**Parts of an Atom Study Guide**

**Introduction:**

* What is an atom?
* What are the three parts of an atom?

|  |  |  |  |
| --- | --- | --- | --- |
|  | Located where? | Have mass? | What charge? |
| Protons |  |  |  |
| Neutrons |  |  |  |
| Electrons |  |  |  |

**\*Atomic Number\*\***

* What is Atomic Number?
* What is the Atomic Number of the Following?
  + Helium:
  + Sodium:
  + Iron:
* Why can’t you change atomic number?

**\*Atomic Mass\*\***

* How is atomic mass determined by scientists?
* What is the Atomic Mass of the following?
  + Helium:
  + Sodium:
  + Iron:

**\*Mass Number\*\***

* How do you determine the mass number?
* What is the mass number for each of the following?
  + Helium:
  + Sodium:
  + Iron:

**Fill in the Chart Below:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Element Name** | **Element Symbol** | **Atomic Number** | **Mass** | **Protons** | **Neutrons** | **Electrons** |
| Chlorine |  | 17 |  |  | 19 |  |
| Calcium |  |  | 41 |  |  | 20 |
| Carbon | C |  |  |  | 7 |  |
| Magnesium |  |  | 25 |  |  |  |
| Helium | He | 2 |  |  | 3 |  |

**Draw** the atom for **Calcium** (gray row) above, making sure to place the different parts in the correct location. Make sure to **label the electron cloud & nucleus** as well. \*\*Remember: protons are represented by a plus sign, neutrons should be colored in, and electrons should have negative signs in them.