG. THEY TELL US EVEN ONE USE CAN START YOU ON THE PATH TO ADDICTION AND ROB YOU OF YEARS OF YOUR LIFE.</p>
25	04:59	On Camera	<p><b>Kyle:</b></p> <p>Drugs and alcohol took everything away from me... I mean everything... and I'm talking much more than just the physical aspect of it, you know, of course it took my freedom away. I've been in quite a few institutions but for me it was much more than that, it was a prison of the mind, and you know I just find it so ironic because throughout that I always told people, you know... you're not going to tell me what to do, you know, I don't have to listen to you, this and that and this... but I listened to my disease everyday... you know, my addiction would tell me to do things that I didn't want to do that I would do, you know.</p>
26	05:33	Kyle	<p><b>NEVES VOICE OVER:</b></p> <p>I'M ANTONIO NEVES FOR THE DOT NEWS.</p>

**If you wish to stop the video at any time, refer to the running time listed on the printed script. Each segment begins at 00:00 and the time is displayed in the lower corner of your video player.**

## “Science of Addiction” Science Curriculum Segment Two

This lesson has been designed to support *the.News* video “Science of Addiction.” The video can be found online at [http://www.pbs.org/newshour/thenews/themedic/story.php?id=3058&package\\_id=636](http://www.pbs.org/newshour/thenews/themedic/story.php?id=3058&package_id=636).

**Grade Level:** Middle School/High School

**Content Areas:** Science/Media Literacy

### Vocabulary:

**Addiction:** A chronic, relapsing brain disease characterized by compulsive drug seeking and use, despite harmful consequences, and by neuro-chemical and molecular changes in the brain.

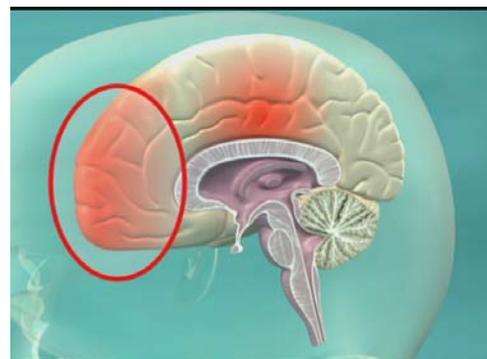
**Cerebellum:** The cerebellum is involved in the coordination of voluntary motor movement, balance and equilibrium, and muscle tone.

**Corpus Callosum:** A broad, thick band (largest connective pathway) in a human brain consisting of more than 200 million nerve fibers that connect the left and right sides (hemispheres) of the brain. Each hemisphere of the brain has dominant functions: the left hemisphere functions in language, mathematics and logic; the right hemisphere functions in special abilities, face recognition, visual imagery and music.

**Endorphins:** Small, protein molecules produced by cells in the nervous system and other parts of the body. Their important role is to work with sedative receptors in the brain, spinal cord and other nerve endings that are known to relieve common pain.

**National Science Education Standards**  
Science in Personal and Social Perspectives (5-8)

- Structure and Function in Living Systems
  - Living systems at all levels of organization demonstrate the complementary nature of structure and function. Important levels of organization for structure and function include cells, organs, tissues, organ systems, whole organisms and ecosystems
- Personal Health
  - Alcohol and other drugs are often abused substances. Such drugs change how the body functions and can lead to addiction
- Risks and Benefits
  - Risks are associated with personal hazards such as smoking, dieting and drinking
  - Important personal and social decisions are made based on perceptions of benefits and risks



**Frontal Lobe:** Part of the human brain (can be seen in adjacent graphic) associated with reasoning, planning, parts of speech, movement, emotions, problem solving and decision making; controls emotional response, expressive language and memory for habits and motor activities.

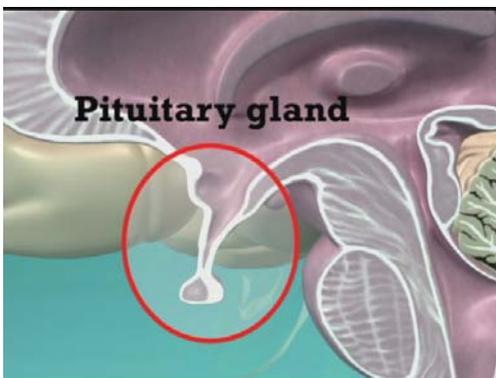
**Occipital Lobe:** Part of the human brain associated with many aspects of vision perception and processing.

**Opiate Receptors:** Within the limbic system, brainstem and spinal cord, there are places on certain nerve cells that recognize opioids. When stimulated by opioids, these sites -- called opiate receptors -- trigger responses in the brain and body.

**Opiate Receptor System:** (Also known as a brain reward system) A brain circuit that, when activated, reinforces behaviors. The circuit includes dopamine-containing neurons. The activation of this circuit causes feelings of pleasure.

**Opioids:** Commonly prescribed medications used to treat moderate to severe pain. Opioids attach to opioid receptors, where they can change the way a person experiences pain.

**Parietal Lobe:** Part of the human brain associated with perception of stimuli related to touch, pressure, temperature and pain; functions in integration of different senses that allows for understanding a single concept.



**Pituitary Gland:** A small, pea-sized gland (can be seen in adjacent graphic) located at the base of the brain that functions as "The Master Gland." It sends signals to the thyroid gland, adrenal glands, ovaries and testes, directing them to produce many hormones that have dramatic effects on metabolism, blood pressure, sexuality, reproduction and other vital body functions.

**Prefrontal Cortex:** Part of the Frontal Lobe associated with problem solving, emotion and complex thought.

This is the last part of the brain to develop (does not finish developing until mid 20s).

**Prescription Drug Misuse (Abuse):** Taking a medication in a manner other than that prescribed or for a different condition than that for which the medication is prescribed.

**Respiratory Breathing Centers in the Brain:** A group of nerve cells in the brain that control the rhythm of breathing in response to changes in levels of oxygen and carbon dioxide in the blood and cerebrospinal fluid. Barbiturates, anesthetics, tranquilizing agents and morphine are central nervous system depressants that can depress the respiratory center, causing breathing to slow or stop.

**Temporal Lobe:** Part of the human brain associated with perception and recognition of auditory stimuli, memory and speech.

\* Definitions obtained from various sources; see resources starred (\*) at the end of this curriculum.

**Materials:**

- A poster or picture of the human brain showing the position of the four lobes and the cerebellum for each group of students (p.43)
- A poster or picture of the corpus callosum for each group of students (p.43)
- Books and other visuals
- Videotapes/DVDs on the human brain
- Internet access

**Background:**

Addiction alters areas of the brain that are critical to decision-making, learning and memory, and control of behavior. It is similar to other diseases in that it disrupts normal functioning of

organs or systems, has harmful consequences, is preventable and treatable, and if left untreated, can last throughout a lifetime.

**National Science Education Standards**

➤ **Personal and Community Health (9-12)**

- Personal choice concerning fitness and health involves multiple factors. Personal goals, peer and social pressures, ethnic and religious beliefs and understanding of biological consequences can all influence decisions about health practices.
- An individual’s mood and behavior may be modified by substances. The modification may be beneficial or detrimental depending on the motives, type of substance, duration of use, pattern of use, level of influence and short- and long-term effects.
- Students should understand that drugs can result in physical dependence and can increase the risk of injury, accidents and death.

The nervous system is the body's decision and communication center. The central nervous system (CNS) is made of the brain and the spinal cord and the peripheral nervous system (PNS) is made of nerves. Together they control every part of your daily life, from breathing and blinking to memorizing facts.

The cerebrum or cortex is the largest part of the human brain, associated with higher brain function such as thought and action. The cerebral cortex is divided into four sections, called "lobes": the frontal lobe, parietal lobe, occipital lobe, and temporal lobe.

Through interviews and reports, Segment Two offers important facts and information including:

- Addiction is a physical dependence on and mental craving for a drug(s)
- Teen drug abuse is especially dangerous because the adolescent brain is still developing

- The last part of the brain to develop is the pre-frontal cortex and it does not fully develop until the mid-20s
- When improperly used, prescription pain medicines alter the brain’s ability to make good choices
- When used without a doctor’s supervision drugs can be too powerful and change the chemistry of the brain
- Mixing high amounts of prescription pain medicines with alcohol or other drugs can be fatal
- Susceptibility to drug addiction can be inherited
- One in three teens believe that there is nothing wrong with taking medicines once in a while without a prescription

## Objectives

Following the viewing of Segment Two and their involvement in the instructional activities that follow, students will:

### Scientific Literacy

- Describe the position, structure and function of major parts of the human brain
- Describe ways that major parts of the human brain are affected when damaged by drugs, alcohol or other sources

### Learning Skills linked to Information and Communication Technology Literacy K-12

(Literacy for the 21<sup>st</sup> Century  
[www.21stcenturyskills.org](http://www.21stcenturyskills.org))

**Overview:** This activity will acquaint students with the major areas of the brain that are affected by drug abuse. They will research the structure and function of the four lobes of the brain, the cerebellum, and the corpus callosum to better understand how each of these function in a normal brain and a brain that is damaged by drugs, alcohol or other sources. They will use information from the segment to describe how drug abuse can alter the functioning of the human brain.

### Learning Skills linked to ICT Literacy for Science

- Access and manage information using a variety of resources
- Evaluate and analyze information
- Understand, manage, and create effective communication: orally, written, and using multimedia
- Exercise sound reasoning
- Frame, analyze, and solve problems
- Develop, implement, and communicate ideas to others
- Demonstrate teamwork and work productively with others
- Locate resources

Students will be divided into ‘home groups’ with each member assigned one of the six brain parts to research. Through a jigsaw approach, ‘expert’ groups of students will share their findings about one part of the brain and identify the major ‘messages’ that should be shared with their home group. Students will join home groups and share their findings.

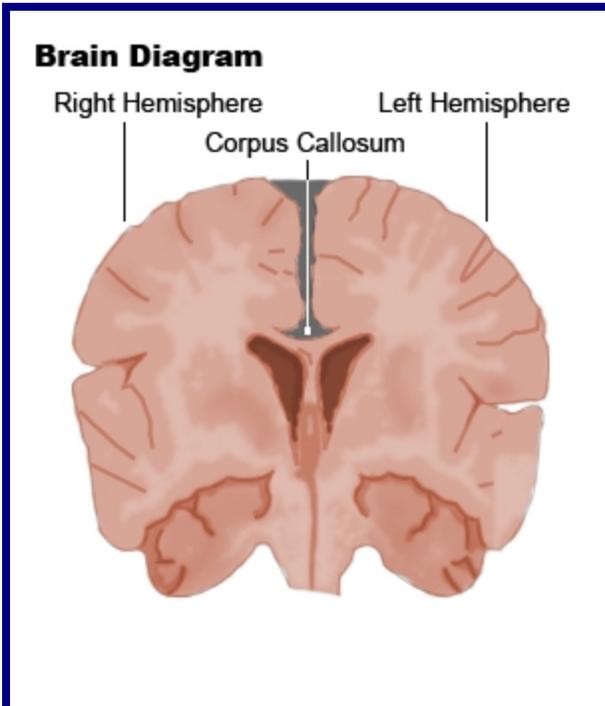
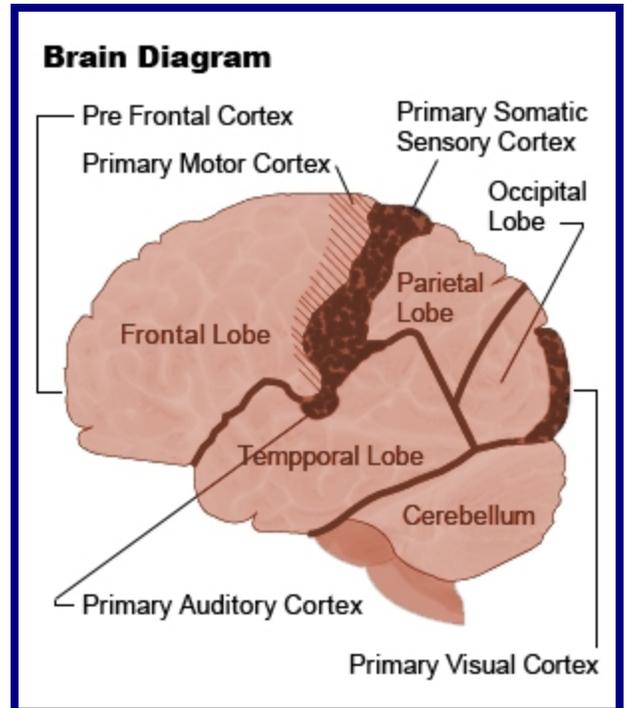
## Activity: The Amazing Human Brain

**Engagement:** Have students view Segment Two. Ask students what they know about the parts of the human brain that are affected by drug abuse. Make a transparency of the graphic titled “What We Know about the Human Brain” (see p.46) or use a chart to record student responses. Identify any misconceptions students have.

**Exploration:** Tell students they are going to research information to learn about or review the structure and function of major parts of the human brain and identify some of the ways they are affected by drug abuse.

Divide students into groups of six. These groups will be ‘home groups’. Give each group a poster or picture of the human brain and the corpus callosum. Each student in the group should select or be assigned one of the six major brain parts to research: occipital lobe; parietal lobe; frontal lobe; temporal lobe; cerebellum; corpus callosum.

Students should note the location of the part on the



the title: Information to Share.

poster or picture and access information from a variety of sources, including Segment Two. They should record information about the major part of the brain including its function and how its function is affected by drugs, alcohol or other sources of damage.

Give students time to conduct their research and fill in the Information Page (see p.47) with sources and information as best they can.

After a reasonable amount of time, all students who have researched each brain part can now get together as ‘expert groups’. Each member of the expert group should share his/her information with the others. As a group, the students should identify the MOST important information to share with their ‘home groups’. Students should record this information under

**Explanation:** When all groups have had a chance to decide the most important information to share, re-assemble home groups. Each student in the home group should have time to identify on the poster or picture the location of the part of the brain he/she researched and share with the group the important findings from the expert group.

Students should be encouraged to ask questions within the group and record any questions for which they do not have answers.

**Assessment:** Through their completed data pages and presentations students will describe the position, structure and function of major parts of the human brain and describe ways that major parts of the human brain are affected when damaged by drugs, alcohol or other sources.

Through their research and communication, they will:

- Access and use information from a variety of resources
- Evaluate and analyze information
- Understand, manage and create effective communication
- Demonstrate sound reasoning
- Develop, implement and communicate ideas to others
- Demonstrate teamwork and work productively with others

**Extensions:** If possible, provide additional time for students to answer questions and extend their learning through interviews with professionals, reading, videotapes or DVD programs, or Internet research.

**Extensions for High School:** Assign group research projects on the type and extent of harm done to the human brain due to the abuse of prescription drugs among youth. Have students collect data, make graphs and develop statistics related to their findings.

### Resources

- Campbell, N.A. Biology. Redwood City, CA: The Benjamin/Cummings Publishing Co, Inc., 1990. \*
- Center for Neuro Skills (Largely a site dedicated to brain injuries but with some useful information on the parts/functions of the brain), [www.neuroskills.com/brain.shtml](http://www.neuroskills.com/brain.shtml). \*
- Giedd, Jay, MD, Chief of Brain Imaging, “Structural Magnetic Resonance Imaging of the Adolescent Brain,” Child Psychiatry Branch, National Institutes of Mental Health (NIMH). June 2004, <http://intramural.nimh.nih.gov/chp/articles/index.html>.
- Jensen, Eric. Brain-based learning. San Diego, CA: The Brain Store, 2000. \*
- Literacy for the 21<sup>st</sup> Century, Information and Communication Technology Literacy K-12. Tucson, AZ: Partnership for 21<sup>st</sup> Century Skills, [www.21stcenturyskills.org](http://www.21stcenturyskills.org). \*
- Lopez, Dr. Ralph I. The Teen Health Book: A Parents’ Guide to Adolescent Health and Well-Being, New York: WW Norton, 2002.

- Medline Plus, <http://medlineplus.gov/> (health information from the world's largest medical library, the National Library of Medicine).\*
- National Cancer Institute. US National Institutes of Health, [www.cancer.gov](http://www.cancer.gov). \*
- National Institute on Drug Abuse (NIDA). Drugs, Brains, and Behavior: The Science of Addiction, NIDA Pub. No.07-5605. April, 2007, <http://www.drugabuse.gov/scienceofaddiction/>. \*
- National Institute on Drug Abuse (NIDA). InfoFacts (prescription Pain and other Medications), [www.nida.nih.gov/infofacts/PainMed.html](http://www.nida.nih.gov/infofacts/PainMed.html).
- National Institute on Drug Abuse. NIDA for Teens: The Science Behind Drug Abuse, [www.teens.drugabuse.gov](http://www.teens.drugabuse.gov). \*
- National Institute on Drug Abuse. Prescription Drug Abuse, Topics in Brief. March, 2008, <http://www.drugabuse.gov/pdf/tib/prescription.pdf>. \*
- National Institute on Drug Abuse. Prescription Drugs: Abuse and Addiction. NIDA Pub. No. 05-4881, Revised August, 2005, <http://www.drugabuse.gov/PDF/RRPrescription.pdf>. \*
- National Research Council. National Science Education Standards, Washington, DC: National Academy Press, 1996. \*
- Neuroscience for Kids, <http://faculty.washington.edu/chudler/split.html>. \*

**Activity Designer:**

Elizabeth Hammerman, Ed. D.

Curriculum Consultant and Author, Workshop Presenter for Phi Delta Kappa, Intl., member of Association for Supervision and Curriculum Development

**What We Know about the Human Brain**


**Information Page**

Part of Brain: \_\_\_\_\_

<b>Source of Information</b>	<b>Information about how this brain part functions in the healthy brain and how it functions when damaged by drugs, alcohol or other sources</b>

Information to Share with the Home Group

## “Science of Addiction” Language Arts Curriculum Segment Two

This lesson has been designed to support *the.News* video “Science of Addiction.” The video can be found online at [http://www.pbs.org/newshour/thenews/themedic/story.php?id=3058&package\\_id=636](http://www.pbs.org/newshour/thenews/themedic/story.php?id=3058&package_id=636).

**Grade Level:** Middle/High School

**Content Areas:** English/Language Arts

**Key Concept:** Understanding addiction through imagist poetry

**Vocabulary:**

**Addiction:** A chronic, relapsing brain disease characterized by compulsive drug seeking and use, despite harmful consequences, and by neuro-chemical and molecular changes in the brain.

**Diction:** A style of speaking or writing as dependent upon choice of words.

**Imagery:** A literary device which uses words to create a picture in the reader’s mind.

**Imagism:** A movement of poets in the early 20<sup>th</sup> century who believed that poetry should be composed of clear, concise and concentrated images in order to create a feeling in the reader. Imagist poems are defined by their concreteness, their careful diction and their vivid sensory language.

\*Definitions from [www.dictionary.com](http://www.dictionary.com) and [www.nida.nih.gov](http://www.nida.nih.gov)

**Background:** The second video segment of *the.Medic* series presents information on the physical consequences of prescription drug abuse. Experts give the biological reasons behind addiction and discuss the symptoms of addiction and withdrawal. In addition, teens who were formerly drug abusers discuss the physical effects of their addiction.



This Language Arts curriculum asks students to use the intense and disturbing words and images from this segment and other sources to create powerful poems that convey what they learn as well as serve as “messages” from the body to resist prescription drugs. It can also help students to develop

vocabulary and to grasp the techniques that poets use to convey meaning.

**Materials:**

- Computers with Internet access
- Descriptions of physical reactions to drug abuse (from novels, memoirs, online medical descriptions, etc.)
- Thesauri and dictionaries
- Examples of imagist poems (poems by William Carlos Williams, H.D., Ezra Pound, Amy Lowell, among others—some are included as part of this lesson on p.55)

**Procedure:** (Time frame: 4-6 class periods)

1. **Pre-viewing Writing Activity:**

Think of a time when your body was under a large amount of stress, for example, because of illness, lack of sleep, over exertion while playing a sport, etc. Describe the physical aspects of this stress—what did various parts of your body do? How did it feel? Try to be as

vivid as possible in order to make your reader *feel* the physical pain, exhaustion, exertion, etc. (For middle school students especially, or classes in which students have not spent much time writing descriptively, it might help to hear a teacher’s example.)

2. Have some volunteers share their descriptions. Ask students to react—what words or phrases stand out to them in a way that made them *feel* the physical stress?
3. Explain that one significant way some people cause severe stress to their bodies is through drug abuse, including prescription drug abuse. Show *the.Medic* Segment Two.

**McRel Learning Objectives: Standard 2 - Uses the stylistic and rhetorical aspects of writing**

Level III (Grades 6-8)

- Uses descriptive language that clarifies and enhances ideas

Level IV (Grades 9-12)

- Uses precise and descriptive language that clarifies and enhances ideas and supports different purposes

**McRel Learning Objectives: Standard 1 - Uses the general skills and strategies of the writing process**

Level III (Grades 6-8)

- Uses a variety of prewriting strategies
- Uses a variety of strategies to draft and revise written work
- Evaluates own and others’ writing
- Uses content, style and structure appropriate for specific audiences and purposes

Level IV (Grades 9-12)

- Uses a variety of prewriting strategies
- Uses a variety of strategies to draft and revise written work
- Evaluates own and others’ writing
- Uses strategies to adapt writing for different purposes
- Writes descriptive compositions

Ask students, as they are watching, to make a list of strong words, phrases, images and descriptions that stand out to them. These could be both things that are said aloud and images that are shown through animation and photography.

4. **Post-viewing Discussion:** Use the questions below to check for comprehension and to encourage students to clarify their ideas about what they learned and to ask questions.

- What is addiction?
- Why is it particularly detrimental for teenagers to become addicted to drugs? What kind of development is hindered at this age? What could this lead to, do you think?
- How does the body react to high levels of pain medication? Why does this make it difficult to break the addiction?
- What kinds of reactions might a body have to withdrawal?
- Why is it particularly bad to mix prescription drugs with other drugs or alcohol?
- What role does genetics play in prescription drug abuse?
- What have you experienced or observed in relation to addictions? How are your experiences/observations similar to/different from the experiences related in the video? (Although students may not be able/willing to talk about their own experiences with addiction, they quite possibly have seen family members, friends and other acquaintances struggle with physical addictions, even if it is just cigarette smoking. Sharing a few personal observations/stories can help make the reality of addiction stronger for all of the students.)

**McRel Learning Objectives: Standard 9 - Uses viewing skills and strategies to understand and interpret visual media**

**Level III (Grades 6-8)**

- Understands a variety of messages conveyed by visual media
- Understands how language choice is used to enhance visual media
- Understands how symbols, images, sounds and other conventions are used in visual media

**Level IV (Grades 9-12)**

- Uses a range of strategies to interpret visual media
- Understands the conventions of visual media genres
- Understands how images and sound convey messages in visual media
- Understands effects of style and language choice in visual media

5. Explain that students are going to write an “imagist poem” from the point of view of a drug-addicted body as a way of conveying what they have learned from the video as well as outside sources. As Dr. Geidd explains in the segment, “addiction isn’t about wanting or craving. It is a physical and mental dependence on a drug.” The poem’s ultimate goal will be to vividly show this dependency in such a way that it discourages young people from subjecting their bodies to drug abuse.

**McRel Learning Objectives: Standard 5 - Uses the general skills and strategies of the reading process**

**Level III (Grades 6-8)**

- Establishes and adjusts purposes for reading
- Reflects on what has been learned after reading and formulates ideas, opinions and personal responses to texts

**Level IV (Grades 9-12)**

- Understands writing techniques used to influence the reader and accomplish an author’s purpose
- Understands influences on a reader’s response to a text

Define “imagism”—Imagism was a movement of poets in the early 20<sup>th</sup> century who believed that poetry should be composed of clear, concise and concentrated images in order to create a feeling in the reader. Imagist poems are defined by their concreteness, their careful diction (word choice) and their vivid sensory language.

6. Split students into groups of 3 or 4 and give each group an exemplary imagist poem (some samples are included on p.55). Students should do the following:
  - Have one person read the poem aloud to the group.
  - Have a designated member of the group look up words the group is unfamiliar with, if necessary.
  - Spend a few minutes rereading the poem quietly and individually. Take notes on the poem: what do you see, smell, taste, hear, feel, etc.? What emotions are created by these sensory experiences?
  - Discuss reactions to the poem as a group.

**Please note:** Depending on how much experience students have had with reading and discussing poetry, this lesson might require a few moments to emphasize how poetry—especially imagist poetry—is up for interpretation, depending on the individual reader. Group members may have differing interpretations and that is fine. It is more about the gut reaction to the images and how the individual reader feels as s/he is reading it.

**McRel Learning Objectives: Standard 6 - Uses reading skills and strategies to understand and interpret a variety of literary texts**

**Level III (Grades 6-8)**

- Uses reading skills and strategies to understand a variety of literary passages and texts
- Knows the defining characteristics of a variety of literary forms and genres
- Understands the use of language in literary works to convey mood, images and meaning
- Understands the effects of an author’s style

**Level IV (Grades 9-12)**

- Uses reading skills and strategies to understand a variety of literary texts
- Knows the defining characteristics of a variety of literary forms and genres
- Understands the effects of author’s style and complex literary devices and techniques on the overall quality of a work

7. Ask a member of each group to read his/her poem aloud—slowly and clearly—to the class. If it is very short, it may be beneficial to read it twice. Then another group member should share a few key ideas from the discussion. Allow students from other groups to respond to the poems as well, before moving on to the next group.
8. As practice for the “addiction” poem that students will write, they should return to the Pre-writing Activity and write a very brief poem that uses words and phrases from that description of physical strain (you could give them a very small word limit to encourage them to choose accordingly, such as only using the four most vivid, concrete, specific

words from the description). While having a few students share these practice poems, it would be helpful to talk about word choice—how some words are more specific and concrete than others. Students can use one another as well as a thesaurus to hunt for even better words, more vivid and concrete nouns and more active and vibrant verbs. Depending on the level of the students, a quick review of the parts of speech may be helpful.

9. Before beginning the poem, students should read at least 2-3 more sources that describe physical addiction in detail and should take notes as they did with the video. These sources could be found on the Internet, selections from memoirs or fictional short stories or novels and more medical-based descriptions of the body’s reaction to addiction. (See “Resources” on p.53).

**McRel Learning Objectives: Standard 7 - Uses reading skills and strategies to understand and interpret a variety of informational texts**

Level III (Grades 6-8)

- Uses reading skills and strategies to understand a variety of informational texts
- Summarizes and paraphrases information in texts
- Uses new information to adjust and expand personal knowledge base

Level IV (Grades 9-12)

- Uses reading skills and strategies to understand and evaluate a variety of informational texts
- Uses text features and elements to support inferences and generalizations about information

10. Have students write the poem in class or for homework, based on the video segment and the other resources they have consulted. Once a draft of the poem is finished, have students do the following (perhaps in collaboration with a partner):

- Select at least 2 nouns that could be made more concrete, vivid or specific. Use your partner and/or a thesaurus to replace them OR add an adjective that helps to amplify the effect of the noun.
- Select at least 2 verbs that could be made more active or interesting and do the same as above.
- Examine your *diction*. In what ways do your words convey a physical feeling?
- Examine your *imagery*. What pictures does your poem paint in the reader’s mind? What other senses are activated through the language?
- Revise your poem accordingly.

11. Once poems are finished, they should be posted around the classroom. Students can browse one another’s poems and come away with an overall poetry-inspired feeling of the harrowing physical effects of drug addiction.

**Assessment:** Students should be assessed based on their ability to understand and imitate the imagist style, their willingness to expand their vocabulary and examine word choice and their comprehension of what they have learned about drug addiction and the physical ramifications.

**Resources:****Imagism Resources:**

- “A Brief Guide to Imagism.” The Academy of American Poets, Retrieved April 2008, <http://www.poets.org/viewmedia.php/prmMID/5658>. (An overview of imagism as a movement and a style and links to popular imagist poets and their poetry).
- *Imagist Poetry: An Anthology*. Ed. Robert Blaisdell. Dover Thrift Editions: 1999. (A definitive, but brief and selective, collection of popular imagist poetry).

**Drug Addiction Resources:**

- Burgess, Melvin. *Smack*, New York: HarperCollins Children’s Books, 1996 (An award-winning young adult novel that profiles two British teens who use drugs as an escape from the hardships of life and who spiral into addiction. Passages throughout would be useful for illustrating physical addiction).
- Burroughs, Augusten. *Dry: A Memoir*, New York: Picador, 2003 (Burroughs’s memoir is mostly focused on alcoholism, but particular passages can provide students with a keen insight into the physical struggles of addiction).\*
- Carroll, Jim. *The Basketball Diaries*, New York: Penguin Books, 1987 (This memoir is particularly appropriate as it is based on Carroll’s actual diary entries from his teen years, when he struggled tumultuously with drug addiction. The teenage narration, vivid descriptions of the physical effects of addiction, and the compelling story could make it a good choice as a supplementary reading assignment to go along with this lesson. There is also a film version of the book that provides visual illustrations of Jim’s body’s struggle with the addiction, which could be useful especially for reluctant readers).
- Frey, James. *A Million Little Pieces*, Great Britain: John Murray Publishers, 2003 (Frey’s controversial memoir—although apparently fictionalized in large part—can provide for some intriguing and disturbing descriptions of drug addiction and withdrawal). \*
- National Institute on Drug Abuse (NIDA). *InfoFacts*, <http://www.nida.nih.gov/Infofacts/PainMed.html> (A list of factual information on prescription pain medicines and other prescription medications, including the physical effects of addiction).
- PrescriptionDrugAddiction.com, <http://www.prescriptiondrugaddiction.com/stories/default.asp> (A Resource for Individuals and Families. This links specifically to the “Stories of Recovery” page, which gives a series of interviews/accounts from individuals who struggled with prescription drug addiction and who have since recovered).
- Wurtzel, Elizabeth. *More, Now, Again: A Memoir of Addiction*, New York: Simon & Schuster, 2002 (A memoir by the author of *Prozac Nation: Young and Depressed in*

*America*. The book gives an in-depth look at the horrors of a prescription drug addiction and its spiraling after-effects). \*

**\*Please note:** The books that are starred (\*) are more appropriate for a high school reading and maturity level.

**Activity Designer:** Jenny Chrest

Jenny Chrest is a writer and a high school English and creative writing teacher in New York City.

## Imagist Poetry

**The Jewel Stairs' Grievance**

The jewelled steps are already quite white with dew,  
 It is so late that the dew soaks my gauze stockings,  
 And I let down the crystal curtain  
 And watch the moon through the clear autumn.

-- Ezra Pound

**The Red Wheelbarrow**

so much depends  
 upon  
 a red wheel  
 barrow  
 glazed with rain  
 water  
 beside the white  
 chickens.

--William Carlos Williams

**Poem**

As the cat  
 climbed over  
 the top of  
 the jamcloset  
 first the right  
 forefoot  
 carefully  
 then the hind  
 stepped down  
 into the pit of  
 the empty  
 flowerpot

-- William Carlos Williams

**Fog**

The fog comes  
 on little cat feet.  
 It sits looking  
 over harbor and city  
 on silent haunches  
 and then moves on.

-- Carl Sandburg

**Oread**

Whirl up, sea--  
 Whirl your pointed pines,  
 Splash your great pines  
 On our rocks,  
 Hurl your green over us,  
 Cover us with your pools of fir.

--H.D.