The World of Chemistry: <u>The Periodic Table</u> Name _____
(28 minutes) Period _____

READ THE QUESTIONS FIRST, BEFORE VIEWING THE VIDEO!

_____ 1. The most important piece of equipment in the chemistry laboratory is the _____.
_____ 2. Mendeleev created the periodic table _____ years ago.

_____ 3. The table is arranged by chemical and physical properties such as __3__, __4__, and __5__.
_____ 4. _____ 5.

_____ 6. There are 88 naturally occurring elements and ____ (number) artificial elements.
_____ 7. The Latin "ferro" was used to name which element.

_____ 8. The element Po is named for the country _____.

_____ 9. Varieties of elements with differing number of neutrons are called _____.

_____ 10. _____ determines the position of an element on the table.

_____ 11. Vertical columns on the table are called _____ or families.

_____ 12. Horizontal rows are called _____.

_____ 13. Elements in a family have similar _____.

_____ 14. The elements He, Ne, Ar, Kr, Xe, and Rn are in the _____ family.

_____ 15. Three of the properties of the inert or noble gases are __15__, __16__, and __17__.
_____ 16. _____ 17.

_____ 18. Alkali metals are used in _____ making to toughen the material.

_____ 19. Three examples of alkali metals are __19__, __20__, and __21__.

_____ 20. _____ 21.

_____ 22. Would you characterize the alkali metals as inert, reactive, or highly reactive?

_____ 23. The size of an atom _____ (increases/decreases) as you go *down a group*.

_____ 24. The size of an atom _____ (increases/decreases) as you go *across a period.*
_____ 25. The repetition of properties is called _____.

_____ 26. The element _____ can be used to make stronger glass since the atom is larger than that of sodium.

_____ 27. Mendeleev left blank spaces in his periodic table for elements that had not been discovered, based on their _____.

_____ 28. An example of one of these elements is _____.

_____ 29. Glenn Seaborg established the Actinide Series of elements by moving the locations of the elements _____, protactinium, and uranium.

_____ 30. _____ arrangement ultimately determines location of elements on the periodic table.

_____ 31. The number of *clouds* in the 2 p sublevel is _____.

_____ 32. How many electrons in any single cloud (sublevel)?

_____ 33. Electrons in the outer energy levels of an atom are called _____ electrons.

_____ 34. The _____ have full outer orbitals.

_____ 35. The halogens are missing _____ (number) outer electron which makes them VERY reactive.

Baseball Player-Sodium atom demonstration.

_____ 36. The lowest energy level is called the _____.

_____ 37. The next highest energy level is called the _____.

_____ 38. The next highest energy level is called the _____.

_____ 39. The highest energy level in a sodium atom is _____.

Rules for filling electron orbitals:

1. _____

_____

2. _____

_____

3. _____

_____

How is X-Ray fluorescence used by art museums?