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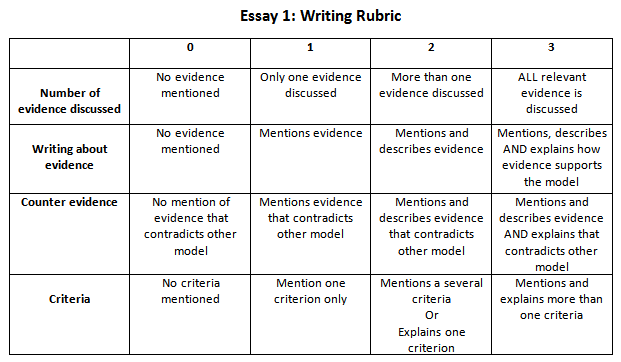
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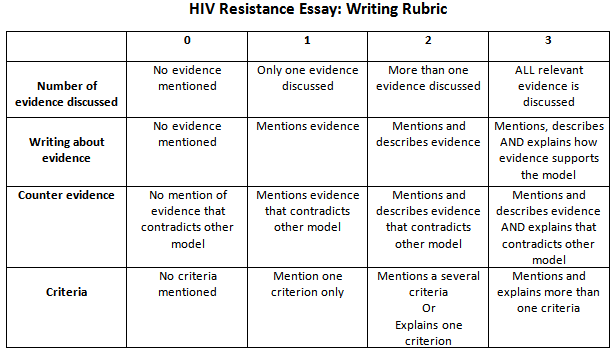
**Do Now Part 1:**

Read essay 1. Then circle one box on the rubric for each category.

When you are done, discuss in your groups the scores you gave the essay. Give lots of reasons.

**Essay 1:**

I think that Model 2 is correct and that people can be genetically resistant to HIV. Evidence 1 supports this. Evidence 4 is good because it is a scientific study. It supports my model because the tests were conducted on people who actually had been exposed many times and never got the disease. Evidence 4 contradicts the other model because it shows that at least some people are resistant.



**Do Now Part 2:**

Read your own essay about the models for resisting HIV. Then circle one box on the rubric for each category.

**Lesson 8: Why are some people resistant to HIV?**

**HIV Model Quiz**

Look at the two models of HIV resistance and circle the best answer.

1. According to the ATTACK-AND-DESTROY model, why are some people resistant to HIV?

A. Their genes give instructions to make extra white blood cells to attack HIV.

B. Their genes give instructions to make a protein that turns on immune cells to attack HIV.

C. Their genes do not give instructions to make a receptor protein that is used by HIV.

D. Their genes give instructions to make a receptor protein that keeps HIV out.

2. According to the KEEP-IT-OUT model, why are some people resistant to HIV?

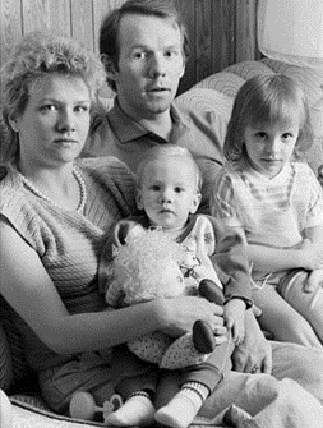
A. Their genes give instructions to make extra white blood cells to attack HIV.

B. Their genes give instructions to make a protein that turns on immune cells to attack HIV.

C. Their genes do not give instructions to make a receptor protein that is used by HIV.

D. Their genes give instructions to make a receptor protein that keeps HIV out.

After you have answered the two questions discuss your answers with your partner. It is OK to change your answer after discussing it with your partner. If you change your answer after talking to your partner, circle your new answer with a red pen.



**Evidence #1: The Burke Family**

Read the newspaper article on the Burke Family of Pennsylvania.

1. Why does Mr. Burke think that Nikki has stayed healthy?

A. Nikki has not been exposed to the HIV virus.

B. Nikki has a protein that destroys the HIV virus.

C. Nikki has just been very lucky all her life.

Burke Family

D. Nikki is missing an important protein called the CCR5 protein.

2. Individually, add evidence ratings and arrows for Evidence #1 on the arrows diagram.

3. Individually, answer this question: How good or bad is Evidence #1? Write your reasons for your answer. Write to someone who might disagree with you.

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**Evidence #2: Comparison of White Blood Cells**

4. Go through the comparison of white blood cells evidence on the computer. Answer all the questions you see on the computer. Give lots of reasons for your answers.

5. Take the short quiz on Evidence #2. #1\_\_\_\_\_\_ #2\_\_\_\_\_\_\_

6. Individually, add evidence ratings and arrows for Evidence #2 on the arrows diagram.

Cell infected with HIV

7. Individually, answer this question: How is Evidence #2 related to Model 1 (supports, contradicts, etc.). Give reasons for your answer. Write to someone who might disagree with you.

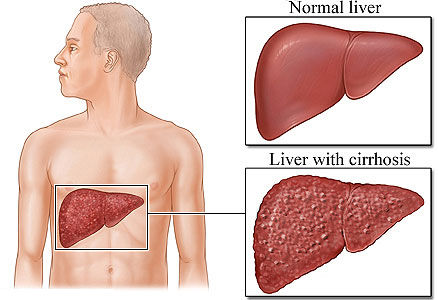
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**Evidence #3: How the Body Fights the Hepatitis Virus**



Liver

8. Read the Health Science News blog on the computer and answer all the questions. Give lots of reasons for your answers.

9. Take the short quiz on Evidence #3.

#1\_\_\_\_\_\_ #2\_\_\_\_\_\_\_

10. Individually, add evidence ratings and arrows for Evidence #3 on the arrows diagram.

11. Individually, answer this question: How does this Evidence relate to Model 1 (supports, contradicts, etc.). Give reasons for your answer. Write to someone who might disagree with you.

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**Evidence #4: Testing for Proteins in Membranes**



12. In pairs, read Jen’s Favorite Genes blog on the computer. Answer all the questions you see on the computer. Give lots of reasons for your answers.

13. What conclusion do you draw from this study? Explain your answer.

White Blood Cell

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14. Individually, add evidence ratings and arrows for Evidence #4 to the arrows diagram. Then in pairs, discuss your ratings.

**Arrows Diagram**

|  |  |  |
| --- | --- | --- |
| **Evidence Goodness Rating** | **Model 1**  **ATTACK-AND-DESTROY** | **Model 2**  **KEEP-IT-OUT** |
| **#1. The Burke Family.** |  |  |
| **#2. Comparison of White Blood Cells.** |  |  |
| **#3. How the Body Fights the Hepatitis Virus.** |  |  |
| **#4. Testing for Proteins in Membranes.** |  |  |

15. Individually, answer this question: What is the best model of genetic HIV resistance? Circle your answer.

Model 1: Attack-and-destroy Model 2: Keep-it-out

16. Write an argument to support the model you chose. Write to someone who may not agree with you.

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**Model Evaluation**

17A. Discuss in your groups: Which model is better, based on the evidence? Give detailed reasons for your ideas during your discussion.

17B. As a class discuss which model is better based on the evidence. Give detailed reasons during your discussion.

17C. As a class review and revise the class list of model goodness criteria.