

# PERIODIC

*A Game of The Elements*

**RULEBOOK**

# PERIODIC

## A Game of The Elements

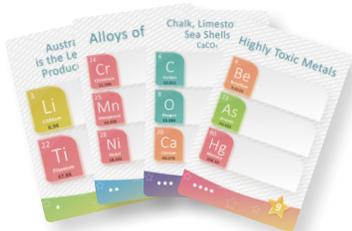
### GAME SUMMARY

In Periodic: A Game of The Elements, players activate periodic trends to maneuver across the Periodic Table discovering elements to score points. The goal is to land on and discover specific elements shown on available Goal Cards. As players move across the board, they're also racing to end their turn within specific families of elements, competing with other players for the limited Academic Achievement points. The player with the most points at the end of the game wins!

### COMPONENTS

#### 27 Goal Cards

- 11 green
- 7 blue
- 4 purple
- 5 pink



#### 8 Element Group Cards

- 1 for each Element Group



#### 15 Agenda Cards



#### 11 Goal Cubes

- 2 green
- 3 blue
- 3 purple
- 3 pink



#### 38 Lab Tokens (points)

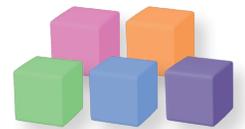
- 12 3-point
- 10 5-point
- 6 15-point



#### Player Pieces

##### 35 Research Cubes

- 7 pink, 7 orange, 7 green, 7 blue, 7 purple



##### 5 Flasks

- 1 pink, 1 orange, 1 green, 1 blue, 1 purple



##### 10 Track Markers

- 2 pink, 2 orange, 2 green, 2 blue, 2 purple



#### 12 Award Tiles

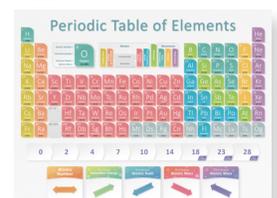
- 3 +3 Spaces
- 3 Free Action
- 3 Move To
- 3 Take 2 Energy



#### 30 Energy Tokens



#### 1 Periodic Table game board



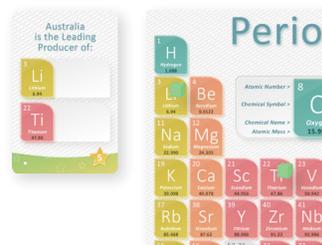
# GAME SETUP

1 Place the **game board** face-up in the center of the play area.

2 Separate the **Goal Cards** by color into green, blue, purple, and pink stacks and shuffle each stack separately.



3 Make one facedown stack of **6 green cards**, one facedown stack of **5 blue cards**, one facedown stack of **5 purple cards**, and one facedown stack of **4 pink cards**. Place the stacks above the game board, ordering the stacks from left to right as follows: green stack, blue stack, purple stack, then pink stack. Flip the top card of each stack faceup, and place it on top of its respective stack.



4 Place the **three “+3 Spaces” Award Tiles** above the green Goal Cards, the **three “Take 2 Energy” Award Tiles** above the blue Goal cards, the **three “Free Action” Award Tiles** above the purple Goal cards, and the **three “Move To” Award Tiles** above the pink Goal cards.



5 Place **1 green Goal Cube** on each of the elements on the game board that match the elements shown on that green Goal Card. Repeat this for the blue, purple and pink cards.

6 Separate the **Lab Tokens** into piles to the left of the Goal Cards.



7 Shuffle the **Element Group Cards** and place four of them faceup in a semicircle along the left side of the board, and the remaining four faceup in a semicircle along the right side of the board.



8 Place **1 Energy Token** on each of the **Periodic Trend spots** located at the bottom of the board.

9 Have each player choose a color and give them **1 Flask**, **2 Track Markers**, and **7 Research Cubes** of that color.

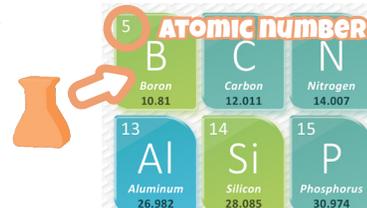


10 The last person to handle Calcium Carbonate (Chalk, Seashells, Limestone, etc.) is **first player**. Give the **first player 3 Energy Tokens**. In clockwise order, give the **second player 4 Energy Tokens**, and the **third player 5 Energy Tokens**. The fourth and fifth players will receive fewer Energy Tokens, but will be advanced on the Academic Achievement Track. The **fourth player receives 3 Energy Tokens**, and the **fifth player receives 4 Energy Tokens**.

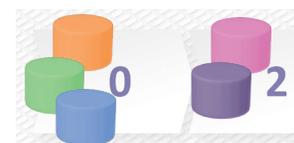
**11** The first player places one of their **Track Markers** on the lowest Element Group Card on the left side of the board. The player to their left then places their Track Marker on the **third Element Group Card** (the third Element Group Card going clockwise), the 3rd player on the **5th Element Group Card** and the 4th player on the **7th card**. The 5th player should skip the 1st Element Group Card and place their Track Marker on the **2nd card**.



**12** Each player should locate **their Element Group** on the game board (according to the Element Group Card on which they placed their Track Marker in Step 11) and then find the element within that Group that has the **lowest Atomic Number**. This represents a player's **starting element**. Each player should then place their Flask on their starting element. Each player will have a different starting element. (For example, if a player placed their Track Marker on the Metalloids Element Group Card in Step 11, they would place their Flask on Boron).



**13** Each player should place their remaining **Track Marker on the Academic Achievement Track** (horizontal track directly below the periodic table) on the game board. The first, second, and third players should each place their Track Marker on the "0" spot. The fourth and fifth players should place their Track Marker on the "2" spot.



**14** Deal each player **3 Agenda Cards** facedown. Each player should secretly **choose 1** and place the remaining two back in the box.

## SETUP FOR A 3 PLAYER GAME



The main game board features a central **Periodic Table of Elements** with the following tracks below it:

- Academic Achievement Track:** A horizontal track with spots for 2, 4, 7, 10, 14, 18, 23, and 28.
- Element Group Cards:** Cards for Alkali Metals, Halogens, Alkaline Earth Metals, Metalloids, Transition Metals, Noble Gases, Nonmetals, and Post-Transition Metals.
- Agenda Cards:** Cards for +3 Spaces, Take 2 Energy, Free Action, and Move to.
- Track Markers:** Colored markers placed on the Academic Achievement Track.
- Flasks:** Placed on the periodic table to represent starting elements.

# GAMEPLAY

In *Periodic*, players compete to discover elements and advance along the Academic Achievement Track, by strategically activating periodic trends to move their Flask across the periodic table. Each turn, players choose between either **spending** energy to make multiple movements (in the hopes of discovering multiple elements) or **gaining** energy but taking only a single movement.

*Periodic* is played in turns, starting with the first player and continuing clockwise around the table.

**A turn consists of two main parts:**

## Activating Periodic Trend(s)

- Spend / Gain Energy Token(s)
- Move Your Flask
- Discover Elements

## Refresh After Your Turn

- Refresh Completed Goal Cards
- Assign Lab Tokens (Points) and Award Tile
- Advance Markers up Tracks

## 1. ACTIVATING PERIODIC TRENDS

Players discover elements by moving their Flask across the Periodic Table and ending a movement on the elements they wish to discover. The primary way players move their Flask across the Periodic Table is by activating one or more periodic trends. There are five periodic trend spots on the bottom of the game board representing trends of the elements on the periodic table (See **Move Your Flask** for more details). When a player activates a periodic trend, they must move their Flask 1 - 5 spaces across the game board from their starting position in the direction(s) allowed by the periodic trend they've activated.

There are two different ways a player can **Activate a Trend**: **Spend Energy Tokens** to activate multiple trends or **Gain Energy Tokens** but activate only one trend.

### a. Spend/Gain Energy Token(s)

**Spend** - If a player chooses to "Spend", they pay Energy Tokens to activate multiple periodic trends. To activate the first periodic trend, a player places 1 Energy Token on the periodic trend they wish to activate. That player then moves their Flask across the game board up to 5 spaces in the direction indicated by the periodic trend they activated.

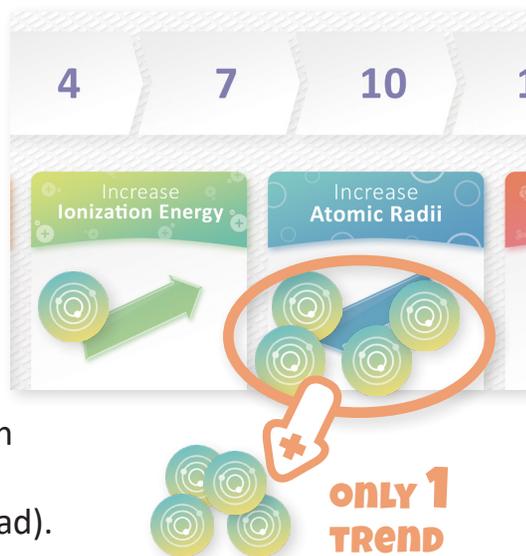
For each additional trend a player wishes to activate, they pay 2 Energy Tokens onto their desired periodic trend. Players may activate any number of periodic trends, and/or activate the same trend multiple times, so long as they have the Energy Tokens to pay for it.



**Gain** - If a player chooses to “Gain”, they collect all the Energy Tokens accumulated on a single Period Trend.

Then, that player moves their Flask across the game board up to 5 spaces according to the direction of the periodic trend from which they collected the Energy Tokens. **This is the only periodic trend a player may activate on this turn.**

If there are 0 Energy Tokens on the periodic trend a player wishes to activate, they may take 1 Energy Token from the player with the most Energy Tokens. (In a 2 player game, take the Energy Token from the box instead).



### b. Move Your Flask

After activating a periodic trend, that player must move their Flask across the game board from 1 to 5 spaces according to the direction of the periodic trend they activated. Any number of players may occupy a single element.

## The Five Periodic Trends - Movement Directions

**Atomic Number** – allows a player to move their Flask EITHER left OR right according to the Atomic Number. This is the only trend that allows a player to jump from the far right edge of the Periodic Table to the far left edge (or vice versa) as long as they move according to the Atomic Number.

A close-up of the periodic table showing elements Phosphorus (P, Atomic Number 15) and Sulfur (S, Atomic Number 16). The atomic number 15 is circled in orange.

**For example**, if a player starts on Na (Sodium, Atomic No. 11) they may move to Ne (Neon, Atomic No. 10) by moving 1 space to the left. Using this trend would allow a player to move from Na to any of the following elements: C, N, O, F, Ne, Mg, Al, Si, P, or S.

A periodic table of elements with a blue arrow pointing from Sodium (Na) on the far right to Neon (Ne) on the far left, illustrating the Atomic Number trend.

**Increase Ionization Energy** – allows a player to move their Flask up and/or right. This means a player may move up only, or to the right only, or any combination of up and right.

**For example**, if a player starts on Na (Sodium, Atomic No. 11), they may move to N (Nitrogen, Atomic No. 7), by moving 4 spaces to the right (Mg to Al are adjacent for the purpose of movement) and 1 space up. Using this trend would allow a player to move from Na to any of the following elements: H, He, Li, Be, B, C, N, Mg, Al, Si, P, or S.

A periodic table of elements with a blue arrow pointing from Sodium (Na) to Nitrogen (N), illustrating the Increase Ionization Energy trend.

**Increase Atomic Radii** – allows a player to move their Flask down and/or left. This means a player may move down only, or to the left only, or any combination of down and left.

**For example,** if a player starts on S (Sulfur Atomic No. 16), they may move to Pb (Lead, Atomic No. 82) by moving 3 spaces down, and then 2 spaces to the left. Using this trend would allow a player to move from S to any of the following elements: Na, Mg, Al, Si, P, Ca, Zn, Ga, Ge, As, Se, In, Sn, Sb, Te, Pb, Bi, Po, Mc, or Lv.



**Increase Atomic Mass** – allows a player to move their Flask down and/or right. This means a player may move down only, or to the right only, or any combination of down and right.

**For example,** if a player starts on Be (Beryllium, Atomic No. 4), they may move to Ge (Germanium, Atomic No. 32) by moving 1 space to the right, 2 spaces down, then 1 space to the right. Using this trend would allow a player to move from Be to any of the following elements: B, C, N, O, F, Mg, Al, Si, P, S, Ca, Sc, Ti, V, Ga, Ge, As, Sr, Y, Zr, In, Sn, Ba, Hf, Tl, or Ra.



**Decrease Atomic Mass** – allows a player to move their Flask up and/or left. This means a player may move up only, or to the left only, or any combination of up and left.

**For example,** if a player starts on Al (Aluminum, Atomic No. 13) to Hydrogen (H, Atomic No. 1) by moving 2 spaces to the left, then 2 spaces up. Using this trend would allow a player to move from Al to any of the following elements: H, Li, Be, B, Na, or Mg.



*Movement from Ba (Barium, Atomic No. 56) to Hf (Hafnium, Atomic No. 72) or from Ra (Radium, Atomic No. 88) to Rf (Rutherfordium, Atomic No. 104) is one space.*



*To move diagonally, a player must move two spaces (for example, up and then right). A player may not move diagonally in one move.*

### c. Discover Elements

Players score points by **discovering elements** shown on the faceup Goal Cards. Elements that are available for discovery are indicated on the Goal Cards and by Goal Cubes on the game board. A player may discover an element by ending their movement on an element containing a Goal Cube. **Because discovering happens only at the end of a movement, a player may discover only 1 element per periodic trend they activate.** (A player may not discover an element by beginning their turn on that element.)



When a player discovers an element, they place one of their Research Cubes on the corresponding Goal Card showing that element (to the right of that element on that Goal Card). Multiple players may discover the same element on the same Goal Card, but a player may not discover an element on the same Goal Card twice.



If there are multiple Goal Cubes on an element on the game board, a player must choose only one of the corresponding Goal Cards to place their Research Cube on during that movement. They may come back and discover the other on a future movement.

## 2. REFRESH AFTER YOUR TURN

After a player completes their final movement, they should refresh any completed Goal Cards for the next player's turn. If their Flask ends within the group of elements that corresponds to their next Element Group Card they should also advance to the next Element Group Card, as well as advance up the Academic Achievement Track.

### Refresh Completed Goals Cards

Players score points by discovering elements shown on the Goal Cards. If a player has Research Cubes on every element of a single Goal Card, then that Goal Card is complete. Give Lab Tokens (points) to each player who had Research Cubes on that Goal Card, then give all cubes on that card back to the appropriate player.



### Assign Lab Tokens (Points) and Award Tile

Give Lab Tokens to all players with Research Cubes on completed Goal Cards:

- Any other player(s) with 1 total cube on that Goal Card take a 3 Lab Token
- Any other player(s) with 2 total cubes on that Goal Card take a 5 Lab Token
- The player who completed the card will **not** take any Lab Tokens, rather they take the Goal Card, as well as the top Award Tile from the stack above the Goal Card they completed.



Refresh the stack of Goal Cards by flipping the next card in that stack face-up, and placing it on top of that stack. Move the Goal Cubes associated with that Goal Card onto the elements on the game board that match the elements shown on that Goal Card.

Now the active player's turn is over and the player to their left may take their turn.

### Advancing On the Element Groups Track

The Periodic Table is divided into eight groups of elements - Alkali Metals, Alkaline Earth Metals, Transition Metals, Post Transition Metals, Metalloids, Other Non-Metals, Halogens and Noble Gases.



Each of these groups is represented on the Element Groups Track by a single Element Group Card arranged clockwise in a semi-circle along the sides of the game board.

Players advance on the Element Groups Track by ending their turn with their Flask on any of the elements within the element group that corresponds to the next card (clockwise) in the Element Group Track.

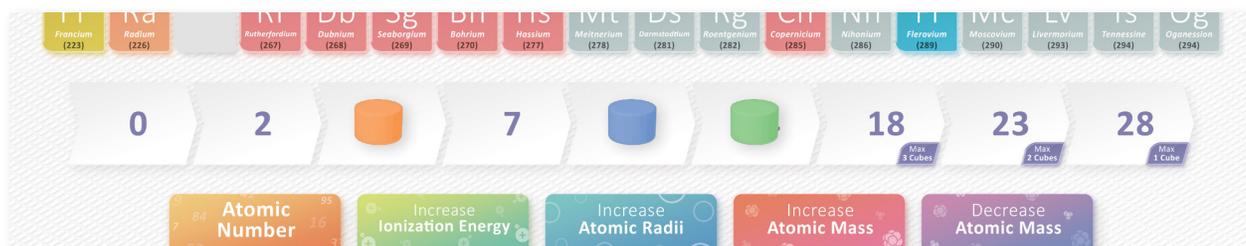
For example, if a player ends their last Flask movement on Arsenic (which is part of the group Metalloid), and the next card (going clockwise) on the Element Group Track is Metalloid, that player advances their Track Marker to the Metalloids Element Group Card.

13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.06	17 Cl Chlorine 35.45	18 Ar Argon 39.948
31 Ga Gallium 69.723	32 Ge Germanium 72.630	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 83.798
49 In Indium 114.818	50 Sn Tin 118.710	51 Sb Antimony 121.757	52 Te Tellurium 127.60	53 I Iodine 126.905	54 Xe Xenon 131.29
81 Tl Thallium 204.38	82 Pb Lead 207.2	83 Bi Bismuth 208.98	84 Po Polonium (209)	85 At Astatine (210)	86 Rn Radon (222)



## Advancing On the Academic Achievement Track

The Academic Achievement Track is the horizontal track near the bottom of the game board. Each player's Track Marker on the Academic Achievement Track represents their current position on the Element Group Track as well as tracking the number of points awarded for advancing along the Element Groups Track.



Each time a player advances their Track Marker to the next Element Group Card, they also move their other Track Marker one space to the right along the Academic Achievement Track.

The last three spaces of the Academic Achievement Track indicate the maximum number of Markers that may occupy that space. The right-most spot may only contain one marker. The spot to the left of that may only contain 2 markers at any time and the spot to the left of that may only contain 3 markers at any time.

## AWARD TILES

Award Tiles are benefits given to players for completing Goal Cards. A player may use any number of their Award Tiles during their turn to take a one-time bonus ability specified on that Tile.

Once an Award Tile has been used, place it back in the box.



*+3  
Spaces*

**+3 Spaces** – Use this tile after activating a periodic trend to move an additional 1, 2, or 3 spaces to that movement (following the same direction rules of that movement).

*Free  
Action*

**Free Action** – Use this tile at any time during your turn, to activate the periodic trend as indicated on the Award Tile for free.

*Move to*

**Move To** – Use this tile to move your Flask to any element on the board that's within the Element Group shown on the Award Tile.

*Take 2  
Energy*

**Take 2 Energy** – Use this tile at the beginning of your turn to take 2 Energy Tokens total from one or two periodic trends. This Award Tile does NOT allow you activate the periodic trend from which the Energy was taken. After spending this tile, take a turn as usual, either Gaining or Spending.

## GOAL CARDS



The Goal Cards above the game board show the elements that are available to be discovered. A Goal Cube is placed on the game board for each element shown on the Goal Cards, making the elements available to be discovered more visible to all players.

Points are awarded to players for elements they've discovered on a Goal Card once that Goal Card has been completed (See **Refresh Completed Goals Cards**).

Multiple players may discover the same elements on a single Goal Card, but once a single player has discovered all the elements on a Goal Card, that card is complete. All players with Research Cubes on that completed Goal Card will then take their cubes back and score points based on how many cubes they had on that Goal Card.

## AGENDA CARDS



Each Agenda Card lists a unique combination of 1-2 possible objectives and the end game points a player is awarded if they achieve any of those objectives. (A player does not need to complete both objectives, but may score points for either or both of the objectives listed on their Agenda Card). A Goal Card a player completes counts toward only 1 objective on their Agenda Card. Points from Agenda Cards are awarded during Final Scoring. Points from Agenda Cards are awarded during Final Scoring.

### Objectives

**+1 point for each additional level on the Academic Achievement Track Marker along the Academic Achievement Track.**

Count the number of spaces you advanced your Track Marker to the right along the Academic Achievement Track and gain 1 point for each space.

**+1 point for every Goal Card you complete**

Count the number of Goal Cards you completed and gain 1 point for each.

**+2 points for each oo, ooo, or oooo Goal Card you complete**

Count the number of the specified Goal Cards you completed, and gain 2 points for each.

**+5 points for each pair of oo + ooo, oo + oooo, or ooo + oooo Goal Cards you complete**

Count the number of pairs of the specified Goal Cards you completed, and gain 5 points for each pair.

**+11 points for completing one Goal Card of each difficulty**

Count the number of sets of 1 green, 1 blue, 1 purple, and 1 pink Goal Card you completed, and gain 11 points for each set.

## Score a number of points equal to 3X the lowest of these:

- Total Goal Cards completed, or
- Each additional level on the Academic Achievement Track

Count the number of Goal Cards you completed. Then, count the number of spaces you advanced your Track Marker to the right along the Academic Achievement Track. Take the lower number of the two, multiply it by 3, and gain that number of points.

## ENDING THE GAME

The final round of the game is triggered when one of the following conditions is met:

- **One** stack of Goal Cards is depleted.
- **Two** players advance to the two rightmost (23 and 28) positions on the Academic Achievement Track.



When one of these conditions is satisfied, each player (excluding the player who triggered end game) takes one final turn. Then, move to **Final Scoring**.

## FINAL SCORING

To determine their final score, each player should add up any points earned throughout the game.

### 1) Points from Goal Cards and Lab Tokens



### 2) Points from Academic Achievement Track



### 3) Points from Research Cubes remaining on incomplete Goal Cards.

Each player with a Research Cube(s) remaining on an incomplete Goal Card(s) is awarded points as if the Goal Card was completed.



### 4) Points from Agenda Cards.

**The player with the most points wins!**

If there is a tie, then the tied player with highest position on the Academic Achievement Track wins the tie. If players are still tied, then the tied player with the most Energy Tokens wins the tie.

