

Phineas Gage Thematic Unit © 2009 by Chris Juhl

This thematic set of units for *Phineas Gage* can be used over 13 to 15 school days. *Phineas Gage* is a book on the human spirit and what makes someone uniquely human. Teacher's note: Although there is not a full movie on the life of Phineas Gage, this YouTube video does a good job of telling the story:

<http://www.youtube.com/watch?v=oPAqTP7058Q>

Day One Introductory Activity--Begin by dividing the class into groups of three to five students in each group. In each group, give all of the students except one the page titled, **New Classroom Language**. The student without the **New Classroom Language** should sit in a chair with the other members of his group sitting around him/her. The teacher may wish to choose a student who is a leader in the classroom and is fairly easy-going to be the one that sits in the middle. Students on the outside of the group will use the **New Classroom Language** page to carry on a conversation with each other while the student in the middle is unable to understand what is being said. Let this conversation go on for a few minutes. After a few moments, you may have student groups rotate with the person in the middle staying where he is and other groups of students gathering around to talk in the **New Classroom Language**. NOTE: Remind students on the outside to only use the **New Classroom Language**. Remind students in the middle that they should not talk at all.

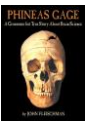
After this activity has gone on for 7-10 minutes, students should return to their seats. The teacher may now choose to begin the discussion or to move to the next activity. The next activity is a game of charades; however, it is a very difficult game of charades. The teacher may choose to use the words/phrases below, or the teacher may choose to come up with his/her own words or phrases. Words/phrases should be exceptionally difficult for students to guess.— **(Remind students they cannot talk during a game of charades!)** Charade words/phrases---helium balloon, professional athlete, concrete paved driveway, Spanish teacher, football field Astroturf.

After the game of charades, have a student led but teacher directed discussion that deals with both of the previous activities. First, ask the students who sat in the middle of the **New Classroom Language** conversation how it felt to be in a situation where they could not understand anything that was going on around them. Discuss how a student might feel alone in a foreign country with people who don't speak or understand his/her language. Next, ask the students who led out in the charades if it was frustrating to have other students not know what charade they were trying to have guessed. Discuss how it feels to not be understood by others. Ask how monkeys communicate? Whales? Dolphins? Turtles? Beavers? What do we possess that they don't? Discuss how this makes us uniquely human. Assign students to draw a picture of what they think makes them uniquely human. It is suggested that you leave this as an open-ended question. Don't give students too much direction.

Day Two Introductory Activity—Have students post their pictures on a wall or bulletin board. Give the wall or bulletin board a thematic name. Depending on the class size, have students give a quick synopsis of what they believe “makes us human.” Reasoning? Speech? Ability to worship? This should lead into a 10-15 minute discussion with a possible brain storming session. Introduce the next story by stating:

“The story you are about to read is a true story about a man who most people have never heard of. His name was Phineas Gage, and he lived in New England over 150 years ago. At the very beginning of the book, Phineas will experience a terrible accident that will forever change his life. This book looks at that accident and what we have learned from it.”

Reading Activities: There is one reading activity for this book.



The Reading Activity requires the students to answer questions on a short worksheet for each chapter of the book. There are two final activities for this book.

Final Projects: There are two final projects for this book.

The first final project is for students to write a short, four to six page, play that tells the story of Phineas Gage while he is driving a stage coach in Chile. This activity should begin after reading chapter three, “Following Phineas Gage.” The students should take the information that they already know about Phineas and should add information that they know about stagecoaches and Chile. By combining these elements, the student can add “facts” about what Phineas did during those lost years driving a stagecoach in Chile. Note: The teacher should remind students that Gage was no longer Gage after the accident. The teacher should encourage students to write erratic, but reasonable, actions that Gage may have done in Chile. (For example, not robbing a bank, but maybe losing his job and arguing over and over again.) Below are the key elements of a play. The teacher should review these elements with the students before they begin writing their plays.

The second activity for this book is for students to research another unique or different accident that has happened to someone. Students should research the accident and give a 1 ½ -2 minute speech on the accident, the victim, and the final results of the accident. The teacher should provide a rubrics for the students on how they will be evaluated for this activity.

Each activity is worth 40-50 points.

Key elements of a play:

Stage directions: Draw on the board the description of the setting for the play. Remind students that upstage is the portion of the stage that they would consider the back of the stage.

Characters: Characters can be listed according to the importance of their role, alphabetically, or by appearance.

Time: Tells when the play takes place.

Place: Tells the location of the play, generally tells where the play begins.

Setting: May give the atmosphere—a recent death, after a hurricane, etc.

[Words in brackets]: Generally one to two words that express the emotions or the tone in which things are said—[softly].

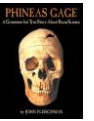
(*Words italicized and in parenthesis*)—Action done between the spoken lines—(*Rushes off the stage right*)—right and left are from the audiences perspective—(*Sits in his chair with his face in his hands*).

Notice that there is generally an abruptness in plays. The action is mentioned quickly. The curtain is dropped instantaneously. There is generally very little omniscient narration. The reader understands the play from the words and the action of the actors, not from a narrator.

Experience the Book! Activities: There are three activities that students can do to experience a little more of Phineas Gage’s life.

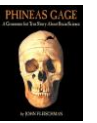
The First Experience the Book! Activity should be done after chapter one. This would be to ask a brain surgeon or neurologist to visit the class to discuss brain surgery and how the brain acts and responds. If you are unable to secure a doctor, the class should watch this video from NOVA: <http://www.youtube.com/watch?v=z1gMbY41X58>. This YouTube video is part one of a six part video. The teacher will need to show all six parts. The teacher may also choose to purchase the video Nova Science Now: How Does the Brain Work?

The Second Experience the Book! Activity divides the students into groups of two. Using page 36 of the book, have students try to “read” the head of a fellow student. Students should try and decide where fellow students have indentions and bumps. Use the [phrenological](#) chart on this page as a guide. This chart will help students in reading the deficiencies and strengths that other students have. Have students then rotate around to read other’s heads. List the agreed upon



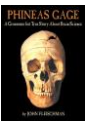
deficiencies and strengths. Remind students that this is NOT accurate reading, but it was an activity that many believed in during Phineas Gage's life. Let students have fun with this activity. **The Third Experience the Book! Activity** would be to choose one of the following activities from this website for students to do in class: <http://faculty.washington.edu/chudler/chmodel.html> One of the best activities from this page is Neuron in a Bag. The class should use a brain mold to fill with the canned fruit, candies, and jell-o and then eat the brains.

Spelling—There are vocabulary and spelling words at the back of the book. Divide the 35 words into two lessons for the spelling activities and tests.



New Classroom Language

crump = funny	thump = silly	drum = boy	onion = girl
jump = school	carrot = basketball	apple = class	plum = car
apricot = paper	potato = pencil	beans = water	tomato = play
peas = sing	couch = song	television = drink	
arrow = hair	bow = computer	box = talk	cable = run
carpet = desk	equals = note	grass = run	dirt = student
key = homework	leg = chair	fox = phone	dog = call
cat = tomorrow	foot = today	feet = recess	flower = happy



Phineas Gage--Worksheet One-Teacher's Key

Name _____ (Entire Worksheet Worth 20 pts.)

1. What is Phineas's job and how does he perform it? Be specific. (5 pts.)

Answer: He is the foreman of a track construction gang on a railroad. He uses a tamping iron to make a hole and then covers it with dirt after it is filled with dynamite. He keeps an eye all day on the diggers who set the blasts.

2. Where does the tamping iron enter and leave Phineas's body? How does he first react after the accident? (5 pts.)

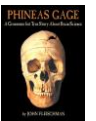
Answer: The iron enters his left cheek, passes through his head behind his eye, and exits in the middle of his head towards the front. Phineas never loses consciousness. He then rides in the back of a wagon to town and still acts as the foreman.

3. How is Phineas's wound treated by Dr. Harlow? (5 pts)

Answer: Dr. Harlow rolls his head with bandages and cleans the wound. He later cleans the pus out of his system and tries to balance his humors.

4. How does Phineas act after he returns from the accident? (5 pts.)

Answer: Phineas is not himself. He has a horrible temper. He is rude and vulgar and insults his old workmates. He doesn't possess any common sense. People will say that, "Gage is no longer Gage."



Phineas Gage--Worksheet Two-Teacher's Key

Name _____ (Entire Worksheet Worth 20 pts.)

1. What do the doctors in Boston think of Phineas and his story? (5 pts.)

Answer: They think he is a fake from the back woods of Vermont. They think maybe the tamping iron only glanced off of him.

2. What do the "Whole Brainers" believe about how the brain works? (5 pts.)

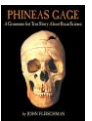
Answer: They believe the brain is one whole connected mind. They believe the brain is a vital force. They believe that if one part of the brain is injured that other parts of the brain can take over to fill in for the part that is injured.

3. What do the "Localizers" believe about how the brain works? (5 pts)

Answer: They believe in localized functions of the brain. They believe that there are sections of the brain that control specific actions. They believe that organs inside the brain control specific functions.

4. Which group do you think is more correct? (5 pts.)

Answer: Answers may vary. Students could include that both theories are correct in some manner. Look for well-thought-out and complete answers.



Phineas Gage--Worksheet Two

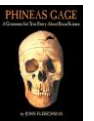
Name _____(Entire Worksheet Worth 20 pts.)

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4. Which group do you think is more correct? (5 pts.)



Phineas Gage--Worksheet Three-Teacher's Key

Name _____ (Entire Worksheet Worth 20 pts.)

1. What does Phineas do at the beginning of chapter three? (5 pts.)

Answer: He travels to New York and displays himself at Barnum's freak show. He then travels around New England displaying himself.

2. Where does Phineas go and what does he do from 1852 until 1859? (5 pts.)

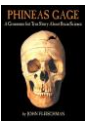
Answer: He leaves for Chile and drives a stagecoach for a company for seven years.

3. What happens with Phineas after he arrives in San Francisco? (5 pts.)

Answer: He goes to his mother's home and works on a farm. He is fired for quarreling with the farmer and moves around to several other farms. He then has several seizures and dies in 1860.

4. What does science find out about Broca's area and Wernicke's area soon after Phineas's death? (5 pts.)

Answer: Both are areas of the brain. Broca's area is located above the ear and is the area that allows people to speak. Wernicke's area is located further back from the ear than Broca's and is the area that helps us to understand speech.



Phineas Gage--Worksheet Four-Teacher's Key

Name _____ (Entire Worksheet Worth 20 pts.)

1. Who are the Damasio's? What have they learned? (5 pts.)

Answer: They are renowned brain researchers at the University of Iowa and treat patients with the same kind of frontal lobe damage as Phineas Gage. They have learned that people with frontal lobe damage have trouble with emotions and with empathy.

2. Describe one of the experiments that the Damasio's do with their patients. (5 pts.)

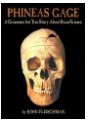
Answer: Answers will vary. Patients see pictures of emotionally charged situations to see how their skin reacts (emotions). Patients play gambling games to see if they take chances.

3. According to the book, what ends up making us human? (5 pts)

Answer: We are human because our frontal lobes are set up so we can get along with other humans. We are wired to be sociable.

4. According to the author, was Phineas lucky? Why or why not? Do you think Phineas was lucky? Why or why not? (5 pts.)

Answer: Answers will vary on what the students think. Accept reasonable, thoughtful, and logical answers. According to the author, Phineas was lucky. He was lucky because he figured out how to live after suffering a terrible accident.



Phineas Gage--Worksheet Four

Name _____(Entire Worksheet Worth 20 pts.)

1. Who are the Damasios? What have they learned? (5 pts.)
2. Describe one of the experiments that the Damasios do with their patients. (5 pts.)
3. According to the book, what ends up making us human? (5 pts)
4. According to the author, was Phineas lucky? Why or why not? Do you think Phineas was lucky? Why or why not? (5 pts.)