



**Topics:** Elements,  
Periodic Table, Chemical  
Symbols

#### Materials List

- ✓ Blank playing cards
- ✓ Permanent marker
- ✓ Optional: periodic table (1 per player)

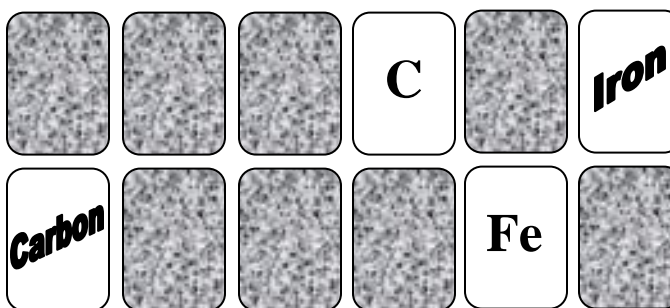
This activity can be used to teach:

- Structure of matter (Next Generation Science Standards: Grade 5, Physical Science 1-1, Middle School, Physical Science 1-1)
- Periodic Table (Next Generation Science Standards: High School, Physical Science 1-1)



# Elemental Match

A Matching Game for Chemical Symbols



A fun game that helps students learn the chemical symbols.

#### Assembly

1. Create a set of cards by writing the name of an element on 1 card and its corresponding chemical symbol on another card.
2. Make a play deck with 20 – 26 sets of elements and symbols.

#### Playing the Game (for 2-4 of players)

1. Place all cards face down, so the names and chemical symbols are hidden.
2. Optional: allow students to play the game with access to a periodic table while they are learning the symbols and/or to check for correct sets.
3. The first player selects two of the cards by turning them over.
4. If the player turns over a card of an element name and its matching symbol, the player collects that set of cards (removing them from play). This player gets another turn. If the player does not find a set of cards, all players should try to remember what is on the cards. The cards are turned back over and the next player takes a turn.
5. The game is over when players have matched and collected all sets.
6. The winner is the student that has the most matching sets.

#### The Science Behind the Activity

The elements are the building blocks for everything in the Universe. Scientists during the 19<sup>th</sup> century began organizing these elemental chemicals as they gained better understanding of atomic structures and how the elements combined to create molecules of other substances. Most notably, Russian chemist Dmitri Mendeleev arranged the elements according to increasing atomic mass into the periodic table in 1869. Elements are notated with symbols. The first letter of a chemical symbol is always capitalized, while the following are always lower-case. Some chemical symbols are based on ancient names for the elements (e.g., Pb = lead, ancient name “plumbum”; Fe = Iron, ancient name “ferrum”).

#### Taking it Further

- To make this game more challenging, include sets of polyatomic ions in the deck.
- Include chemical attributes - see RAFT Idea Sheet *Match 3 for Chemistry*.

**Web Resources** (Visit [www.raft.net/raft-idea?isid=135](http://www.raft.net/raft-idea?isid=135) for more resources!)

- Properties of elements and printable periodic tables - [www.webelements.com/](http://www.webelements.com/)
- Videos on elements and atoms from the Khan Academy – <https://www.khanacademy.org/science/chemistry/introduction-to-the-atom>