

The Limbic Brain and Peace – A Theory of Knowledge Exploration

Rationale: Students will gain an understanding of the human need for wise, strong consistent limbic bonds and the damage to those bonds caused by war.

For Theory of Knowledge (ToK), the goal is:

Objective: Students explore **by creating original art the extent to which art can reveal emotional truth about** the connection between limbic resonance and peace.

Standards: This lesson aligns with IB Theory of Knowledge Standards as follows:

- **Explore with depth & detail the implications and underlying assumptions of the question: To what extent can art give us the truth about the relationship between war and the limbic brain?**

Materials:

- Copies or a link to the article, “The Science of Scarcity”
- Copies of two statements (listed below in “procedures”)
- Paper and pencils for developing initial sketches and phrasing
- Sidewalk chalk for students to use in creating their works of interpretive art

Time: 2 hours (80 minutes for preparation/follow-up and 40 minutes to create drawings and do a “gallery walk”)

Procedures:

Part I – Background & Discovery:

What the human sciences tell us about “unpeace”:

1. Read the article, “The Science of Scarcity”
(<http://www.harvardmagazine.com/2015/05/the-science-of-scarcity>)
2. Discuss the article, along with the two statements below:
 - a. The poor are not poor because they make bad decisions; they make bad decisions because being poor creates such stress. Behavioral economists Sendhil Mullainathan and Eldar Shafir explain in their book; *Why Having Too Little Means So Much* that **scarcity steals mental capacity wherever it occurs—from the hungry, to the lonely, to the time-strapped, to the poor.**
 - b. Thomas Lewis, Fari Amini, and Richard Lannon in their book, *A General Theory of Love*, report that [when researchers created an environment in which food was not readily available, healthy monkey mothers became poor mothers. The unpredictability of circumstances preys on her mind and erodes parental attentiveness. That lack of attention, in turn results in offspring that are **unstable**. They have altered neurochemistry’s and become emotionally vulnerable, showing

- magnified levels of despair and anxiety.** They become **socially awkward neurotics and fail to attach as adults.**] These are conditions often faced by those subjected to war (loss of loved ones, families torn apart, refugees with lost communities, hatred, anger, poverty, trauma, lost mental capacity).
- c. Some consequences of war or “unpeace:”
- loss of loved ones
 - families torn apart
 - refugees with lost communities
 - hatred, anger
 - poverty
 - trauma
 - lost mental capacity
3. Which Ways of Knowing (faith, reason, intuition, emotion, sensory perception, memory, imagination, and language) are involved in these consequences of war? Explain.
4. Discuss which Ways of Knowing (faith, reason, intuition, emotion, sensory perception, memory, imagination, and language) are key to understanding in the human sciences? Explain

ToK and the Arts

5. Which Ways of Knowing do we find that the arts involve? Explain how the arts involve three of the following factors:
- listening
 - composing
 - arranging
 - analyzing
 - improvising
 - designing
 - problem-solving
 - teamwork
 - communicating
6. How can the arts help us, in way that other areas of knowledge cannot, to know the truth? **Use an example** to help explain three of the following:
- Are intuitive
 - Enhance cultural awareness
 - Result in greater love of the learning
 - Give feelings a form
 - Make us more human
 - Enhance creativity

- Increase social harmony
- Promote risk-taking
- Help us to understand our emotions and those of others
- Enhance spatial visualization skills
- Take time to get good at
- Result in a sense of what might be considered “good” art
- Require self-direction
- Energize us
- Are self-directed

Part II – The Artistic representation:

How might you use a drawing in chalk to give form to the feeling of unpeace or move viewers to resolve conflicts that create unpeace?

Design your chalk artwork to include all of the following:

- A **title** that includes “ToK” and the KQ – ***To what extent can the arts reveal the truth about human conduct?***
- An **illustration** to amplify the message (see examples of the consequences of unpeace from the discussion of scarcity above)
- A **creative border frame that states/explores WoKs** involved in human sciences and the arts

Part III – Follow-up:

Limitations of the Arts for Communicating Knowledge

7. Discuss some advantages of this art form for conveying for giving “form to feelings.”
8. What are some limitations of the arts in helping us to know the truth?

Limitations of Knowledge in Human Sciences:

- a. Are there problems with human sciences that do not exist in other sciences? Should the human sciences count as sciences?
- b. Are human sciences really sciences if the experience of the scientist is involved? For example, the human sciences require that the scientist use his/her own introspection and empathy - this form of subjectivity is sometimes collectively called the “Verstehen Problem”. Explain why you think this is or is not a problem.
- c. Is it possible in the human sciences to have constants, repeatable results, confidence in predictions, avoid biases, understand alien cultures, etc.?

- d. What does a *science* involve and do *human sciences* qualify as sciences? (For example, are human science findings falsifiable, simple, beautiful, general, etc.)
- e. Do social sciences (psychology, sociology, anthropology, economics, political science, law, philosophy, etc) follow scientific ideals: reliability, objectivity, precision, testability, comprehensiveness?
- f. How might we best pursue knowledge in the human sciences?

Assessment- Students should be given feedback on their responses to the questions above and to the verbal questions of their chalk art works as follows:

Which Ways of Knowing (WoK) inform the perspectives/claims in your artwork?

WoK Development: Go beyond just mentioning the WoKs to tell how each works?

What are your claims, counterclaims and conclusions about the relationship between war and the limbic brain?

How well does your artwork convey meaning?

Assumptions: What has to be assumed for your conclusions to hold true?

Implications: Given your conclusions, what are the implications?