

ION

A COMPOUND BUILDING GAME

BY JOHN J. COVEYOU



GAME DESIGN

JOHN J. COVEYOU

GAME DEVELOPMENT

JOHN J. COVEYOU + SHELLEY SPENCE

GRAPHIC DESIGN

TOMASZ BOGUSZ

ART & ILLUSTRATION

TOMASZ BOGUSZ + MATT FRANKLIN

AGE	TIME	PLAYERS
8+	20-30	2-7

GAME SUMMARY

ION: A COMPOUND BUILDING GAME

Ion is a simple card drafting game (card drafting is also known as “pick and pass”) where players select from a number of available element and ion cards with the goal of creating neutrally charged compounds and sets of noble gases.

Each player is dealt eight Drafting Cards. They will select one of those cards, which they will either pair (bond) with their own previously selected cards or set it alone.

Then they will pass the remaining cards in their hand to the player on their left. All players will repeat this “pick and pass” process until they have only two cards left in their hand, which marks the end of the round.

Players score points only for neutrally charged compounds and noble gases they’ve collected but may score additional points if their compounds match the Goal Cards for that round. After three rounds, players add their total scores from each round, and the player with the most points wins!

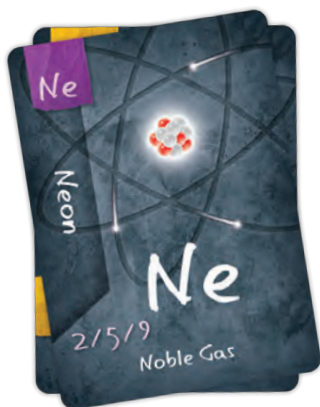


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GAME COMPONENTS

9 COMPOUND GOAL CARDS

- 1 Acid Compound Card
- 2 Base Compound Cards
- 4 Salt Compound Cards
- 1 Noble Gas Goal Card
- 1 Neutralization Reaction Card



94 DRAFTING CARDS

- 50 Charged Ion Cards
- 18 Noble Gas Cards
- 6 Transition Metal Cards
- 6 Polyatomic Ion Cards
- 14 Radioactive Element Cards

21 ACTION TILES

- 7 Select Two Tiles
- 7 Take From Center Tiles
- 7 RXN (Reaction) Tiles



ADVANCED COMPONENTS

The following are advanced components and can be removed and placed back in the box for the Base Game:



From the Drafting Cards, remove the 6 Transition Metal Cards, the 6 Polyatomic Ion Cards and the 14 Radioactive Cards.

Remove the 21 Action Tiles.

BASE GAME SETUP

NO ACTION TILES + NO EXPANSION CARDS

** Ideal for younger gamers and the science classroom.*

The Base Game (without the Action Tiles or Expansion Cards) is recommended for players who are new to Ion. Once you're familiar with Ion, you can add in the Action Tiles and Expansion Cards for a more strategic game experience.

STEP 1

Separate the Drafting Cards from the Compound Goal Cards.



STEP 2

Shuffle the Drafting Cards and deal **eight to each player**. This makes up a player's hand.



STEP 3

If playing with fewer than 5 players, first remove the **two 5+ player Compound Goal Cards**. Then, shuffle the remaining Compound Goal Cards and randomly place two of them face up in the center of the table. If playing with 5 or more players, shuffle all of the Compound Goal Cards and randomly flip three of them face up in the center of the table. These are the active Goal Cards for this round.

GAMEPLAY

One game of Ion is three rounds. After playing three rounds, players should add their scores from each round to get their final scores.

STEP 1

Now that players have a hand of Drafting Cards, each player should select one of them, and place it face down in front of them.

STEP 2

Once all players have a selected card in front of them, all players should simultaneously reveal their selected card.

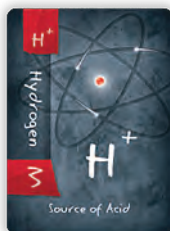
STEP 3

Players now must choose to either:

(1) Bond their selected Drafting Card to another Drafting Card in their player area,



(2) Lay their card unbonded in their player area.



NOTE: Once a card has been placed in their player area, bonded or unbonded, it may not be moved.

STEP 4

All players will then pass the remaining Drafting Cards in their hand, to the player on their left.

You will now repeat this process (**Steps 1 through 4**) until each player holds only two Drafting Cards in their hand. These two remaining Drafting Cards should be discarded, and this marks the end of the round. Players should then count and record their points for that round. (See End of Round Scoring.)

If this is the end of the first or second round, collect all the cards, reshuffle them and then repeat **Game Setup** and **Gameplay** in order to set up and play the next round. If this is the end of the third round, move on to **End of Game Scoring**.

HOW DO I BOND DRAFTING CARDS TO CREATE NEUTRALLY CHARGED COMPOUNDS?

The goal of Ion is to create neutrally charged compounds. Some Drafting Cards have positive charges while others have negative charges. When a card with a positive charge, like Sodium (Na^+) is bonded (or paired together in Step 3 of Gameplay) with a negatively charged card, like Chloride (Cl^-) it forms a neutrally charged compound, because the positive and negative charges balance out!

To show that cards are bonded simply place the negatively charged cards on

top of the positively charged cards, and just off to the right, like in the examples on the right.

For example, you may bond a Chloride (which has a charge of -1) with a Hydrogen (which has a charge of +1). The positive and negative charges are equal, thus the compound is neutrally charged and will score points at the end of the round.



Two Drafting Cards in the Base Game, Magnesium (Mg) and Calcium (Ca), have a charge of +2. To create a neutrally charged compound with either of these cards, you must bond them with two of the **same** negatively charged Drafting Cards. For example, one way to create a neutral compound with Mg is Mg-Cl-Cl or another could be Mg-F-F.

However, you could not create a neutral compound with Mg and 1 Cl and 1 F because they are different cards.

Noble Gas Cards are already neutrally charged and thus score points without bonding!

END OF ROUND SCORING

Only Drafting Cards which are part of neutrally charged compounds, and Noble Gas Cards (since noble gases are already neutral and do not bond) score points. All other Drafting Cards (e.g. cards with a charge) in front of players that are not part of neutrally charged compounds score 0 points.

SCORING NEUTRAL COMPOUNDS

A neutral compound consists of bonded cards which have an equal number of positive and negative charges. To count the points for a Neutral Compound, simply add the point values (as listed in the bottom left of each card) within that neutral compound. For Example:

$(+1) + (-1)$
 $= 0 \text{ Charge}$

$3 + 4$
 $= 7 \text{ Points}$

6

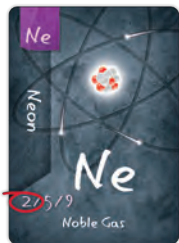
$(+2) + (-1)$
 $+ (-1)$
 $= 0 \text{ Charge}$

$5 + 3 + 3$
 $= 11 \text{ Points}$

SCORING NOBLE GASSES

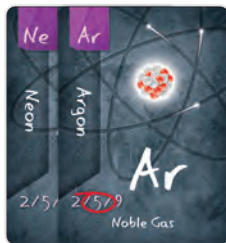
Noble Gases have no charge (which means they are neutral and do not bond), therefore they score points automatically. Noble Gas Cards can be scored individually or in groups with other Noble Gas Cards. Any single Noble Gas Card scores 2 points, two different Noble Gas Cards score 5 points and three different Noble Gas Cards score 9 points. For example:

*A single
Noble Gas Card*



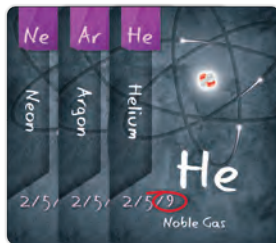
(2 pts)

*Two different
Noble Gas Cards*



(5 pts)

*Three different
Noble Gas Cards*



(9 pts)

SCORING COMPOUND GOAL CARDS

A player scores bonus points for any neutrally charged compound(s) they've build that are listed on any of the active Compound Goal Cards that round.



2/5 : If the Compound Goal Card has 2/5 listed in the upper left corner, players earn 2 points for building one compound listed on that Goal Card and 5 points for building both compounds listed.

3/7 - If the Compound Goal Card has 3/7 listed in the upper left corner, players earn 3 points for building one compound listed on that Goal Card and 7 points for building both compounds listed.



END OF GAME SCORING

After playing three rounds, players should add their scores from each round to get their final scores. The player with the most total points wins!

ADVANCED GAME SETUP

ADDING IN THE ACTION TILES

* *Ideal for gamers or players already familiar with Ion.*

The Advanced Game (with the Action Tiles and / or Expansion Cards) is recommended for gamers and players who are already familiar with Ion. These components add more strategic options to the game.

After Step 3 of Base Game Setup, players should follow these additional steps to incorporate the Action Tiles:

STEP 1

Flip the Action Tiles so that the side with the small letter in the lower-left corner is facing up. Then group the tiles in sets of three so the tiles in each set have the same letter.



Now, flip each set over (point side down) and randomly give one set to each player. Place any unused Action Tiles back into the box. You won't use these tiles.

NOTE: Players should not look at the point side of their Action Tiles until it is used and revealed during gameplay.

STEP 2

Flip four Drafting Cards face up in the center of the table.

If any of the cards are the same, replace them with a new Drafting Card until all four cards are unique.

(These cards should be replaced with four new cards at the beginning of each subsequent round)



ACTION TILES

At any point during the game, a player may choose to use any of their Action Tiles by flipping that tile point side up.



SELECT TWO

The “Select Two” Action Tile allows a player to select and play two Drafting Cards from their current hand, instead of one. After the two cards are selected, a new Drafting Card must be drawn from the top of the Drafting Deck and added to that hand BEFORE this hand is passed to the next player.

TAKE FROM CENTER

The “Take from Center” Action Tile allows a player to immediately select one Drafting Card from the face up Drafting Cards in the center of the table, and play it in front of them. This action is in addition to the Drafting Card they selected from their hand.

Drafting Cards from the center of the table are only replenished at the end of each round.

RXN

The “RXN” Action Tile allows a player to immediately rearrange any or all of the Drafting Cards in their player area. In addition, once the round is over and before players score End of Round Points, they may choose to take any one **non-scoring Drafting Card** from another player’s area and play it in their own player area.

Non-scoring cards **exclude** any cards that are part of a neutrally charged compound and Noble Gas Cards. However, any +2 charged card bonded to only one -1 charged card are both non-scoring and thus may be taken.

If multiple players flip RXN Action Tiles in the same round, then these tiles are resolved in the order they were flipped.

Action Tiles are not automatically refreshed between rounds and may be used only once per game, unless it is refreshed by playing a Polyatomic Ion Card. (See Polyatomic Ion Cards for more details.)

SCORING ACTION TILES

Action Tiles are only scored once at the end of the game during End of Game Scoring. At that point, each player must subtract all points from their used Action Tiles from their final score, according to the negative number on each Action Tile (a number from -1 to -4). The total point value of each set of “Select Two”, “Take From Center”, and “RXN” Action Tiles is always -9.

THREE SETS OF EXPANSION CARDS

Ion contains three sets of Expansion cards - the Transition Metal Cards, the Polyatomic Ion Cards and the Radioactive Cards. Each Expansion set may be used individually with the Base Game or used in combination with any or all other Expansion sets.

TRANSITION METAL CARDS

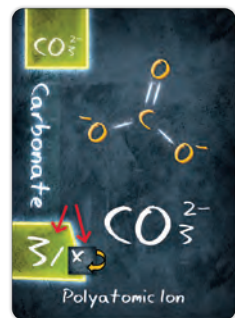
To play with the Transition Metal Cards, simply shuffle the six Transition Metal Cards into the Drafting Deck in Step 2 of Base Game Setup BEFORE dealing cards to each player.

Transition Metal Cards are played and bonded the same way as all the other cards with a charge, except that each Transition Metal Card has two different charges listed. Simply rotate the card 180 degree to see the other charge. When playing this card, a player should rotate the card so the charge of their choosing is in the upper left corner.



Once a player has passed their hand, they may not change the orientation of their Transition Metal Card.

NOTE: If a player uses their RXN Action Tile, they may rotate any of their Transition Metal Cards.



POLYATOMIC ION CARDS

To play with the Polyatomic Ion Cards, simply shuffle the six Polyatomic Ion Cards into the Drafting Deck in Step 2 of Base Game Setup BEFORE dealing cards to each player.

Polyatomic Ion Cards are played and bonded the same way as all other cards with a charge, however, when scoring Polyatomic Ion Cards at the end of a round a player may choose from two different options:

1. Receive the number of points shown on the lower left of the card
2. Refresh any one used Action Tile by flipping it back point side down.

RADIOACTIVE ELEMENT CARDS

For 3-7 players

To play with the Radioactive Cards, shuffle the fourteen Radioactive Cards into the Drafting Deck in Step 2 of Base Game Setup BEFORE dealing cards to each player. Then, deal each player **9 Drafting Cards**, rather than the usual 8.

GAMEPLAY

Radioactive Cards do not have a charge and thus do not bond.

When Radioactive Cards are played, they must be placed in a specific orientation depending on how many other players played a Radioactive Card that turn. Their orientation determines how many points a player will score from their Radioactive Cards at the end of a round.

- If 1 Radioactive Card is played on the same turn, place that card face up.
- If 2 Radioactive Cards are played on the same turn, place those cards face up but turned 90 degrees.
- If 3 or more Radioactive Cards are played on the same turn, place those cards face down.



At the end of a round, **do NOT shuffle Radioactive Cards** back into the Drafting Deck. All Radioactive Cards played should remain in each player's player area for the remainder of the game.

SCORING RADIOACTIVE CARDS

Radioactive Cards score a player points in two ways:

(1) End of Round Scoring and 2) End of Game Scoring

END OF ROUND SCORING

Radioactive Cards score End of Round points only for the round in which they were played.

3-4 PLAYERS

Radioactive Cards placed face up: +2 points for that player

Radioactive Cards placed at either 90 degrees or face down:

0 points for those players

5-7 PLAYERS:

Radioactive Cards placed face up: +3 points for that player

Radioactive Cards placed at 90 degrees: +1 point for each of those players

Radioactive Cards played face down: -1 point for each of those players

END OF GAME SCORING

End of Game Scoring for Radioactive Cards is based upon the total “Radioactive Decay” a player has accumulated throughout the game. Each Radioactive Card has a number of Radioactive Decay (from 2 to 5) noted on the card. At the end of the game, each player will add up their total Radioactive Decay, and compare it to all other players.

Players will score a number of points according to the charts below.

3-4 PLAYER GAME

MOST RADIOACTIVE DECAY **+9 PTS**

SECOND MOST RADIOACTIVE DECAY **+3 PTS**

LEAST RADIOACTIVE DECAY **-3 PTS**

5-7 PLAYER GAME

MOST RADIOACTIVE DECAY **+13 PTS**

SECOND MOST RADIOACTIVE DECAY **+9 PTS**

THIRD MOST RADIOACTIVE DECAY **+3 PTS**

LEAST RADIOACTIVE DECAY **-3 PTS**

If two or more players tie for a Radioactive Decay position, they will add the points together for that position and the position below it. Then, they will divide the points equally among those players rounding up (receiving only whole numbers of points).

EXAMPLE OF A TIE

In a 4 player game, one player had 10 total Radioactive Decay, two players tied with 7 Radioactive Decay each, while another player had only 2 Radioactive Decay. The player with 10 total decay clearly had the most, so she receive 9 points. The tying players, each with 7 Radioactive Decay, will add together the points for second position (3 points) and the third position (0 points), and divide those points equally among themselves, rounding up. In this case, they each get 2 points. The player with 2 total decay clearly has the least, and thus loses 3 points.