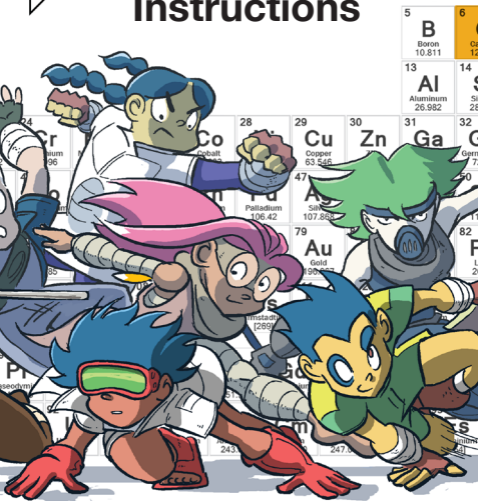


# SCIENCE NINTAS

# VALENCE

## Instructions



# Deck Contents

Valence  
Number



Color

Hydrogen

Element

Atomic  
Number



Science  
Ninja

Dr. Eureka Fermi

## Element Cards

- 12 Oxygen Cards
- 8 Hydrogen Cards
- 4 Carbon Cards
- 4 Sodium Cards
- 4 Fluorine Cards
- 4 Chlorine Cards
- 2 Potassium Cards
- 2 Calcium Cards
- 1 Helium Card

Molecule  
Type

Water



Point  
Value



Colors



Sacrifice a Water to transform an opponent's Deadly Carbonyl into a Carbon Dioxide and an Acid. Take a random Element card from opponent. If opponent has no Element cards, draw an Element card from the deck.

Action

## Molecule Cards

- 9 Salt Cards
- 9 Water Cards
- 5 Metal Oxide Cards
- 5 Acid Cards
- 5 Base Cards
- 5 Carbon Dioxide Cards
- 4 Deadly Carbonyl Cards
- 3 Halocarbon Cards

# Getting Started



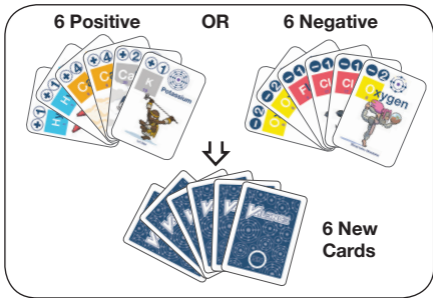
## Molecule Bank

OPTIONAL: start game with one card already in discard pile

1. Arrange the molecule cards in the center of your playing surface to form the **Molecule Bank**.
2. Deal each player **6 Element cards**. Make sure the Deck is well-shuffled!
3. The player with the card with the **highest atomic number** (that's the purple number in the bottom of the color box) **goes first** and the player to their left goes second (clockwise). Calcium is the highest card - whoever has it usually goes first! If there's a tie, the next highest atomic number is used to determine who goes first.

# Drawing Cards

- To start your turn, **draw** either the top card from the Element Deck or the top card (facing up) from the discard pile.
- If you have **zero Element Cards** at the beginning of your turn, draw 3 Element cards instead of 1! (none from the discard pile).
- If you have **6 cards** with **only positive** or **only negative** Valence numbers, you may exchange them for 6 new cards at the beginning of your turn instead of drawing (see diagram)



- If the draw **pile is empty**, reshuffle the discard pile and use that as the new draw pile.

# Making Molecules

- You can only make Molecules during your turn.  
**You can make as many Molecules as you choose.**
- During your turn, make Molecule cards by finding combinations of your Element cards whose **Valence numbers add to zero.** (see diagram)



## How to Make a Molecule:

Add Valence to Zero and Match the Colors



- Take the **Molecule** from the **Molecule Bank** that **matches the the colors of the element cards** (see diagram). You can check that you made the correct Molecule (or learn about the Molecule) by looking at the back of the Molecule card.
- Place the Molecule in front of you face up on your playing surface so all opponents can see.
- Place the Element cards that formed the molecule in the discard pile in any order.

# Molecule Cards

13. Most Molecules have special properties listed at the bottom of each card.



## Attack Cards

- Sacrifice **Acid** (return to the Molecule Bank) to transform an opponent's Metal Oxide or Base into Water and Salt. Take a random Element card from opponent. If opponent has no cards, draw a card from the deck.
- Sacrifice **Water** (return to the Molecule Bank) to transform an opponent's Deadly Carbonyl into Acid and Carbon Dioxide. Take a random card Element from opponent. If opponent has no cards, draw a card from the deck.



## Vulnerable Cards

- **Metal Oxide** and **Base** cards are vulnerable to attack from Acid. If attacked, exchange for a Salt and a Water. Opponent takes an Element card at random.
- **Deadly Carbonyl** cards are vulnerable to attack from Water. If attacked, exchange for an Acid and a Carbon Dioxide card. Opponent takes an Element card at random.



## Draw Cards

- Once per turn, you may sacrifice a **Salt** card (return to the Molecule Bank) to draw two element Element cards from the deck.
- When you make a **Halocarbon**, all Water Molecules are returned to the Molecule Bank.
- **Helium is an Element card that functions as a Molecule card.** “Make” Helium by placing it in front of you like a molecule. All players pass all Element cards in hand to the player to their left.

## Finishing your Turn

14. Tell the other players you are done with your turn. If you have 7 or more Element cards in hand, discard until you have **only 6 cards**.

## Out of Molecules

15. If there aren't molecules of a certain type in the Molecule Bank, players cannot form that molecule.

## Winning the Game

16. Each Molecule is worth a different **point value**, noted in the diamond in the corner. The first player to **10 points wins the game!**

# Tips and Strategies

- Try to **get rid of all your cards** - then you can **draw 3** on your next turn! More cards = more molecules!
- You can put Element cards in the **discard pile** in **any order you choose**. If you have **Bases**, don't put anything that could make **Acids** on top!
- You don't have to make molecules every turn. Save cards for a **surprise Acid attack**, or a **late burst of points**. Just make sure you make your molecules before the Helium card arrives...
- If a player has at least **6 points**, watch out - they **might win on their next turn!** Attack them with everything you've got!

Watch our how-to-play video at  
[www.scienceninjas.com](http://www.scienceninjas.com)

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