The Nature OR Nurture Question

Research

**Objectives:**

Students will

1. Learn that environment can influence some personality traits, while others are genetic;

2. Understand that the most effective way to study the concept of nature versus nurture is by conducting research with identical and fraternal twins reared separately and together; and

3. Discover that the issues of nature versus nurture are still debated in the scientific community

**Part One**

1. What do you think determines your likes, dislikes, and personality characteristics? Is it your genetic makeup or the environment that you have grown up in? Explain thoroughly.

**Researchers have been debating this question for centuries. This debate is referred to as “nature versus nurture.” Researchers have studied identical and fraternal twins to try to determine whether genetics (nature) or environment (nurture) has a greater effect on personality development. Identical twins, or monozygotic twins, come from the same fertilized egg. In the earliest stages of development, the egg splits into two zygotes, creating two individuals with the same genetic code. Fraternal twins, or dizygotic twins, develop from two eggs, and each has its own genetic makeup.**

**Some of the most conclusive research has studied identical and fraternal twins who were raised apart. Scientists have been able to determine whether characteristics such as personality traits, talents, and occupational preferences are a result of environment or genes. Similar characteristics among identical twins reared apart might indicate that environment does not play the biggest role. Different characteristics might indicate the opposite.**

**By comparing fraternal and identical twins, scientists can refine their findings. If identical twins raised in different homes have many similarities but fraternal twins raised apart have nothing in common, scientists can conclude that genes are more important than environment in determining personality traits.**

**Part Two-** *Read the attached PDF and answer these questions.*

1. What is the problem with stories about twins versus studies about twins?
2. What are some issues with traditional twin studies?
3. How has molecular genetics affected twin studies?
4. Many human traits and behaviors are a result of both the genetic and environmental factors. In a word your genes “interact” with the environment. Give two examples of this idea and explain.

**Part Three**

You will now read summaries over THREE twin studies of your choice. Working individually, review the studies and answer the following questions:

Identical Twin Study Choices:

* Bouchard Twins, Jim Twins, Paula Bernstein and Elyse Schein, Oskar Stohr and Jack Yufe, Bessie and Jessie Poor, Jerry L. and Mark N.
1. How are the findings summarized?
2. What do you think these cases say about nature versus nurture? Be specific about each case you are referring to.
3. What conclusions about nature versus nurture emerge from each study?
4. Do you think these studies are conclusive? Why or why not?
5. Compare the information for identical and fraternal twins. What conclusions do the studies draw about nature and nurture?

**Questions to consider for later….**

**Discussion Questions:**

1. Do you think personality traits are primarily inherited or influenced by environment? What is your evidence?

2. Why do you think nature versus nurture is debated? Do you think it is possible to answer this question definitively? Why or why not?

3. Who might be most interested in resolving the nature versus nurture debate? What effect might a resolution have on our society?

4. If you were raising identical twins, what might you do to make sure that they were unique individuals? Explain your answer.

5. Based on what you have learned, do you think it is possible to change your personality? Why or why not? If so, how would you go about making changes?

6. If you are not a twin, would you rather be an identical or a fraternal twin? Why? What do you think would be some of the challenges of being a twin? If you are a twin, write a couple of sentences about the experience. Is it fun? Difficult? If you have other siblings, is your relationship with your twin different from the relationship with your other siblings? If so, what makes it different?

7. Lastly, which do you believe has a larger impact on shaping a person? Nature OR Nurture?