

The following questions are based on this article:

Biofilms
From
The American Scientist, November-December 2005
Note: You received this article as a handout

1. This article uses what term to describe individual bacteria that are living outside a biofilm community?
2. What is the term that the author of the article uses to describe the matrix of a biofilm? What are the 3 major materials, which make up the matrix of a biofilm?
3. Who first described Biofilms? These biofilms were associated with what type of material?
4. Cite 2 environments (cited in the article) where biofilms are found.
5. Methanogens are noted in this article.
 - a. To what Domain do they belong?
 - b. What type of animal are they mentioned in connection with?
 - c. This source of methane is estimated (by the authors) to represent between ____ and ____% of global methane releases into the atmosphere.
6. The article notes that biofilms can confer protection on their members. Cite 3 forms that this protection can take.
7. Some space in this article was devoted to a plant pathogen whose scientific name is *Xylella fastidiosa*. This microbe is responsible for what is called ____ disease which was described as having a major impact on the ____ industry in the State of ____.
8. What is the CDC estimate of bacterial infections in the Western World that can be attributed to the presence or development of biofilms?
9. The term, “persisters” is used in connection with biofilms. What are these types of biofilm inhabitants?
10. The article does note that biofilms consisting of *Pseudomonas aeruginosa* frequently occur in the lungs of ____ patients where they can lead to the development of life threatening pneumonias.