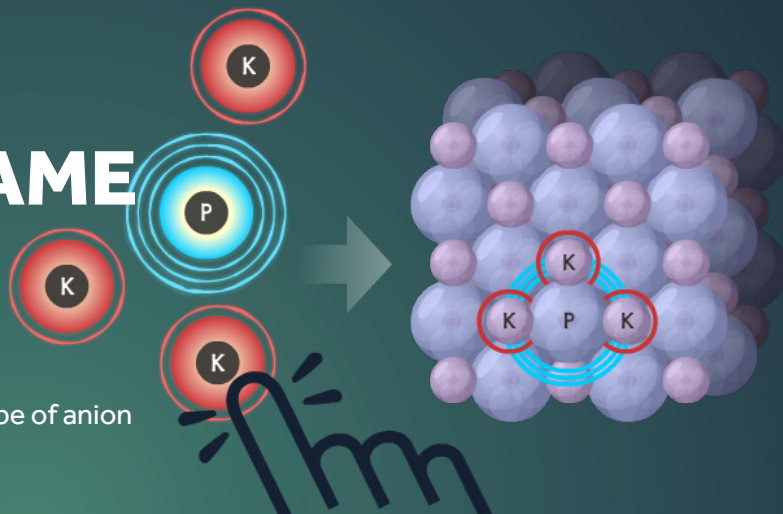


# IONIC BONDING GAME

## Integrated chemistry concepts:

- Cation and anion attraction
- Net compound neutrality
- Ionic compounds contain one type of cation & one type of anion
- Ionic compound ratios



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

Assign your students the first 5 levels of Ionic Bonding. During gameplay, ask your students to answer the following guided questions:

1. Try to make 2 ions repel one another. How did you get this result to happen?
2. Try to make 2 ions attract one another. How did you get this result to happen?
3. What combination of ions did you use to successfully match a target?
4. How many types of ions are in each compound you created?
5. Describe the difference between the compounds that you created in Level 5.
6. What is your goal in the Ionic Bonding game?

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

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

1. Explain the rules of the Ionic Bonding game, using some or all of the following keywords: cation, anion, ratios, neutrality, charge.
2. What is the overall charge of an ionic compound?
3. What is the difference between a compound that has a 2:3 ratio vs. a compound that has a 3:2 ratio?
4. What is the ratio of a compound that contains  $\text{Ca}^{2+}$  and  $\text{O}^{2-}$ ?

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

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

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