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| CHEMISTRY | CODE: SCS21 |
| 2014-2015 SCHOOL YEAR | INSTRUCTOR: Ms. Bui |
| CLASSROOM: 510 | LAB ROOM: 506 |

**ATOMIC CONCEPT**

**Subatomic Particles**

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| Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Period: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |
| Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Subject: Chemistry |

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| **SCIENCE STARTER:**   1. What is an atom? 2. What is a nucleus? 3. Can an atom be broken down into smaller parts? |

**VOCABULARY:**

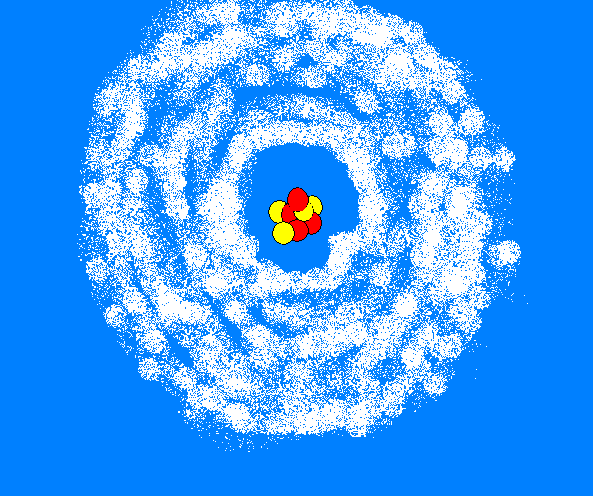
1. **Subatomic Particles –** smaller parts of an \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. **Proton –** subatomic particle with a \_\_\_\_\_\_\_\_\_\_\_\_\_ charge (+1)
3. **Neutron –** subatomic particle that is \_\_\_\_\_\_\_\_\_\_\_\_\_\_(no charge)
4. **Electron –** subatomic particle with a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_charge (-1)

**Where are the subatomic particles located?**

The proton and neutron are located in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

The electron is located \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of the nucleus in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ cloud

Label the parts of an atom (neutron, electron, proton, nucleus, and electron cloud)



**What is the overall charge of the nucleus?**

**What is the overall charge of the atom?**

**Which subatomic particles have equal but opposite charges?**

**What is the quantity relationship between protons and electrons for an atom?**

**Mass of the subatomic particles:**

Neutron = 1.675 x 10-24

Proton = 1.673 x 10-24

Electron = 9.109 x 10-28

**How many times heavier is a proton to an electron?**

**How heavy is a proton if the electron weighs as much as a ping pong?**

**Ping Pong weighs about 3 grams**

**Basketball weighs about 1.25 pounds (567 grams)**

**SCIENCE EXIT:**

**Fill in the table below:**

|  |  |  |
| --- | --- | --- |
| **Subatomic particle** | **Charge** | **Location in an atom** |
| **Proton** |  |  |
| **Neutron** |  |  |
| **Electron** |  |  |