



## Memory Game Rules

### STARTING THE GAME

Select the elements that you want to practice. Shuffle them, then lay them out face down in a grid.

### PLAYING THE GAME

When it's your turn, flip a card over. Then flip another card over.

If the two cards do not match then flip them back over so they are face down. Your turn is over.

If the two cards match leave them face up and score a point. You may play again.

If you make a mistake when claiming a matched pair, you suffer a one point penalty and your turn is over.

### ENDING THE GAME

The game is over when all cards are turned over.

### SCORING

You score one point for every pair that you match. You lose one point for every pair that you claim by mistake.

## Element Symbols Answer Key

Look up the atomic number of the essential elements on the table below.

Aluminum.....13	Mercury.....80
Argon.....18	Neon.....10
Beryllium.....4	Nickel.....28
Boron.....5	Nitrogen.....7
Bromine.....35	Oxygen.....8
Calcium.....20	Phosphorus.....15
Carbon.....6	Potassium.....19
Chlorine.....17	Silicon.....14
Copper.....29	Silver.....47
Fluorine.....9	Sodium.....11
Gold.....79	Sulfur.....16
Helium.....2	Tin.....50
Hydrogen.....1	Zinc.....30
Iron.....26	
Lead.....82	
Lithium.....3	
Magnesium.....12	



Illustration ©2009 Alexander Braun, Creative Commons license.

# Element Symbols Matching Game



©2014 Robert Prior



*“Chemistry begins in the stars. The stars are the source of the chemical elements, which are the building blocks of matter and the core of our subject.”*

Peter Atkins

### STARTING THE GAME

Deal eight cards to every player. Place the deck face down in the middle of the table.

Each player places any matching pairs in them, but does not draw replacement cards. Players can challenge each other if they think the pairs are incorrect.

### PLAYING THE GAME

On your turn, you ask a specific player for a specific card.

- ▶ The requested card must pair with a card already in your hand.
- ▶ Questions should be in one of the following forms: “Bill, do you know the symbol for <element>?” or “Sally, do you know what element <symbol> is?”

If they do not have the card, your turn is over.

If you get the card you asked for, place the matching pair in front of you and ask for another card. You may ask any player.

If you get a card that doesn't match, you may examine the other player's hand and take any card you like.

- ▶ If this makes a matching pair, place the matching pair in front of you and ask for another card. You may ask any player.
- ▶ If it doesn't make a matching pair, your turn is over.

When your turn is over, draw a card from the deck.

### CHALLENGING

If another player plays a pair that you think doesn't match, you can challenge them. If you are right (and the cards didn't match) you may either

- ▶ take both cards and add them to your hand, or
- ▶ give them back the cards, and give them any two cards from your hand.

### ENDING THE GAME

The game is over as soon as any player runs out of cards.

### SCORING

Once the game is over, add up your score as follows:

- ▶ 1 point for every pair
- ▶ 10 points for playing all your cards
- ▶ 10 points for having a complete organ system

### VARIANTS

Remove some of the elements from the deck.

A player who runs out of cards ends their turn and draws one card from the deck. The game ends when all the cards are played.

A player asks everyone for a card, rather than a specific player. (Eg. “Does anyone have the symbol for lithium?”)

A player can ask for a type of card rather than a specific card. (Eg. “Bill, do you have a noble gas symbol?”)



**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

2

He

4.00

1

H

1.01

Helium

Hydrogen

4

Be

9.01

3

Li

6.94

Beryllium

Lithium

6

C

12.01

5

B

10.81

Carbon

Boron

8

O

16.00

7

N

14.01

Oxygen

Nitrogen

10

Ne

20.18

9

F

19.00

Neon

Fluorine

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Hydrogen**

**Helium**

**Lithium**

**Beryllium**

**Boron**

**Carbon**

**Nitrogen**

**Oxygen**

**Fluorine**

**Neon**

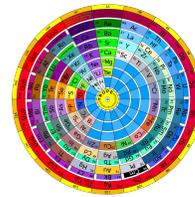
**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

12

**Mg**

24.31

11

**Na**

22.99

Magnesium

Sodium

14

**Si**

28.09

13

**Al**

26.98

Silicon

Aluminum

16

**S**

32.07

15

**P**

30.97

Sulfur

Phosphorus

18

**Ar**

39.95

17

**Cl**

35.45

Argon

Chlorine

20

**Ca**

40.08

19

**K**

39.10

Calcium

Potassium

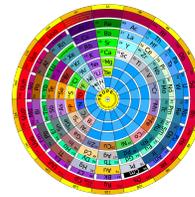
**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Sodium**

**Magnesium**

**Aluminum**

**Silicon**

**Phosphorus**

**Sulfur**

**Chlorine**

**Argon**

**Potassium**

**Calcium**

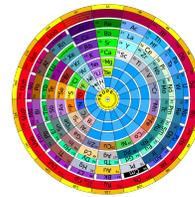
**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

26

Fe

29

Cu

Iron

Copper

55.85

63.55

28

Ni

47

Ag

Nickel

Silver

58.69

107.87

50

Sn

79

Au

Tin

Gold

118.71

196.97

82

Pb

30

Zn

Lead

Zinc

207.2

65.41

35

Br

80

Hg

Bromine

Mercury

79.0

200.59

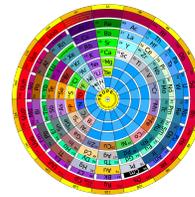
**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

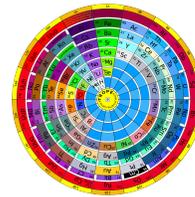
**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Element  
Symbols**



**Matching  
Game**

Illustration ©2009 Alexander Braun. Creative Commons license..

**Copper**

**Iron**

**Silver**

**Nickel**

**Gold**

**Tin**

**Zinc**

**Lead**

**Mercury**

**Bromine**