



Components: 52 personality cards; 1 wild card for games with 4 & 5 players; 1 reference card and 1 *Library of Alexandria* card.

Welcome to **Eureka!**, a cooperative card game were you work together to develop the human science and culture with the help of 52 historical personalities from every ages.

Objetive of the game:

Players try to get rid of all the cards from their hands into the corresponding suits in ascending order.

Game setup:

Build and shuffle the card deck. Deal cards to each player according to this table.

No. of players	Cards per player	Deck
2	6	cards from 1 to 6
3	6	" from 1 to 8
4	5	" from 1 to 11
5	5	" from 1 to 13

After this, build the **Market**: draw as many cards as players a put them facing up near the deck. Every time a player has to take a card or make and exchange, they will do it with the Market cards, never directly with the deck.

During the game players can't share any information about their cards, nor comment which move could be good for them or whether or not a move was perjudicial for them.



Setup draft:

Choose a starting player. Remember you can't share information, the only things you can say are: «I can go first» —when having low cards, a good starting hand—, or «I can't go first» —ehen having a bad starting hand.

Before starting the game, the last player passes one of their cards to the preceding one (the one to the right), which take a look at it and then pass one of their cards to the player at their right. The process goes on until the starting player gives a card to the last player. The purpouse of this draft is to balance the card hands and share some starting information, remember this is a cooperative game.



Playing the game:

During their turn, each player has to play a card if possible, either opening a new suit (no necessarily with number 1) or continuing an existing one, always in ascending order.

When continuing a color suit you activate the powers of the cards. If the card played is consecutive in number to the prior one, you are making a small cultural advance and will suffer a penalization «) (see the bonifications and penalizations section). The card is played upside down so the penalization icon is in the top of the row.

If the card played is NOT consecutive, you have made a great discovy and get a bonification «O».



3 follows 2, so the card is played upside down and the penalization is applied (bottom icon). 5 is NOT consecutive to 3, so it's played normal and the bonification is applied.

Applying a bonification is always optional.

If a player uses their **last card**, it **doesn't generate a penalization**, but it can generate a bonification.

If a player **can't play** any card, they **must pass**. However, they can play in later turns if other color suits are unlocked or they recive new cards.

When a player is out of cards they have finished playing (but they can enter the game again if they recives new cards due to a penalization).

If all the active players pass consecutively, the game ends inmediately.

Bonifications and penalizations:

Artistic knowledge (red)



Bonification. Epiphany: the next move doesn't generate a penalization, if it was going to.



Penalization. Plagiarism: the next move doesn't generate a bonification, if it was going to.

Social knowledge (blue)



Bonification. Social revolution: you can recover the last card played in any other suit. With this, you can correct previous moves or recover cards to ac-

tivate bonifications playing them again.



Penalization. Cultural clash: take a card from the market and give it to another player, then refill the market with 1 card from the deck.

Formal knowledge (yellow)



Bonification. Shared knowledge: put 1 card from your hand facing up in front of you. From now on this card can be used by any player as if it was in their-

hand (for the purpose of avoiding the penalty for playing the last card, this card is still considered part of your hand).



Penalization. Mad experiments: the next player has to use a random card from their hand. If the card selected can't be played, it is shown to everyone, placed

again in their hand and a card is played in the usual way.

Natural knowledge (green)



Bonification. Evolution: this is the only bonification that can be handed over to another player. The beneficiary can choose to make one of the following

three exchanges:

- Player-Market: the player takes a card from the Market and exchanges it with one from their hand.
- Player-Player: the beneficiary gives one of their cards to another player, they look at the card and give back one of their cards (it can be the same card he received).
- New Market: discard all the Market, put them under the deck and refill with new cards.



Penalization. Mutation: the next move must be on the green suit. Players must pass until one of the can play there. This can lead to an end game condition if all

the players pass consecutively.

The last card of the green suit (6, 8, 11 or 13 depending of the number of players) doesn't generate a penalization even if played consecutively, as there is not a "next" card to be palyed. This exeption is only applied on the green suit.

Wild card:



In 4 and 5-player games you'll have acces to the **wild card:** represented by the statue of Pallas Athena. You can use it only once during the game it allows one player to apply any one of the 4 bonifications after of before his turn. Then the wild card is turned face down to remember it can't be used again this game.

End of the game:

The game ends when all the active players pass consecutively. Each player gets one point for each card remaining in his hand. Add up all the points to get the total score.

Example.: Ada, Albert and Pati finish the game with 0, 1 and 0 cards respectively, for a total of 1 point.

Check the chart to see your result.

2	3	4-5	Result
0	0	0	Ask for a Nobel Prize
1	1	1-2	Very good, respect
2	2-3	3-4	Room for improvement
3-4	4-6	5-8	Going back to the caves
5+	7+	9+	Time to sell the game

The Library of Alexandria (optional):



If you find playing without sharing information too challenging, you can use this optional rule. The Library starts the game closed (facing down). Once the 3rd penalization has been activated, the Library opens (flip card) and any player can use it to give one of these possible bits of information:

- I have [no.] cards I can't play.
- I only have high cards from suits [colors].
- Don't play [color].

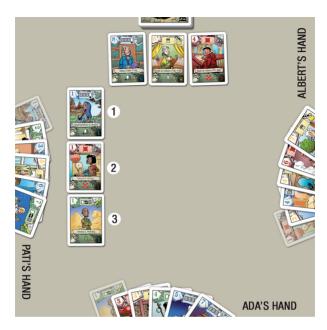
After giving the information the Library closes. It will open again after penalization number 6, 9...



Sample game

The following pages depict the first rounds of a 3 player game.

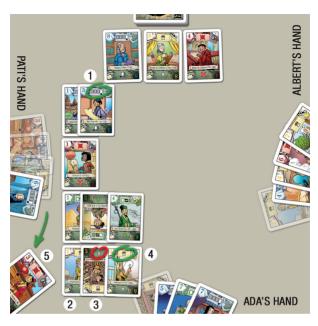
Setup: Our players deal the cards and, after looking at their hands, Albert and Pati say they can start. Ada prefers not to do it. They decide Pati will be the first player and make the starting draft. Pati gives one of her 1 cards to Ada so she will have a low card for the first round.



Round 1: Pati opens with blue 1, Albert plays red 1 and Ada the green 1 that Pati gave her. The first round is not hard and is all about trying to open as many color suits as possible with the lowest cards, so you make the game easier for the next rounds for everyone.



Round 2: Pati risksplaying green 2 (1). Since it's consecutive to green 1, it's played upside down and the penalization is activated: players must pass until one of them can play a green card. Albert has no green cards so passes (2). Ada, however has green 4 and must play it (3). Since the card isn't consecutive it's played upright and the bonification is activated: She can make an exchange. She gives red 3 to Pati, who looks at the card and gives her green 7.



Round 3: It's Pati's turn, she plays blue 3 (1). The card isn't consecutive so it activates a bonification: she can recover a card from any other suit. Since no card has created a big gap, she decides not to use the bonification. Albert opens the last suit with yellow 2 (2) and Ada takes some risk playing a yellow 3 (3). Pati is forced to play a random card. Luckily, it's yellow 5 (4), so a bonification is activated: Pati puts red 3 in front of her, this will be a team card from now on.



Round 4: Albert plays blue 4 (1), which activates the penalization: he takes a card from the Market and gives it to another player. He takes red 4 from the Market and gives it to Pati (2), the he takes takes a new card from the deck to refill the Market (3). Ada plays blue 5 (4) and is penalized: she has to give a card from the Market to another player.

Do you think Ada, Pati and Albert will be able to clear this game?

Advanced 2 player games

2 player games are very fast, but also too easy for expert players.

This variant including a phantom player really makes the game a challenge for everyone. Set up a game for 3 players and deal 6 cards facing up to the pantom player. Arrange the cards in a row from lowest (left) to highest (right). Arrange cards with the same number randomly.

During his turn, the phantom player will use the leftmost card he can. If there is any shared card from the yellow bonification, the phantom player can use it instead of playing the card from his row.



Every time the phantom player gets a card, put it in the corresponding place in the row, according to its number. If there is another card with the same number you can choose to put the new card before or after.

There are some changes on the general rules.

Setup draft: the player on the left of the phantom puts a card from their hand on the row. Then takes a card from the row and gives it up to the other player.

Bonification (if the phantom activates them):

Blue. Social Revolution: players choose which card the phantom recovers.

Yellow. Shared khowledge: the phantom shares the last card from the row, the one with the highest value.

Green. Evolution: if the phantom has a card he can't play anymore and the Market has playable cards, take the highest playable card from the Market and exchange it with the lowest unplayable card from the phantom. If the phantom only has playable cards in his row, the benefit is granted to the player with the most cards in hand. In case of a tie, to the player to the left of the phantom.

Penalizations (if the phantom activates them):

Blue. Cultural clash: the player with the most cards in hand takes a card from the Market and gives it up to the other player. In case of a tie, the player to the right of the phantom. Players can't talk about which card they would like to get.

In the case of doubt about the rules, apply them so they hurt you the most.

Solitaire game

To play a solitaire game, prepare the deck with cards from 1 to 8, draw 7 cards and set up 2 cards facing up as the Market.

The deck is your phantom player. To all effects the hand of the phantom player is the top card of the deck, with the exception of the yellow suit effects (see below).

You start playing. After each of your rounds the phantom player reveals te top card of the deck and plays it. If not possible, the card is set aside, is out of the game and it will add 1 point at the end of the game. These cards cannot be eliminated by any means once they have been set apart.



If you don't want a card played by the phantom, you can delay it 1 round. Take the next card of the deck as penalization and put back the card that was going to be to be played back onto the top of the deck (you can leave the card facing up to remember it). Then you play your turn (the phantom doesn't play any card this turn).

As in the advanced 2 players games, there are some changes in the general rules.

Setup draft: take the top card of the deck and then put a card from your hand back at the bottom of the deck.

Bonifications:

Blue. Social Revolution (phantom activated): choose the card for the phantom and put it on top of the deck.

Yellow. Shared knowledge (phantom activated): take the top card of the deck and put it facing up next to it. Whenever you reveal a card for the phantom you can choose to play that card instead (the card revealed remains on top of the deck for the next turn).

If you have a card facing up on the table, the phantom player can also use it instead of the one revealed.

Green. Evolution: The player always chooses the type of exchange. Remember that the phantom player's hand is always the 1st card of the deck plus any card set aside by the yellow bonification. If the exchange is between players, take the top card of the deck and put one of your cards back on top.

Penalizations:

Blue. Cultural clash: If you activate the penalization, take a card from the Market and put it on top of the deck. If the phantom activated the penalization, choose and take a card from the Market.

Yellow. Mad experiements: If the phantom has to play a random card, shuffle the deck (including any card set aside) and play the first card.

And now, a bit of history:

Some of the characters shown in the game are little known for most of the people. We list them here with a short description of their contributions to the race for knowledge. At the end of this rulebook you can check the referenes we consulted in case you want to get more information about the characters in **Eureka!**

Artistic knowledge (red)

1.- Tutmose (14th c. BCE): noted Egyptian sculptor. The famous painted bust of Nefertiti was found in his home in 1912.



2.- Anyte of Tegea (3rd c. BCE): Greek writter and poet especially relevant for her epigrams, transmited in the Palatine or Planudean Anthology and the works by Polux.





3.- Cai Wenji (c 176-beginning of 3rd c.): Chinese musician and poet also known as Cai Yan. Her most outstanding work is: Eighteen Songs of a Nomad Flute, were she describes the difficulties of nomad life.



4.- Beato de Liébana (701-798): Spanish monk known for his Commentary on the Apocalypse (preserved in differente fragments) and a great believer of the arrival of the end of the world in the year 800, a true «millennialist».



5.- Comtessa de Dia (end of 12th c.-beginning of 13th c.): this poet wrote in Occitan language in the scope of courtly poetry. We don't know the extent of the work of this *trobairitz'* (women who composed ballads), butwe preserve five of them.



6.- Michelangelo Buonarroti (1475-1564): Italian Renaissance sculptor, painter, architect and poet who made a remarkable influence in the development of Western art. The *Sistine Chapel*, the *Pietà*, the staue of *David* or *The Last Judgment* stand out among his works.

7.- María de Zayas (1590-c. 1661): one of the first women novelists publishing prose in Spanish; among her works, *Novelas amorosas y ejemplares*, where she fights the misogynistic attitudes from the Baroque, stands out.



8.- Wolfgang Amadeus Mozart (1756-1791): prestigious Austrian composer of universal renown who excelled in all the genres he composed. Among his works we find: *Piano Sonata No. 11*, *Serenade No. 13* or *Requiem in D minor*.



9.- Francisco de Goya (1746-1828): Spanish artist whose paintings, drawings and carvings reflected historial and contemporary scenes. Among his most remarkable works we find *La Maja Desnuda*, *La Maja Vestida*, or the famous *The Third of May 1808*.



10.- Alice Guy (1873-1968): French by birth, she considered cinema an art rather than mere entertainment. She was the first woman filming a movie (La Fée aux choux) and a pioneer in the cinematographic industry both in France and the United States.





11.- Pablo Picasso (1881-1983): ceramist, scenographer, sculptor, engraver, painter and one of the most influential artists of the twentieth century. He was the creator (with Georges Braque) of Cubism, although he also worked with surrealism. Among his most famous works are Guernica, Les Demoiselles d'Avignon or the Three Musicians.



12.- Aretha Franklin (1942-): American singer who defined the golden age of soul music in the sixties. Her album *Amazing Grace* (1972) is considered one of the greatest gospel albums of all time.



13.- Shigeru Miyamoto (1952-): Japanese videogames designer and producer, known for being the creator of some of the most influential and long-lasting sagas in videogame history, such as *Mario Bros.* or *The Legend of Zelda*.

Social knowledge (blue)



1.- Gargi Vachaknavi (8th c. BCE): recognized as one of the great natural philosophers in Vedic literature. She composed a large number of hymns questioning the origin of existence.

2.- Plato (427-347 BCE): Greek philosopher, student of Socrates and teacher of Aristotle. He founded the Academy in Athens, where he taught philosophy and wrote many influential works such as the *Republic*.



3.- Ban Zhao (45-c 115): Chinese historian and scholar, author of multiple essays and poems, known for her contribution in what is considered the masterpiece of Chinese historical literature: The Book of Han.



4.- Al-Tabari (c 839-923): Muslim scholar author of multiple compendia of Islamic history and studies on the Qur'an who contributed to the consolidation of Sunni thinking during the 9th century.



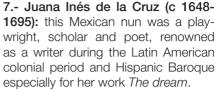
5.- Averroes (1126-1198): Muslim philosopher born in Cordoba who wrote commentaries on the work of Aristotle and Plato, defending the comPatibility of religion with the teachings of classical philosophy.



6.- Teresa de Jesús (1515-1582): Spanish nun considered one of the great mystics of Catholicism and author of an influential spiritual work. She initiated the Carmelite reform in search of a more austere and contemplative character of the order.









8.- Voltaire (1694-1778): considered one of the greatest French writers, his literary work covers all fields including numerous philosophical works for which he is considered, even today, as an example of the struggle against tyranny, fanaticism and cruelty.



9.- Olympe de Gouges (1748-1793): French writer and reformer, political activist who devoted herself to important disputes: from divorce to the rights of illegitimate children, as well as the role of women as citizens.



10.- Karl Marx (1818-1883): German historian, economist, sociologist and revolutionary. He wrote the *Communist Manifesto* with Engels, the central pamphlet of the socialist movement. His writings are the basis of Marxist ideology.



11.- Jane Addams (1860-1935): American pacifist and social reformer. She won the Nobel Peace Prize in 1931. SHe founded the *Hull House* in Chicago, one of the first social centers in the United States.

12.- Martin Luther King (1929-1968): African-American social activist. He led the civil rights movement and his non-violent actions and tactics were decisive for the end of legal segregation in the United States. He received the Nobel Peace Prize in 1964.



13.- Charles Tilly (1929-2008): Sociologist, political scientist and American historian. He stands out as one of the leading researchers of social protests in the modern world. The terms he coined spread among social movement scholars.



Formal knowledge (amarillo)

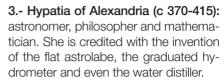
1.- Tapputi-Belatekallim (13th c. BCE): she was the first Mesopotamian chemist and perfumer we know about. Her legacy is preserved in a cuneiform tablet.



2.- Archimedes (287-212 BCE): Greek astronomer, engineer, inventor and mathematician who named this game to the cry of εὔρηκα! (He also formulated the principle of Archimedes and discovered the mathematical relationship between the surface and the volume of a sphere).









4.- Al-Khwarizmi (8th-9th c.): Persian astronomer, geographer and mathematician famous for introducing the Arabic numeral system and his treatise on algebra.



5.- Fibonacci (1170-1240): Italian mathematician, responsible for extending the use of Indo-Arabic numbers in the West and creating the numerical series that bears his name.



6.- Martine de Bertereau (c 1585-c 1642): French alchemist and geologist, author of several famous books on alchemy and geology: *The Restitution of Pluto* and the *Elixir of the Ancients*.



7.- Isaac Newton (1642-1727): English physicist and mathematician. His most famous theory, relative to the field of mechanics, was the law of gravity, although he also discovered the infinitesimal calculus and the composition of white light.

8.- Émilie du Châtelet (1706-1749): French physicist and mathematician who wrote, translated and commented on numerous scientific. His studies on fire and light stand out.



9.- Ada Lovelace (1815-1852): English mathematician, considered the first programmer. In fact, the programming language Ada is named in her honor.



10.- Sofia Kovalevskaya (1850-1891): Russian mathematician and writer noted for her contribution to the theory of partial differential equations. She was the first woman in modern Europe to obtain a Ph.D. in mathematics, join the editorial board of a scientific journal and be appointed as mathematics teacher.



11.- Albert Einstein (1879-1955): German physicist who developed the special and general theories of relativity and won the Nobel Prize in Physics in 1921 for his explanation of the photoelectric effect.



12.- Dorothy Vaughan (1910-2008): American theoretical computer expert and mathematician. She was the first African-American supervisor of the NACA (later NASA) and contributed to the Scout Launch Vehicle Program.





13.- Stephen Hawking (1942): English theoretical physicist famous for his theory about black holes, based on both the theory of relativity and quantum mechanics.

Natural knowledge (green)



1.- Imhotep (27th c. BCE): Egyptian sage, architect, astrologer and doctor of the 3rd dynasty. Considered the greatest scholar of his time, he was later deified and venerated as the god of healing.



2.- Agnodice (c 3rd-4th c. BCE): Athenian physician who studied medicine in secret and was judged for it. Her trial ended the law that forbid women from studying medicine. Some researchers think that she is a myth, although Hyginius mentions her in his writings.



3.- Ptolomy (c 100-c 170): Egyptian geographer, mathematician and astronomer of Greek origin who developed the geocentric model known as the Ptolemaic System.



4.- Sun Simiao (c. 581 - 682): he wrote two important treatises on medicine that included more than 7,000 remedies known at the time. He was recognized with the title of King of Medicine.

5.- Hildegard von Bingen (1098-1179): German nun, poet, visionary and composer who wrote two texts on Medicine and natural history that stand out for their great scientific vision, something rare at the time.



6.- Nicolaus Copernicus (1473-1543): Polish astronomer famous for establishing the heliocentric model that defined the Sun as the center around which planets revolved.



7.- Galileo Galilei (1564-1642): Italian philosopher, astronomer and mathematician, pioneer of the experimental scientific method and defender of the Copernican model, which led him to face a Inquisition trial that forced him to retract his ideas.



8.- Wang Zhenyi (1768-1797): Chinese astronomer author of twelve books on astronomy and mathematics. She defended that women had the same rights to acces knowledge as men.



9.- Charles Darwin (1809-1882): English naturalist, author of the theory of evolution by natural selection that gave coherence to extesive evidence such as the progression of the fossil record, homologous structures or vestigial organs.





10.- Louis Pasteur (1822-1895): French chemist who made great discoveries about pathogens and developed the vaccine against rabies, in addition to sterilization methods that are still used today.



11.- Barbara McClintock (1902-1992): American scientist who won the Nobel Prize in Medicine in 1983 for her discovery in the 40s of the movement of genetic elements within chromosomes.



12.- Esther Lederberg (1922-2006): American microbiologist responsible for the discovery of bacteriophage λ , as well as the development of a method to replicate colonies of bacteria.



13.- Elisabeth Helen Blackburn (1948): Australian molecular biologist. She received the Nobel Prize in Medicine in 2009 for her discovery of the enzyme telomerase, responsible for the protection of chromosomes

Eureka! is a game designed by César Gómez Bernardino. Illustrated by Jordi Bayarri. Scientific advice: Maria Bosch English proofreading: Manuel Gil.

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 DONES ASTRÒNOMES, Observatori de la Igualtat de la Universitat Rovira i Virgili, url: http://www.urv.cat/es/vida-campus/universidad-responsable/ob
 - servatorio-igualdad/ano-mujeres-ciencias/dones-iciencies/dones-astronomes/wangzhenyi/
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 - INSTITUT PASTEUR, url: https://www.pas-teur.fr/en/institut-pasteur/history
 - INSTITUTO DE ASTROFÍSICA DE CANARIAS, url: http://www.iac.es/proyecto/galileo/bio_esp.html - NATIONAL AFRONALITICS AND SPACE

ADMINISTRATION, url: https://www.nasa.

- gov/content/dorothy-vaughan-biography
 NINTENDO WIKI, url: http://es.nintendo. wikia.com/wiki/Shigeru_Miyamoto
 - OFFICIAL NOBEL PRIZE WEBSITE. url: http://
- OFFICIAL NOBEL PRIZE WEBSITE, url: http://www.nobelprize.org/nobel_prizes/
 WOMEN IN MEDICINE, Antiqua Medicina, University of Virginia, url: http://exhibits.hsl.

virginia.edu/antigua/women/

The next move doesn't generate a penalization. You can recover the last card from any other suit. Put a card from your hand facing up in front of you. From now on the card can be played by any other player. A player of your choice can make an exchange: player-Market / player-player / new Market.

?

The next move doesn't generate a bonification. Take a card from the Market and give

it to another player.

Players must pass until one of them

can play on the green suit.

The next player plays a random card.

2	3	4-5	Result
0	0	0	Ask for a Nobel Prize
1	11	1-2	Very good, respect
2	2-3	3-4	Room for improvement
3-4	4-6	5-8	Going back to the caves
5+	7+	9+	Time to sell the game
	0.60.79		THE PARTY OF THE P