

Name \_\_\_\_\_ Date \_\_\_\_\_ Period \_\_\_\_\_

# Video worksheet: Genetic Engineering Will Change Everything Forever – CRISPR

## HONORS BIOLOGY: UNIT 7

**Directions:** Answer the questions as you watch the video: “Genetic Engineering Will Change Everything Forever – CRISPR” <https://www.youtube.com/watch?v=jAhjPd4uNFY>

1. How long have humans been “engineering life”?
2. How were humans “engineering” life?
3. What is the “code for life”?
4. In the 1960’s how did scientists alter the genetic code of plants?
5. What test subjects did scientists use in the 1970’s to study and modify them?
6. What was the earliest genetically modified animal?
7. What organism was patented in the 1980’s and what was it used for?
8. What chemicals are produced by means of “engineered life” today? (name three)
9. What was the first food modified in 1994?
10. What modification gave it a longer shelf-life?
11. What discovery led to the reduction of cost to genetically engineer an organism by 99%?
12. How do Phages kill bacteria?

13. What is a bacteria's most effective antivirus system?
14. What does the protein CAS9 do?
15. What does it mean when they say that the "CRISPR CAS9 system is programmable"?
16. How is CRISPR like a GPS system?
17. How could CRISPR be used to treat cancer?
18. What are some of the first ways they want to use genetic engineering?
19. How would CRISPR be used to change how we age?
20. What problems may be solved in the future by having a modified population?
21. What major challenges still await us concerning genetic engineering?
24. What are some of the "darker visions" concerning genetic engineering?
25. What is your opinion on the use of genetic engineering in the future?