

Atom System

Creating an Atom

To create an atom, simply drag the Atom prefab from Atom System/Prefab into a scene.

Atom Parameters

- Element Name – The name of the element (e.g. Hydrogen)
- Element Symbol – The symbol of the element (e.g. H)
- Atomic Number – The number of protons/electrons in the atom. While this can be entered, it is automatically calculated and overwritten by the script
- Atomic Weight – The combined weight of the protons and neutrons in the atom. This is **not** calculated, but is not necessary for the script to work
- Proton Count – The number of protons in the atom
- Proton Color – The color of the protons in the nucleus
- Neutron Count – The number of neutrons in the atom
- Neutron Color – The color of the neutrons in the nucleus
- Electron Configuration – The order of electrons in their shells. The size represents the number of electron shells there are, and the value for each element is the number of electrons in the corresponding shell. For example, here is a Hydrogen atom with only 1 shell containing 1 electron. Element 0 is the first shell

▼ Electron Configuration	
Size	1
Element 0	1

- Electron Shell Spacing – The spacing between each electron shell. The recommended value is 3, but it can be adjusted as the user wishes
- Spin Electrons – Toggle whether the electrons spin around the nucleus or remain stationary
- Freeze Nucleus Movement After 5 Seconds – This optional value toggles whether after 5 seconds of existing, the nucleus of an atom stops moving. This is because as atoms get larger, the movement of their nucleons becomes more noticeable. This option restricts all movement of the nucleus after 5 seconds.

Glossary

- Proton – The positive particle in the center of an atom
- Neutron – The neutral particle in the center of an atom
- Nucleus – The center of the atom that is comprised of protons and neutrons
- Nucleon – A proton or neutron
- Electron – The negative particle that orbits the nucleus
- Electron Shell – A group of electrons that orbit the nucleus. Each shell is further away from the nucleus than the last