BioGas Notesheet C. Kohn, Agricultural Sciences - Waterford WI

Name: Hour Date:

Date Assignment is due: Why late? Score: + ✓ -
 Day of Week Date If your project was late, describe why -**Directions**: Use the accompanying PowerPoint ([***http://bit.ly/biogas-ppt***](http://bit.ly/biogas-ppt)) 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. Methane is the prevalent emitted in the

US from .
2. Methane accounts for % of .
3. Methane is one of the most greenhouse gases, with over

of the heat retaining capacity of .
4. What produces methane?
5. What accounts for the greatest amount of human-released methane?
6. What accounts for the second greatest amount of human-released methane?
7. What accounts for the third greatest amount of human-released methane?
8. While methane is a , it can be used

to .
9. When methane is burned to , it is released as
10. Isn’t CO2 a problem? Why would we want to create *more* CO2 by burning methane? Explain in detail below:
11. What does anthropogenic mean?
12. Define biogas:
13. Biogas can be used to produce or or it can be used as a

 if it is
14. How does biogas differ from natural gas? Name two ways:
15. Define anaerobic digester:
16. What are the four biological mechanisms of an anaerobic digester?
17. How large of a tank would a 100 cow dairy farm need for its methane digester?
18. How much could a dairy cow produce per year in additional gross income?
19. How much additional gross income could a 500 cow dairy farm make from a methane digester?
20. Describe the 6 additional benefits acquired from the byproducts of anaerobic digesters:
21. Describe 6 drawbacks from anaerobic digesters:
22. Digesters are covered that are
23. They are typically constructed from
24. What is cogeneration?
25. The in a digester are very , requiring
26. Every change from causes
27. Describe 5 physical requirements of an anaerobic digesters:
28. What is liquid effluent?
29. What can it be used for?
30. What are digested solids used for?
31. The US EPA estimates that there are in the US that

could .
32. These farms could generate
33. They could displace
34. How many coal-fired power plants would this displace?
35. How could the number of coal fired power plants be reduced even more through biogas?
36. Summarize the benefits provided by utilization of biogas:

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.

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