

Space Station Stumpers

A Quiz on Space Station Alpha's Power Systems

Time Questions

15 minutes

- 1. What are two ways solar storms can affect the space station's electrical systems?
 - 2. What is the critical percentage for total power reduction on the space station?
 - 3. What is one thing the astronauts can do to conserve power during a solar storm?
 - 4. Who created the TV series Star Trek?
 - 5. What was the source of electrical power on the Enterprise?
 - 6. Is this source fictional or real?
 - 7. What is the word used to describe how earth-bound electrical power plants create electricity?
 - 8. Who discovered the photoelectric effect?
 - 9. What is the photoelectric effect?
 - 10. Who explained what actually happens during the photoelectric effect?
 - 11. What is the primary substance used in photovoltaic arrays?
 - 12. What does "doping" mean?
 - 13. What does "emf" mean?
 - 14. How many volts of emf are needed to service a typical house in the US?
 - 15. How large will the PV arrays on the space station be when complete?
 - 16. Batteries employ what type of process to create free electrons?
 - 17. What type of batteries are used on the space station?
 - 18. What is the name for that period of time in which the space station is in the shadow of the Earth?
 - 19. What is the name of that period of time in which the space station is in full sunlight?
 - 20. What percentage of the space station batteries' electrical power is depleted during one orbital period of eclipse?
 - 21. If they are not recharged by the solar arrays, how many orbits can the space station make before the batteries run down?
 - 22. What is electricity?
 - 23. What metals make good conductors?
 - 24. What substances make good insulators?
 - 25. Electrons flow from the positive pole of a battery through a conductor to the negative pole. True or false?
 - 26. What three components are needed to make a circuit?
 - 27. Does a washing machine contain a part of an electrical circuit when turned on? Yes or No?
 - 28. The power required by an electrical device to do its "work" is measured in terms of what?