**Grade 9 Science**

**- Chemistry Review –**

**Format**

- Matching Section (Element Cards)

- Multiple Choice

- Short Answer (2-3 Bullet Points)

**Elements 1-20 on the Periodic Table**

- You should have the Elemental Symbol (1-2 letter abbreviation) memorized for

each Element (atomic numbers 1-20)

- You should be able to match an element with an important use that best fits it

- Periodic Table Song on YouTube: https://www.youtube.com/watch?v=-I7l8TgtuLQ

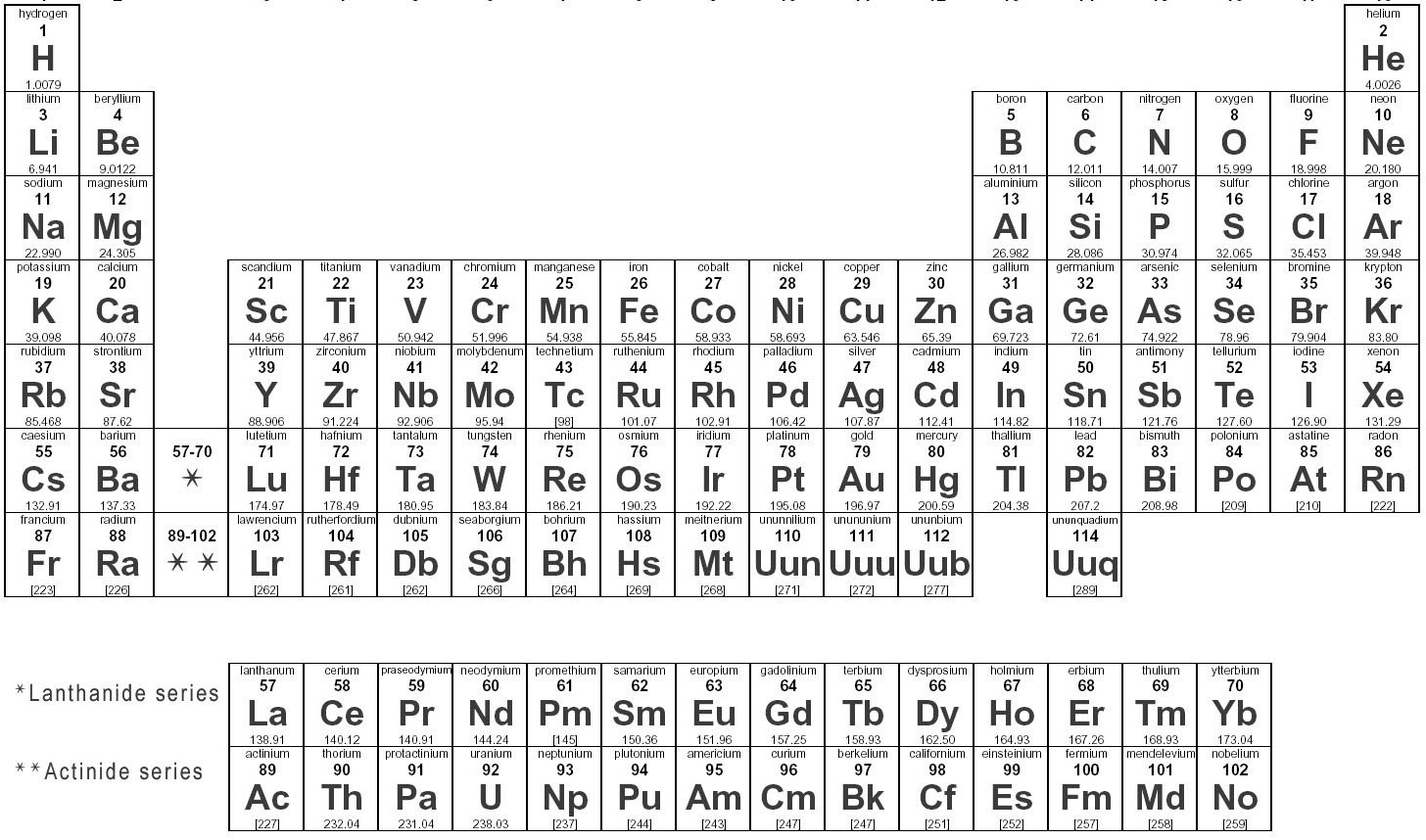
( / 40 Marks)

**Classifying the Periodic Table**

- If given a periodic table, you must be able to label the classifications and

periods, as well as explain what a period refers to.

- Practice this on the table provided:



**Compounds**

- If given a compound name, you must be able to state if it is molecular or ionic,

and why. Complete the chart to help summarize this:

|  |  |  |  |
| --- | --- | --- | --- |
| **Compound Name** | **Chemical Formula** | **Ionic vs. Molecular** | **Why** |
| Sodium Chloride |  |  |  |
| Methane |  |  |  |
| Carbon Dioxide |  |  |  |
| Calcium Flouride |  |  |  |
| Calcium Carbonate |  |  |  |
| Water |  |  |  |
| Phosphorus Tetraflouride |  |  |  |

**Subatomic Particles**

- Complete the following chart to demonstrate your understanding of the

relationship between the different subatomic particles:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Element / Ion** | **Atomic Number**  **(Protons)** | **Mass Number**  **(Protons & Neutrons)** | **Charge** | **Protons**  **(Atomic #)** | **Neutrons**  **(Mass # - Atomic #)** | **Electrons**  **(= Protons)** |
| 24Mg  12 |  |  |  |  |  |  |
| 39K  19 |  |  |  |  |  |  |
| 23Na+1  11 |  |  |  |  |  |  |
| 19F -1  9 |  |  |  |  |  |  |
| 27Al+3  13 |  |  |  |  |  |  |
| 1H  1 |  |  |  |  |  |  |

Unit 2 Pre-Test-Chemistry

1. Multiple choice:
2. Oxygen is a metal
   1. True
   2. False
3. Beryllium has 2 valence electrons
   1. True
   2. False
4. In Lewis Dot diagrams the dots represent neutrons
   1. True
   2. false
5. Which of the following is not one of the things Empedocles believed that everything was made of:
   1. Wind
   2. Air
   3. Fire
   4. Wood
6. What is the atomic symbol for Iron
   1. I
   2. Au
   3. Fe
   4. Hg
7. What charge does a neutron have
   1. Positive
   2. Negative
   3. No charge
8. What charge does an electron have
   1. Positive
   2. Negative
   3. No charge
9. What 2 sub atomic particles are found in the nucleus
   1. Protons and Electrons
   2. Neutrons and Electrons
   3. Protons and Neutrons
   4. Only electrons
10. How many electrons can fit in the 2nd orbital on a bohr diagram
    1. 2
    2. 8
    3. 16
    4. 10
11. If an element has a +1 charge then it has:
    1. More electrons then protons
    2. More protons then electrons
    3. More protons then neutrons
    4. The same amount of protons and neutrons
12. If an element has 10 Protons and 10 Neutrons then:
    1. It is Carbon
    2. It has an atomic mass of 20
    3. It has 20 electrons
13. What pair of elements is in the same period
    1. S and Ca
    2. Li and K
    3. O and F
    4. Co and Ru
14. What element is part of the Noble Gases
    1. Fluorine
    2. Argon
    3. Calcium
    4. Oxygen
15. How many valence electrons does Carbon have
    1. 1
    2. 3
    3. 4
16. What element has the same number of valence electrons as Calcium
    1. Oxygen
    2. Sulfur
    3. Chlorine
    4. Magnesium
17. What element is a metalloid
    1. Be
    2. B
    3. C
    4. Na
18. [What is NOT a physical property of table sugar?](http://www.helpteaching.com/questions/24006/what-is-not-a-physical-property-of-table-sugar)
    1. white, crystalline solid
    2. breaks down into carbon and water vapor when heated.
    3. tastes sweet
    4. dissolves in water
19. What is a chemical property of baking soda
    1. White
    2. Powder
    3. Reacts with vinegar
20. How many Fluorine atoms are there in AlF3
    1. 1
    2. 2
    3. 3
    4. 4
21. How many Hydrogen atoms are needed to create 2CH4
    1. 2
    2. 4
    3. 6
    4. 8

B) Long answer

1. Draw the Bohr diagram for:
2. K
3. Si
4. Ne
5. Sort the following into the appropriate boxes. Each answer only fits in 1 box
6. Roasting a marshmallow
7. Baking soda and vinegar react
8. Melting point
9. Conducting electricity
10. Melting cheese
11. Basic
12. Reacts with metals
13. Dissolving koolaid in water

|  |  |
| --- | --- |
| Physical Change | Chemical Change |
| Physical Property | Chemical Property |

**Additional Study Resources:**

- In addition to this package, you can also study by visiting the resources available on our classroom website. To access these, please visit:

[www.thompsonclassroom.weebly.com](http://www.thompsonclassroom.weebly.com)

- Grade 9 Science page

- Symbaloo (bottom of the page)

- Purple Icons

\*\* This study guide is meant to be used as a general review, it should not be used exclusively. Please read over all class notes/materials in order to be fully prepared.