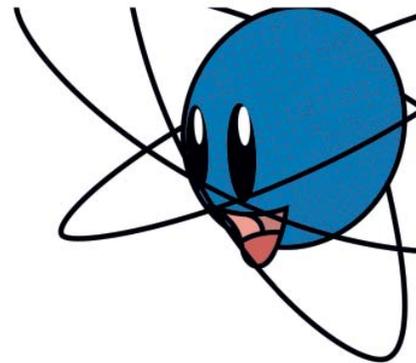


OPERATION

CLEAN DESERT

Student Assessment

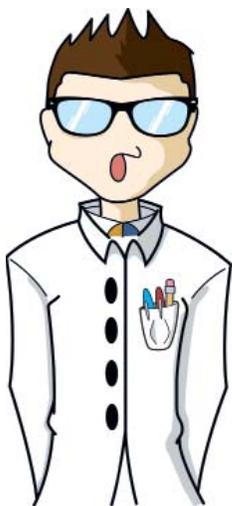


Multiple Choice (circle the correct answer)

- How many different animal species can be found at the Nevada National Security Site?
 - Less than 500
 - Exactly 1,325
 - More than 1,500
 - Exactly 2,303
- Nuclear research, development and testing caused radioactive contamination of:
 - Buildings
 - Clothes and tools
 - Soil and water
 - All of the above
- One method used to check soil for the presence of radioactive contamination is:
 - Use a black light to see if the soil glows
 - Send soil samples to laboratories for analysis
 - Check soil for extreme temperature changes
 - Place soil sample in a cup of water to see if it reacts
- At the Nevada National Security Site, groundwater levels can range from a few hundred feet to:
 - Less than 2,000 feet deep
 - More than 4,000 feet deep
 - Approximately 8,000 feet deep
 - More than 10,000 feet deep
- Nevada National Security Site scientists use computer models to:
 - Design desert habitats
 - Study weather patterns
 - Track the eating/drinking habits of area wildlife
 - Create representations of subsurface geology and hydrology
- Oil spilled on the ground is an example of what type of contamination?
 - Radioactive contamination
 - Mechanical contamination
 - Chemical contamination
 - Liquid contamination
- How do Nevada National Security Site scientists look for and track contaminated groundwater?
 - Use drill rigs to dig deep into the ground to gather water and rock samples to create computer models
 - Measure the temperature of the water; the warmer the water, the more it is contaminated
 - Use seismic devices to test water density; the denser the water, the more it is contaminated
 - Provide water to volunteers for taste tests
- Low-level radioactive waste is containerized and taken to designated areas to be:
 - Placed under water
 - Crushed and placed in smaller bags
 - Safely and permanently disposed in engineered cells
 - Cleaned and reused
- Scientists at the Nevada National Security Site:
 - Have a variety of degrees and experience
 - Practice and learn new skills
 - Consider safety first
 - All of the above

Correct False Statements (cross out and replace incorrect words to make these false statements true)

- An aquifer is a solid layer of soil or rock that allows water to pass through it.
- Before 1951, Nevada National Security Site land was completely unused.
- Scientists study rock and water samples from well drilling to help locate fish.
- Half of the U.S. public water supply comes from underground.
- The nucleus of an atom contains three particles.
- The Sun emits groundwater.
- Training animals is another activity conducted at the Nevada National Security Site.
- Special equipment is used to detect radiation, because it is green and smells funny.
- A neutron has a negative charge.
- Workers package low-level radioactive waste into glass jars and sandwich bags for disposal.



Fill in the Blank

20. A trained professional, known as an environmental _____, may check for soil contamination by taking samples for lab analysis.
21. _____ training is one of the current activities taking place at the Nevada National Security Site.
22. When the roof of an underground cavity collapses during a historic underground test, this forms a _____ at the surface.
23. An _____ is a geologic formation of permeable rock, gravel or sand containing or conducting the movement of groundwater.
24. Atoms are comprised of three particles: protons, neutrons and _____.
25. How fast a radioactive atom decays is measured by its _____ - _____.
26. Full-scale nuclear testing was conducted for over 40 years at the Nevada National Security Site, between _____ and _____.
27. The process of an unstable atom trying to achieve stability is referred to as _____.
28. A radioactive atom is called an _____.
29. Operation Clean Desert takes place at the Nevada _____ Site.
30. Groundwater moves in _____ layers beneath the Earth's surface.
31. Cleanup workers must remove contaminated industrial material such as tools and protective _____.
32. _____ occurs when something harmful or unsafe is in an area where it is not wanted.
33. The water _____ is the underground surface of geologic layers that are wholly saturated with water.
34. The Desert _____ is one of many species that calls the Nevada National Security Site home.
35. Computer models use information obtained during well drilling to generate _____ representations of the geology beneath the Earth's surface.

Essay Question (write an essay responding to the following questions)

Do any careers described in Operation Clean Desert appeal to you? If so, which one(s) and why? If not, write about the type of career you want to pursue and why. Include how you plan to reach your goal, such as by enrolling in college, pursuing training, joining the military, etc.

