**SUB WORK ATOMIC STRUCTURE**

1. What did Democritus come up with?

1. What did John Dalton’s four postulates state?
	1.
	2.
	3.
	4.
2. Describe and sketch a cathode ray tube

1. What did J.J Thomson discover using a cathode ray tube?
2. What did Rutherford discover?
3. Describe Rutherford’s Gold Foil Experiment.
4. What did Rutherford EXPECT to see from his experiment?
5. What did Rutherford ACTUALLY see from his experiment?
6. What did his results tell him about the structure of the atom?
7. What did James Chadwick discover?
8. What particles make up the nucleus?
9. Where are electrons located?
10. What does the atomic number tell us?
11. What does the atomic mass tell us?
12. How do I calculate the number of electrons?
13. How do I calculate the number of neutrons?
14. Why is the atomic mass not a whole number on the periodic table?
15. What is the definition of an isotope?
16. If an atom of Cadmium has 66 protons, which isotope is it? Remember to put the name in the isotope format (like Carbon-14)
17. What is an orbital?
18. Sketch an s and p orbital
19. How many s orbitals in a set?
20. How many p orbitals in a set?
21. How many d orbitals in a set?
22. How many f orbitals in a set?
23. Sketch a set of p orbitals on an x,y,z axis

1. How many electrons can fit in an s orbital?
2. How many electrons can fit in a p orbital?
3. How many electrons can fit in a d orbital?
4. How many electrons can fit in an f orbital?
5. How many electrons in a set of s orbitals?
6. How many electrons in a set of p orbitals?
7. How many electrons in a set of s orbitals?
8. How many electrons in a set of f orbitals?
9. Why don’t I ask you to draw d and f orbitals?

**FREE CHOICE PROCESSING TO SUMMARIZE THE INFORMATION YOU HAVE LEARNED SO FAR IN THIS CHAPTER.**

* **Fill this space up with whatever you choose!**
* **You can pick more than one processing activity!**
* **Add color – even if it is a writing activity, find a way to add color to help make your information stand out!**