Part 1: What is anaerobic digestion? **Name**

View these animations and use these websites to complete the chart and answer the following questions about bioenergy, anaerobic digestion, and biogas.

Animations/Videos

Animation of a simple telescoping biogas digester
http://www.youtube.com/watch?v=BiHDQClpZfI
Biogas: How it works: http://www.youtube.com/watch?v=but5ntRMQQc
What is Anaerobic Digestion?
http://www.youtube.com/watch?v=5dErUHBjR0o
Anaerobic Methane Digestor how to, including biogas scrubbing
http://www.youtube.com/watch?v=l5e_2W71jMM
Methane Biodigestor How To
http://www.youtube.com/watch?v=3AZv6MjZylo&feature=related
How does a biogas plant work?
http://www.youtube.com/watch?v=3UafRz3QeO8&feature=related

Websites

http://canningtonbioenergy.co.uk/index.php?id=3
http://www.biomassinnovation.ca/biomassandbioenergy.html

Anaerobic Digestion

Inputs (biomass/feedstocks)	Processes (describe or draw diagram)
Outputs (products)	Uses

Questions:

1. What is the purpose of anaerobic digestion?

2. What benefits does anaerobic digestion provide?

3. What are the feedstocks for anaerobic digestion and what are the products? List ten specific examples.

4. Where can an anaerobic digester be located, i.e. what factors must be considered?

5. What are the four processes involved in anaerobic digestion? Are they biological or chemical?

6. What requirements in terms of pH are necessary?

7. What might be a sign or quality parameter that would point to a problem in the process?

8. Define the following terms: renewable, sustainable, biogas, anaerobic digestion, hydrolysis, acidogenesis, acetogenesis, methanogenesis,

9. If you wanted to start this process using acetic acid, what stages of the four-stage anaerobic digestion process would you be bypassing?