**Term II Science Exam Review**

**Pages from Notebook:**

Page 13 - The Particle Theory of Matter

Page 14 - The Changing States of Matter

Page 15 - Physical/Chemical Properties and Changes in Matter

Page 16 - Density

Page 17 - Atomic Theory

Page 18 - Atomic Structure

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**Terms/Vocabulary:**

* Matter
* Density of Matter
* States of Matter (Freezing/Melting, Evaporation/Condensation, Sublimation/Desublimation)
* Physical Properties
* Chemical Properties
* Physical Change
* Chemical Change
* 4 Parts of the Particle Theory of Matter
* Chemical Symbols
* Chemical Names
* Chemical Formulas
* Ball and Hook Diagrams
* Combining Capacity/Charges/# of Hooks
* Counting Atoms
* Subatomic Particles
* Protons
* Electrons
* Neutrons
* Counting Subatomic Particles
* Bohr Diagrams
* Periodic Table

**Questions:**

1. What are the four principles of the Particle Theory of Matter?
2. Describe the changing states in matter between:
3. Liquids and solids
4. Solids and Gases
5. Gases and Liquids
6. How can we determine whether a physical or chemical change has occurred in a substance?
7. Give 2 examples of a physical change and 2 examples of a chemical change.
8. Draw a diagram to show the differences in density between gases, liquids and solids.
9. What are the four parts of Dalton’s Atomic theory?
10. Explain the structure of an atom (include the words protons, neutrons and electrons in your description).
11. What is the difference between a chemical compound and a chemical formula?
12. Complete the table below; reference your periodic table:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Element | Symbol | Protons | Neutrons | Electrons |
| Lead |  |  |  |  |
|  | Cu |  |  |  |
|  |  Ca |  |  |  |
|  |  | 19 |  |  |
|  |  |  |  | 47 |

1. Draw the Bohr diagram for the elements below:



1. For the following chemical formulas, give the **proper name**:

 CO2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 N3S \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 P2H2 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ BF4 \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. For the following chemical names, give the **proper formula**:

 nitrogen dichloride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 boron trioxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 nitrogen dioxide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 phosphorus pentafluoride \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 sulfur dibromide \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_