

UNIT 1: “I CAN” STATEMENTS

- 1. I can explain how Chemistry functions as the Central Science**
- 2. I can list the branches of chemistry**
- 3. I can show to my peers an overall view of the components of my chemistry curriculum**
- 4. I can articulate why lab safety is important very important in the chemistry course**
- 5. I can explain why safety is always related to behavior and habits**
- 6. I can enumerate what the important lab safety rules are.**
- 7. I can demonstrate how a scientific theory is developed**
- 8. I can explain why only certain theories become laws.**
- 9. I can justify why observation is considered the basis of the Scientific Method.**
- 10. I can illustrate what a Hypothesis is and how it is developed.**

- 11. I can discuss the components of Experimental Design.**
- 12. I can describe what I understand by the term “Data” and how the data are collected and documented.**
- 13. I can illustrate how data are analyzed and inferences are drawn.**
- 14. I can enumerate the implications of Intellectual Property Rights and Copyright Laws.**
- 15. I can explain the importance of lab reports.**
- 16. I can draw with appropriate color coding, visually represent different formats of the periodic table and highlight the significance of each table.**
- 17. I can identify the chemical apparatus by name.**
- 18. I can differentiate between qualitative and quantitative measurements**
- 19. I can make qualitative and quantitative measurements in a lab investigation**

- 20. I can show how counts are different from measurements.**
- 21. I can explain the significance of SI units.**
- 22. I can draw a Metric Ladder with ease.**
- 23. I can demonstrate by mathematical operations the process for converting between different metric units.**
- 24. I can convert numbers to scientific notation**
- 25. I can convert scientific notation to number**
- 26. I can discuss the common human errors in measurements with examples.**
- 27. I can distinguish between Precision and Accuracy.**
- 28. I can show how errors are estimated in a measurement by percent error.**
- 29. I can report technically the sigfigs in the given numbers**
- 30. I can report technically the final result of math operations in correct sigfigs.**

- 31. I can do a lab investigation to determine the thickness of aluminum foil.**
- 32. I can perform a lab investigation to determine the density of different regular objects**
- 33. I can perform a lab investigation to find the volume of an irregular object by the water displacement method**
- 34. I can delineate the significance of mole as a count in chemistry.**
- 35. I can compute Formula Mass of a substance from Atomic Masses.**
- 36. I can design a lab investigation to find the number of moles in a substance.**
- 37. I can explain the word, "Stoichiometry."**
- 38. I can illustrate an atom with its parts.**
- 39. I can differentiate between a physical change and a chemical change**
- 40. I can trace the Timeline of Different Models of the Atom**
- 41. I can summarize the principles that underlie the electronic configuration of elements**
- 42. I can describe how elements heavier than hydrogen were formed by nuclear fusion**