



After reading the OQ Biofilms in Space Background, answer the following questions.

1. Give at least two examples of biofilm in your everyday life.
2. Name three types of organisms that can make up a biofilm.
3. What is meant by the term planktonic?
4. Why is it important that there are planktonic microorganisms in terms of biofilm formation?
5. The matrix, or the slimy covering produced by a young biofilm has a very important function for the biofilm. Name this function.
6. Why are biofilms of interest in the medical field?
7. Why are biofilms of interest to NASA?
8. What two specific ideas (not which two organisms) is Dr. Zea investigating?
9. Name the two alterations that Dr. Zea is testing in hopes of discouraging biofilm formation.
10. Why do you think Dr. Zea chose to incubate the biofilms at 37°C? (Hint: convert this to °F.)



11. What methods is Dr. Zea using to study the biofilms?

12. What happens to microbes in space?

Dr. Zea expects to see thicker biofilms formed in space as compared to Earth. Additionally, he anticipates seeing genes associated with antimicrobial resistance and increased virulence in the space grown biofilms. Finally, he believes that the biofilms grown on coupons with the lubricant impregnated surfaces will be thinner than those grown on the same substrates without the lubricant. He needs your assistance in confirming or refuting his hypothesis.