BI 101 Films on Demand

**Antibiotics: The Double Edged Sword (***Films on Demand*. Films Media Group, 2003.) <http://digital.films.com/PortalPlaylists.aspx?aid=4065&xtid=32409>

You need only watch the first 23 minutes of this film. Answer the following questions as you view the video:

1. How many unnecessary doses of antibiotics are taken each year?
2. Define the term germ.
3. Fill in the blanks:
   1. A virus is a mass of \_\_\_\_\_\_\_\_\_\_\_\_ that cannot \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ or \_\_\_\_\_\_\_\_\_\_\_\_\_ without the help of a host cell.
   2. Once inside the body, a virus \_\_\_\_\_\_\_\_\_\_ to a host cell and \_\_\_\_\_\_\_\_\_ it to a virus copy machine, injecting it with new \_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   3. Viruses are very difficult to kill because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
   4. Bacteria are \_\_\_\_\_\_\_\_\_\_ larger than viruses and completely \_\_\_\_\_\_\_\_\_\_\_\_\_\_ living organisms.
   5. Bacteria colonies can double in \_\_\_\_\_\_\_\_\_\_\_\_\_ minutes.
4. What does competition between normal bacteria that live in and on our body prevent?
5. List 1 strategy that bacteria can use to evade white blood cells.
6. How does penicillin kill bacteria?
7. Why did the first antibiotic substance fail to be of use to humans?
8. When did antibiotic resistance first become a concern to the medical community?
9. Improper \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and poor \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the 2 main reasons we face the antibiotic health crisis.
10. When did the CDC launch a campaign to educate the public on proper antibiotic use?
11. Why does Dr. Stuart Levy state that the need to sterilize ourselves and our homes in wrong?

(Dr. Levy states that the European Union has outlawed the use of therapeutic antibiotics in livestock production, and the United States is soon to follow. Sadly, a decade after this film was made, little progress have made in limiting the use antibiotics in livestock production in this country.)

1. How much bacteria is killed with just soap and water?
2. Products that leave no \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are deemed safe.
3. Products that use chemicals such as Triclosan leave a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ resifue that promotes \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
4. Who is the one dissenting voice in the debate on use of antimicrobial products in the home?
5. What is the opinion of the American Medical Association on antimicrobial products?
6. Where did the use of antimicrobial products begin?
7. What are some ways the average person can help combat antibiotic resistance?

**After viewing the film, answer the following questions:**

1. Two of the main themes in this film are that # 1: it is impossible to create a sterile environment, and #2: we don’t want to over sterilize our homes or bodies as long as we already have a weakened immune system. Discuss some of the reasons that support these ideas that were presented in this film
2. Take am moment to go through the soap and cleaning products in your home. Based on the types of chemicals that the video listed as safe or unsafe, do you have any products that this film suggests you should not be using?
3. Do you find it alarming or surprising that the Soap and Detergent Association dismisses evidence that supports discontinuing the use of these types of chemicals? Hypothesize on how they have been so successful at the continued marketing of antimicrobial products.
4. Now that you know a little bit more about antibiotic resistance and antimicrobial cleaning products do you think discontinuing or ensuring the continued avoidance of these products is a good idea and one that you are willing to consider implementing in your home?