

Article Review

Here Comes the Sun Dr. Z: Inside the Sun

Time Questions

10 minutes prep time. 5 minutes presentation time per question

- 1. What are the layers of the Sun and in which layer does fusion take place? In which layer are coronal mass ejections seen during an eclipse? Present a rough scale drawing to support your answer.
- 2. Name one of three mysterious or unexplained solar phenomena mentioned in the article. How do scientists believe these three phenomena reflect solar weather trends?
- 3. What solar phenomena help space weather analysts predict periods of dangerous solar weather?
- 4. How does the earth's magnetic field and atmosphere help protect the earth from dangerous solar eruptions? List the types of dangerous eruptions. Present a rough scale drawing of the earth-sun relationship to support your presentation.
- 5. Describe the journey a gamma ray may take as it travels from the center of the sun to the earth and tell how long the journey may take.
- 6. How do radioactive (ionized or charged) particles interact with magnetic field lines around the earth? What examples can you give of this interaction?
- 7. Why is Space Station Alpha vulnerable to dangerous solar eruptions?
- 8. Consider the following quote: "In that second, 700 million tons of hydrogen ions, banging around at almost 15,000,000 degrees Celsius fused together to form 695 million tons of helium and a teeny amount of assorted random elements." What happens to the 5 tons of matter that is not accounted for? What formula explains this transformation of matter?