

# Biotechnology WebQuest

Website #1 <http://www.pbs.org/wgbh/nova/sheppard/analyze.html>

1. DNA is unique for everyone with one exception. What would be an example of that exception?

\_\_\_\_\_

2. What are DNA fingerprints used for?

a. \_\_\_\_\_

b. \_\_\_\_\_

## Part I: "It Takes A Lickin'!"

3. What "crime" was committed? \_\_\_\_\_

4. What bodily fluid was removed from the "crime scene" to get the DNA? \_\_\_\_\_

5. How many suspects are there in this crime? \_\_\_\_\_

## Part II: "DNA Fingerprinting at the NOVA Lab!"

6. What does a Restriction Enzyme do? \_\_\_\_\_

7. What is Agarose Gel? \_\_\_\_\_

8. What is Electrophoresis? \_\_\_\_\_

9. Smaller fragments of DNA move \_\_\_\_\_ than longer strands.

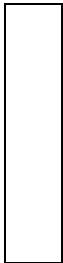
10. Why do you need to place a nylon membrane over the gel? \_\_\_\_\_

\_\_\_\_\_

11. Probes attach themselves to \_\_\_\_\_

12. Which chemical in your "Virtual Lab" is radioactive? \_\_\_\_\_

13. Sketch your DNA Fingerprint in the box to the right.



14. Based on your DNA Fingerprint... WHO COMMITTED THE CRIME??? \_\_\_\_\_

Website #2: <http://www.amnh.org/ology/>

Click the GENETICS tab to the left, scroll down and Click on the Quest for the Perfect Tomato. Then click Food for Thought.

15. Give **two** examples of genetically modified foods. Tell how they are trying to modify them.

a. \_\_\_\_\_

b. \_\_\_\_\_

Website #3: <http://www.pbs.org/wgbh/harvest/coming/coming.html>

Click on each of the foods on the table to see what research is being done to bioengineer the foods. List 3 foods and describe how they are being modified.

16. \_\_\_\_\_

17. \_\_\_\_\_

18. \_\_\_\_\_

