

Name: _____ Date: _____ Period: 1 2 3 4 5 6 Assignment: _____

NOVA Wonders: What's Living in You?



Directions: Please review the questions below before beginning the video. Please write all answers in complete sentences. If you do not know an answer, circle it and come back at the end. Review your answers before submitting.

Before you watch: Are all bacteria bad? Why or why not? Explain your reasoning below...

While you watch:

1. What is an example of a microbe?
2. Each person carries around ____ pounds of microbes in and on our bodies.
3. What is a botfly?
 - a. Virus
 - b. Bacteria
 - c. Parasite
 - d. Microbe
4. Describe an adaptation of the botfly larvae to hide its presence in the host:
5. Describe the mites that are found on your face:
6. Fungi, bacteria and viruses make up our _____, the complex ecosystem that calls our body home.
7. What 3 shapes do bacteria come in? Draw them in the boxes below.

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8. Describe one way in which bacteria are beneficial:
9. **True or False:** microbes have been the most abundant form of life for most of earth's existence.
10. Which scientist first discovered the "microbial world"?
11. Louis Pasteur first proposed the _____ theory.
12. How does cholera affect the cells of a host?
13. _____ secretes a toxin that blocks neurotransmitter and paralyzes muscles.
14. What was the happy accident discovered by Alexander Fleming?
15. What part of the bacteria cell does penicillin disrupt?

16. Why do scientists think the Amish have half as many allergies as the average American?
17. What is the role of a macrophage?
18. How do scientists think soldier cells cause allergies?
19. What did scientists discover was the cause of most stomach ulcers?
20. **True or False:** all strains of E.coli are harmful.
21. How can you tell the difference between a harmful bacteria and a beneficial bacteria?
22. The keys to a healthy biome are _____ and _____.
23. **True or False:** species around the world eat feces to diversify their gut microbes
24. What unorthodox procedure has been a cure for C.Diff?
25. How does someone get C.Diff?
26. The process that allows “super bacteria” to survive and thrive against antibiotics is _____.
27. **True or False:** not only do antibiotics kill off harmful bacteria, they also kill beneficial bacteria.
28. What does a fecal transplant do for a C.Diff patient?
29. What happened when scientists transplanted the microbiome of an obese person to a mouse?
30. Our gut is connected to our brain through the nerve called the _____ nerve.
 - a. What does this nerve regulate?
31. How do scientists study the effects of microbiome on the brain?
32. Which of the following diseases do scientists think may be caused by the person’s gut microbiome?
 - a. Autism
 - b. Parkinson’s
 - c. Influenza
 - d. Smallpox
 - e. Both A and B
33. What happens when you have “leaky gut”?
 - a. What disease may be associated with leaky gut?
34. **True or False:** scientists know how fecal transplants work
35. Name one disease scientists believe may be connected to an unhealthy balance in the gut microbiome: