INNOVATION: LIGHT SPEED

1. How was the news of the fall of Troy carried across Greece?	
2. What was the main problem with the Chappe telegraph system?	
3. In 1815, British and American forces fought in New Orleans. Why were these deaths considered a needless loss of life?	
4. On Aug. 18 of what year did Queen Victoria & James Buchanan exchange the first telegraph messages across the Atlantic Ocean?	
5. What does "multiplexing" mean?	
6. What did Alexander Graham Bell do in 1876?	
7. Does light travel more slowly in water or in air?	
8. Explain how a single tone, carried by radio waves, can be used to send information.	
9. What is the problem with high frequency waves?	
10. In 1962, AT&T launched the Telstar satellite to transmit radio waves between continents. How is using a satellite telephone inconvenient for users?	
11. Light waves are very high frequency radio waves; instead of fluctuating a million or a billion times a second, they fluctuate a __ times a second, allowing them to carry more information.	
12. What profession was the first to use glass to transmit light?	
13. In 1956, Lawrence Curtis made glass fibers to transmit light. What caused light to leak out of his glass fibers?	
14. By the late 1960s sending light down a short endoscope was commonplace. What final challenge remained to using glass fibers for long-range communications?	
15. Fused silica, used to create pure glass, is made of what common substance?	
16. By 1975, how far could optical fibers carry light?	
17. Millions of miles of fiber optic cable exist. Initially, skeptics felt there was too much. What helped use up the capacity?	
18. Howard Longfellow was operated on in North Bay. Where was his surgeon, Mehran Anvari?	
19. What are some of the future applications of remote surgery?	
20. What is "interesting about the history of communications" technologies?	