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Life in a Drop of Water Video Guide

1. What do we call a life-form that is so small we need to look at it through a microscope in order to see it?
2. How many microorganisms can live in one drop of water?
3. What do humans have in common with the smallest microorganisms?
4. What is a cell?
5. How many cells does it take to make a living organism?
6. How many cells are there in a human body?
7. What parts do all cells contain, regardless of what organism they belong to?
8. What are the smallest microorganisms you can see with an ordinary microscope?
9. Why are bacteria important?
10. What is another important food source for many pond organisms?
11. What are algae?
12. What are protists?
13. How do algae obtain their food?
14. What is photosynthesis?
15. What is the green substance found in most algae?
16. What are clusters of algae called?
17. What are protists that possess flagella called?
18. What are protozoa and what does their name mean?
19. What are protozoa that possess cilia called?
20. What structures in protozoa allow them to take in and expel water?
21. How do most protozoa reproduce?
22. What is the name of the process during which protozoa exchange cell material?
23. What is the enclosure a protozoan forms when it enters a state of suspended animation?
24. How does an amoeba move?
25. What are the bubbles that protozoa form to surround food?
26. In what ways are protists important?
27. Name some of the microorganisms you might find in a drop of pond water.

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ANSWERS

28. What do we call a life-form that is so small we need to look at it through a microscope in order to see it? (a microorganism)
29. How many microorganisms can live in one drop of water? (hundreds or even thousands)
30. What do humans have in common with the smallest microorganisms? (We are all made of cells.)
31. What is a cell? (the basic unit of which all living things are composed)
32. How many cells does it take to make a living organism? (Single-celled microorganisms have only one cell; larger organisms can have billions.)
33. How many cells are there in a human body? (billions)
34. What parts do all cells contain, regardless of what organism they belong to? (a nucleus, the control center of the cell; a substance called cytoplasm surrounding the nucleus, where many cell functions occur; a membrane, the sack-like container that holds the cell together)
35. What are the smallest microorganisms you can see with an ordinary microscope? (bacteria)
36. Why are bacteria important? (They are an essential food for other microorganisms.)
37. What is another important food source for many pond organisms? (algae)
38. What are algae? (plantlike organisms that appear in a variety of forms and belong to a larger group of organisms called protists)
39. What are protists? (Protists belong to a group of organisms that are neither plant nor animal.)
40. How do algae obtain their food? (through photosynthesis)
41. What is photosynthesis? (a process by which plants and algae convert water and carbon dioxide into food using the energy of sunlight)
42. What is the green substance found in most algae? (chlorophyll)
43. What are clusters of algae called? (colonies)
44. What are protists that possess flagella called? (flagellates)
45. What are protozoa and what does their name mean? (Protozoa are common one-celled organisms found in pond water; their name means "first animals.")
46. What are protozoa that possess cilia called? (ciliates)
47. What structures in protozoa allow them to take in and expel water? (contractile vacuoles)
48. How do most protozoa reproduce? (through fission)
49. What is the name of the process during which protozoa exchange cell material? (conjugation)
50. What is the enclosure a protozoan forms when it enters a state of suspended animation? (a cyst)
51. How does an amoeba move? (by sending out streams of cytoplasm called pseudopods)
52. What are the bubbles that protozoa form to surround food? (food vacuoles)
53. In what ways are protists important? (They form the bottom of the food chain; some are responsible for producing most of the air we breathe; many are used in scientific studies; some are carriers of disease.)
54. Name some of the microorganisms you might find in a drop of pond water.
    • bacteria • algae • protozoa • paramecium • blepharisma • spirostomum • dileptus • stentor • lacrymaria olor • vorticella • bursaria • didinium • amoebas • rotifers • daphnia (water flea) • cyclops • hydras • giardia