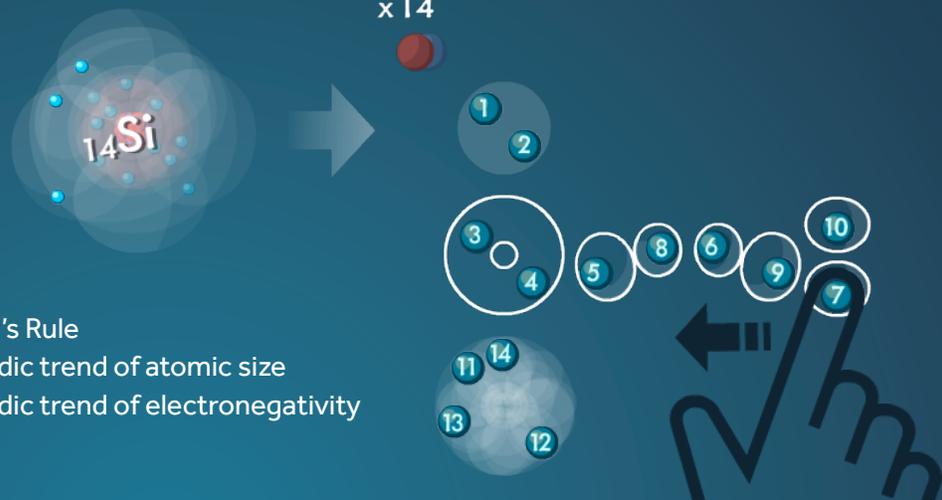


# ATOMS GAME



## Integrated chemistry concepts:

- # of protons = # of electrons
- Electron configuration
- Aufbau Principle
- Hund's Rule
- Periodic trend of atomic size
- Periodic trend of electronegativity

### Use Collisions® PRE-INSTRUCTIONALLY to engage your students and explore a topic.

Assign your students the first 7 levels of Atoms. During gameplay, ask your students to answer the following guided questions:

1. In Level 2, how many protons (red) did you add? How many electrons (blue)?
2. In Level 3, you placed 5 protons in the atom. How many electrons did you use?
3. If there are 8 protons, how many electrons do you need to create an atom?
4. How many electrons can be placed into 1 orbital?
5. In Level 5, you must create 2 atoms. Describe how you did this.
6. What is the goal of the Atoms game?

### Use Collisions POST-INSTRUCTIONALLY to practice, review, and extend the learning.

After instruction, encourage your students to work through the remaining game levels. To check for student understanding, here are some additional guided questions to incorporate into your lesson:

1. Write the electron configuration of one atom that you built in Level 8.
2. After playing Level 9, describe the atomic trend that is represented and explain why this happens.
3. After playing Level 11, describe an atomic trend that is represented and explain why this happens.
4. Explain the rules of the Atoms game using some or all of the following keywords: protons, electrons, orbitals, electron configuration, Hund's Rule, Aufbau Principle.

You can also use the Atoms Sandbox to highlight a specific concept integrated into gameplay and encourage your students to earn the built-in Achievements.

### Additional resources available at [www.playmadagames.com](http://www.playmadagames.com)

- **Atoms Game Guide** - Teacher resource that provides an overview of the game.
- **Atoms Student Quest** - Student activity designed to be completed during and after gameplay.
- **Atoms Activity** (Student Version)