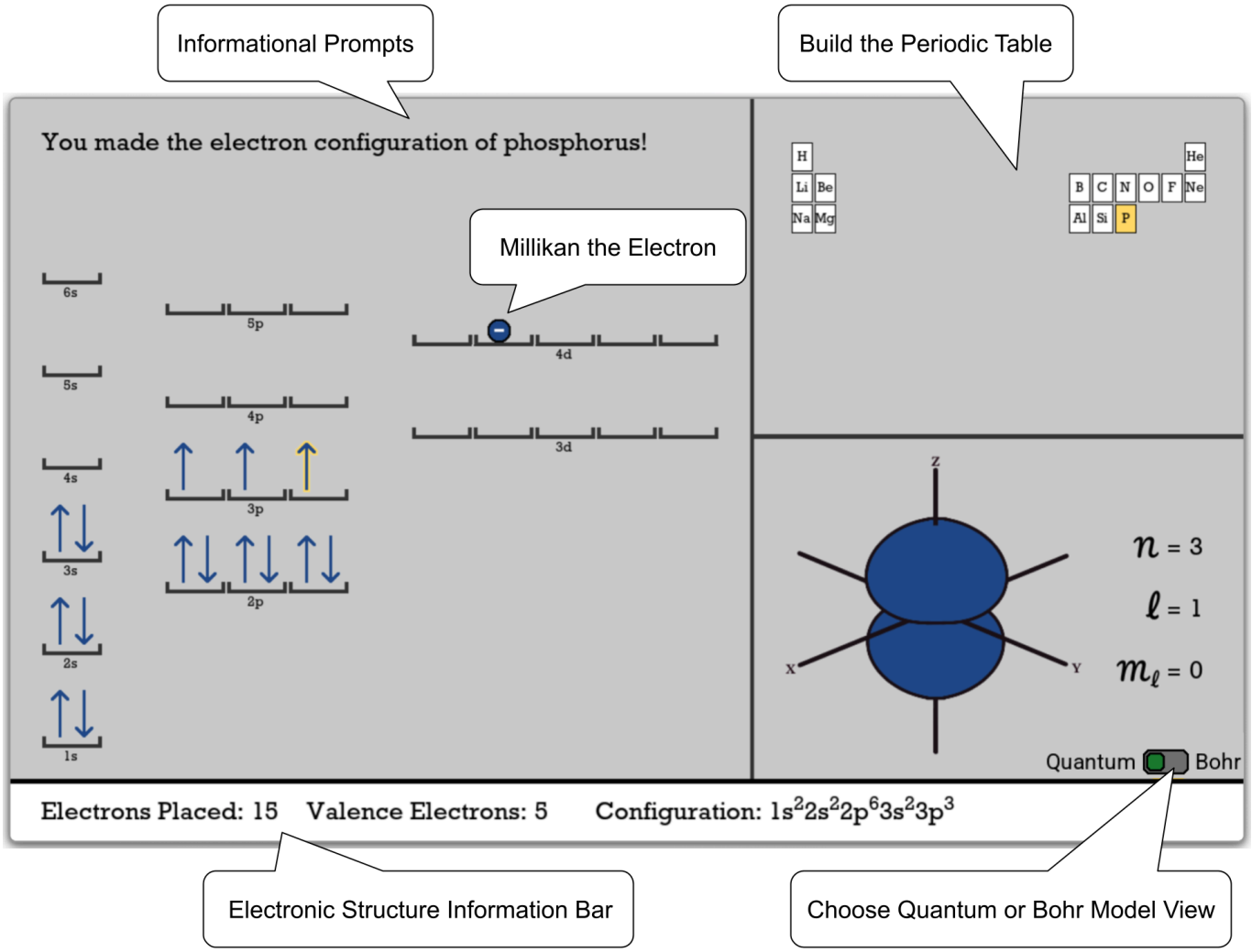
Electron Jump | Classroom Guide

ElectronJump is a FREE online game built for chemistry students. Available now at **www.ElectronJump.app**. How it works:

Players move Millikan the Electron around the game area to form orbital diagrams.

The game provides positive and negative feedback to guide students to discover and apply the Aufbau Principle, Pauli Exclusion Principle, and Hund's Rule.



Learning Outcomes

By the end of gameplay, students will be able to:

- Construct orbital diagrams for elements up to barium.
- Connect orbital diagrams to electron configurations and periodic table structure.
- Identify valence electrons and understand their importance to chemical properties.

Suggestions for Classroom Use

Start with a Pre-Instruction Discovery Activity

- Tell students that electrons follow specific rules when arranging in atoms.
- Introduce the game as a tool where students will figure out these rules for themselves.
- Allow students to progress at their own pace with minimal guidance — the game provides all necessary instructions and prompts and a full playthrough can be completed in a single class period.
- Pair the discovery activity with the **Guided Notes Handout** ($5 optional purchase) to provide a more structured framework for discovery.

Follow Up with Optional Secret Modes (unlock for all students and teacher for $10)

- Teacher Mode: Skip back and forth between elements for quick demonstrations.
- Lightning Mode: Faster version of the game with less text and more action.

Integrate Ready-to-Use Activities to Focus on Specific Learning Objectives

Each activity is available for $5 and includes a student handout and answer key:

- **Bohr Model Inquiry**
- **Drawing Orbital Diagrams**
- **Orbital Diagrams Practice**
- **Periodic Table Inquiry**
- **Quantum Number Inquiry**
- **Valence Electrons Inquiry**
- **Standard Electron Configuration Inquiry**
- **Noble Gas Core Configuration Inquiry**
- **Final Comprehensive Review**

$40 Bundle Deal: Get all 10 activities + Secret Mode unlock codes for one low price!

Contact & Support

Questions or comments? I'd love to hear from you! Email **ElectronJumpGame@gmail.com**