Ahimsa Center K-12 Lesson Plan

Title: Empathy: Imagine That!

Lesson By: Lisa Callaway Pate, Palmer Ridge High School, Monument, Colorado

Grade Level/Subject Areas: 11th & 12th grade / Psychology I

Duration of Lesson: 2 block days (2 ninety minute classes) / 4 traditional days (4 forty-five minute classes)

Content Standards (National standards from National Psychological Association)

Content Standard 1: Structure and function of the nervous system in human and non-human animals.
Content Standard 4: Methods and issues related to biological advances
Students are able to (performance standards):
   4.2 Describe advances made in neuroscience.
   4.3 Discuss issues related to scientific advances in neuroscience and genetics.

Lesson Context:

Students will have just finished part two of our second unit, “The Biological Bases of Behavior.” The first two parts of this unit focus on the functions of the neural systems and the brain in terms of psychological behavior while the third wrestles with the argument of nature versus nurture. Therefore, it is assumed that the class has a basic understanding of this foundational material. Some of the newest information on this subject, in particular the recent research on mirror neurons and empathy, will be the focus of this lesson.

Lesson Abstract:

Students will examine the biological (nature) and environmental (nurture) forces behind our ability to empathize. Via The Buddha and the Terrorist, new scientific research and film the students will explore empathy from personal, scientific, and global perspectives. Finally, students will then compare and contrast the impact of nature and nurture on the ability to empathize.

Guiding Questions:

1. What does it mean to empathize?
2. Why do we empathize with some people and not others? Is it easier to empathize with a victim or a perpetrator?
3. What does science say about empathy? Does empathy serve some purpose in adaptation or survival?
4. Are we “hard wired” for empathy or are we taught to be empathetic? Nature or nurture, what determines our ability to be empathetic?

Content Essay:

Are We Taught to Empathize?

The nature versus nurture argument among philosophers such as Plato and Aristotle as well as later between followers of Descartes and Locke began long before today’s science of modern psychology.
While modern psychologists tend to incorporate a more interactive influence of biology and environment, prior to the 1990’s, empathy (the capacity to recognize emotions that are being experienced by another sentient or fictional being) was commonly thought to be a choice influenced exclusively by environment.

**An Accidental Discovery**
Something interesting challenged this assumption in the 1980’s. Quite by accident, a group of scientist studying the brains of macaque monkeys noticed that the same motor neurons in their premotor cortex which fired when the monkeys did things like reach for or bite a peanut, also fired when the researchers reached for or bit a peanut (Rizzolatti, 1992). After additional study, the researchers discovered that individual neurons would only fire to very specific actions. For instance, the neurons that fired when the monkeys put a peanut in its mouth would only fire if the researcher put a peanut in his or her own mouth. This accidental discovery has led to hundreds of studies on what has now been dubbed, “mirror neurons” (Grone, 2009).

**The Biology of Empathy**
A mirror neuron is now defined to be a neuron that fires both when an animal acts and when the animal observes the same action performed by another. Using evidence that observing people in distress can produce signs of emotional arousal in the observer (i.e., autonomic nervous system and facial expressions), there began a quest to find mirror neurons in humans (Levenson R.W. & Ruef, A.M., 1992). In 1992 two scientists, Robert Levenson and Anna Reuff, completed groundbreaking scientific research which seems to demonstrate that monkeys are not alone in the possession of mirror neurons. According to Frans de Waal (2008) and Jean Decety (2011) mirror neurons seem to have played an integral role in humans and animals evolulational capacity to empathize. PBS’ Nova Episode on Mirror Neurons explains the scientific and physiological basis of empathy via these mirror neurons. Nova brings this cutting edge science to life as it explains how new research may even increase the understanding of obstacles faced by individuals dealing with autism and other neurological complications; however, the investigation is far from over.

**Let’s not Jump to Conclusions**
While scientific studies are attempting to determine the exact function of the mirror neurons, there are those who are not so sure researchers have not already been overly optimistic. Psychologist and cognitive neuroscientist Christian Jarrett argues that the enthusiasm over mirror neurons may have raced ahead of the necessary scientific support (Jarrett, 2012). From claims that “mirror neurons will do for psychology what DNA did for biology,” to claims that they “shaped civilization,” Jarrett is concerned that enthusiasts are starting to attribute too much of what makes us human to these particular neurons. On the other side of the “nature versus nurture” impact-on-empathy coin are all the experiences which shape our behavior and psychology. Environmental contributions to empathy have also been supported by scientific research. Portions of Roman Krznaric’s work emphasizes the importance of cultivating empathy through daily practice (Krznaric, 2012). Cultivating curiosity about strangers, challenging prejudices, discovering commonalities, placing yourself in others’ situations, listening, opening up to others, inspiring mass action and social change, and developing an ambitious imagination are all habits of highly empathetic people (Krznaric, 2012). Habits are repeated actions. Through the repetition of these habits, our ability to empathize is enhanced - suggesting that we are more than our biology.

**Back to Square One**
The argument for nurture is illustrated throughout many cultural, ethnic, and religious tales. Among these is the ancient parable of *The Buddha and the Terrorist*. In the first chapter “Encountering the Monster,” the Buddha, Guatama, learns of Angulimal. Angulimala is a man who is terrorizing an entire community.
through senseless killing and mutilation (Kumar, S., 2004, pp.7-31). In spite of the pleas of a concerned citizen, Guatama refuses to stay away from Angulimala. Instead the Buddha insists on pursuing the terrorist so that he may meet Angulimala and give him comfort. Guatama is profoundly aware of the interconnectedness of all beings; therefore, he is unwilling to forsake Angulimala. Upon meeting Angulimala, the Buddha encourages him to discover the root of his anger and unhappiness. As Angulimala uncovers the source of his pain, Guatama listens and understands but he does not condemn him. The Buddha’s empathy for Angulimala, followed by his offering of friendship and a new life leads to Angulimala’s complete transformation from murderer to disciple.

Nurture Acts on what Nature Endows
The capacity of the Buddha to empathize with even a brutal murderer may be beyond the reach of many students’ ability to empathize; still, this story provides an incredible starting point for discussion. The continuous interplay between nature and nurture involving empathy is as fascinating as it is complicated. Learning to empathize when primed by normal neuron development sounds almost unavoidable; however, unique circumstances may render the attainment of empathy all but impossible. While investigating the current psychological study of empathy, from biological and environmental perspectives, it is important to remember that human empathy could have far reaching consequences of a global scale as students go from classrooms to boardrooms.

Bibliography:


Teaching Activities/ Materials Needed:

1. At the beginning of the unit on biological bases of behavior, students will be asked to pay close attention to violence in the news and to bring a current printed story to class. These will be posted on our class bulletin board until we finish part two of the unit.

2. To begin this lesson, students will share their articles, first in small groups and then as a class. Students will be asked to participate in self-examination of their reactions to the different stories, primarily focusing on their personal feelings surrounding the accused perpetrator of the violence. Students will be given 4-5 minutes to free write about their feelings concerning these current news stories. There will be a brief sharing of anything students would like to say.

3. The class will then read the first chapter of *The Buddha and the Terrorist*. Afterwards, students will have another 4-5 minutes to free write about their feelings of forgiving violent criminals. After writing students will have a small group discussion, and then class discussion, about what they believe to be their own capacity for empathy toward others - including violent criminals.

4. Next the class will read 6 habits of highly empathetic people [http://greatergood.berkeley.edu/article/item/six_habits_of_highly_empathic_people](http://greatergood.berkeley.edu/article/item/six_habits_of_highly_empathic_people) or

5. Discussion: Is empathy innate or learned?


7. Discuss mirror neurons’ article [http://www.science20.com/brain_train/blog/monkey_see_monkey_empathize_quest_elusive_human_mirror_neurons](http://www.science20.com/brain_train/blog/monkey_see_monkey_empathize_quest_elusive_human_mirror_neurons)


9. Discuss controversy (Brain Myths).

10. Empathy, regardless of origin, is important for sustained happiness. Free writing, “Why I Believe Empathy Is Important” or not!

11. Finally, to bring everything together and close “I AM” video and worksheet.