Film Science: Questions to Accompany: *Aurora Explained*

1. What are some reports and beliefs about auroral displays?

2. Why does science fade into the background for some aurora scientists?

3. In the simplest terms, an aurora is a huge ___.

4. What is an example of a "controlled" aurora?

5. What particles collide to create an auroral display?

6. What is the height range of an auroral curtain?

7. What colors are released from collisions between charged particles and:
   a) atoms of nitrogen
   b) molecules of oxygen.

8. What are the two main colors of auroral displays?

9. a) Which of these main colors tends to be seen at the top of the display?
   b) at the bottom?

10. Most of the energy associated with an auroral display is released in what form?

11. What are commonly observed localized aurora forms?

12. Aurora shapes and patterns are never repeated. T or F?

13. Other than the types of atmospheric gases involved in the collisions, what other feature of an aurora determines the colors we see?

14. a) What is the source of the charged particles that collide with the gases in the atmosphere?
   b) What are two points of evidence for this source?

15. The most active sunspots release giant plumes called ___.

16. What is the rarest auroral color?

17. The spray of charged particles from sunspot plumes is called the ___.

18. When the solar wind blasts into the earth's magnetic field, much of it is deflected by a force field called the ___.

19. a) Some solar wind particles get trapped in what flow structures within the earth's magnetosphere?
   
   b) These areas of trapped solar wind particles happen to be located where above the earth's surface?

20. What other planets have auroras?

21. Auroras on earth cause what types of communication problems?

22. a) Auroral energy has what effects on above ground power distribution systems
   
   b) What is an underground effect?

23. The music accompanying the closing credits is intended to create what mood?