

- **Misconception:** The nucleus is a solid ball. **Fact:** The simulation shows it as a cluster of particles; it is mostly empty space.
- **Misconception:** All atoms of the same element have the same mass. **Fact:** Isotopes show different masses.
- **Misconception:** Atoms are always neutral. **Fact:** Ions exist with net positive or negative charge.

CONCLUSION

The PhET "Build an Atom" simulation transforms abstract atomic theory into a hands-on, visual experience. Whether you are a student struggling to understand the role of protons, neutrons, and electrons, or a teacher looking for a dynamic teaching aid, this simulation is invaluable. While searching for a **PhET Simulation Build an Atom answer key** is common, the real goal should be conceptual mastery. Use the answers provided here as a guide to check your understanding, but do not skip the process of exploration. Build atoms, observe changes, ask "what if," and watch the connections form. In doing so, you will not only answer the questions correctly but also build a solid foundation in chemistry that will serve you for years to come.