Biotechnology Notesheet C. Kohn, Waterford WI

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why

**Weekly Schedule: See Board and record**
Mon

Tues

Wed

Thurs

Fri

What is biotechnology?

What are examples of products made from biotechnology?

How might biotechnology affect agriculture?

How might biotechnology affect medicine?

How might biotechnology affect industrial processes?

Circle one: *I have learned some of this material in previous classes.* Definitely – Yes – Sort of - No

Circle one: *I need to review my notes & practice before the quiz.* Definitely – Yes – Sort of - No

Circle one: *I have never seen or heard of some of these concepts.* Definitely – Yes – Sort of - No

Circle one: *This may be a challenging unit for me personally.* Definitely – Yes – Sort of - No

**Directions**: Use the accompanying PowerPoint (<http://bit.ly/ag-biotech>) to complete this sheet. This sheet will be due upon the completion of the PowerPoint in class. These assignments are graded on a +/√/- scale.

1. Define biotechnology:

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2. Why is biotechnology so important to agriculture?

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3. Biotechnology enables humans to

in ways
4. Scientists can literally

in order to
5. Through advances in biotechnology, scientists can increase

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6. Biotechnology involves
7. What is a genome?
8. What is the ultimate goal of biotechnology?

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9. What is green biotechnology involve?
10. What is white biotechnology involve?
11. What is red biotechnology involve?
12. What are 10 examples of biotechnology?

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13. What is artificial selection?

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14. Artificial selection is the form of biotechnology.
15. What is artificial insemination?

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16. How does artificial insemination enable a producer to change the genome of a species or individual more quickly?

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17. How are brewing and fermentation forms of biotechnology?

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18. How does brewing/fermentation increase the value of a food product?

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19. What are three examples of how biotechnology is used to improve medicine?

Example 1: Description:

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Example 2: Description:

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Example 3: Description:

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20. What is gene splicing?

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21. What is Bt Corn?
22. How was Bt Corn created?

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23. What are ‘spider goats’?

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24. Why would scientists want to make spider goats?

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25. What are stem cells?

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26. What might stem cells enable scientists to do?

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27. What is cloning?

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28. What made Dolly the Sheep a clone?
29. When scientists create a clone, they are simply

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30. How does cloning occur naturally?

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31. What are four reasons for the interest in cloning? List AND describe:

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32. What is genomics?

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33. What has genomics enabled scientists to do?

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34. Through genomic science, we now have tests that can tell us if an individual

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35. What is protein purification?

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36. What are the two main benefits of protein purification?

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37. What is microbial synthetic biology?

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38. Why would a scientist want to create a new species from scratch?

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39. What are two things that could be done by an artificially-created species that cannot be done by living species in existence today?

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40. Of the topics covered in this unit, which two do you think will prove to be most valuable to agriculture?

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Unit Wrap-up C. Kohn, Agricultural Sciences - Waterford WI

This page is designed to help raise your grade while enabling you to develop skills you will need for after high
school. You will need to complete every question and blank in order to receive full credit for your notes. Note: if you cannot come up with a strategy to remember a difficult concept on your own, see your instructor for help.

1. What is a topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
2. What is a 2nd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
3. What is a 3rd topic or concept from this unit that you found to be more challenging? Write or describe below:

In the space below, create a mnemonic, rhyme, analogy, or other strategy to help you remember this particular concept:
4. Circle the most appropriate response. You will only be graded on whether or not you completed this section, so be entirely honest with yourself when completing this section.

Circle one: *I used my notes outside of class to prepare for the quiz.* Definitely – Yes – Sort of - No

Circle one: *I took extra notes in the margins for very difficult concepts.* Definitely – Yes – Sort of - No

Circle one: *I created a personal strategy for at least three difficult items.* Definitely – Yes – Sort of - No

Circle one: *I was very involved and actively studying during the quiz review.* Definitely – Yes – Sort of - No

Circle one: *I think I will be satisfied with the quiz grade I received this week.* Definitely – Yes – Sort of - No

Circle one: *I might need to meet with the instructor outside of class.* Definitely – Yes – Sort of - No