

MEMOSKY® Games: **a playful invitation to an astronomically different journey.**

**MEMOSKY® was conceived and designed in 2009 by
Aonghas von RYCKER astronomer and astrophysicist.**

From 1997 to 2014, Mr von RYCKER created, built, administered, directed and animated in France – Hautes Alpes, Alt. 1530M – the Planetarium and Astronomy Observatory of Briançon Les Écrins, his Research and Analysis Laboratory in Astronomy and Astrophysics as well as his 30-bed, 45-seat mountain hotel.

Since 1987, teaching and the transmission of knowledge have always been at the heart of Mr von RYCKER's pedagogical work. More than 40,000 students from kindergarten to university participated in his animations and teachings mainly on astronomy, astrophysics, quantum physics, energies and health, whose speciality is neurophotonics and correlated analysis of these data. Mr von Rycker is also an international speaker.

As we learn better and faster by having fun, Mr von RYCKER has created several educational games/tools, some of which have been marketed mainly in France. They are all deposited and protected:

- unique and colourful double rotating sky map, Northern and Southern hemispheres
- constellation map game, Northern and Southern hemispheres
- game trays/posters of the Map of the Northern Hemisphere
- domino games in astronomy
- astronomy memorization game for very young children
- the 21st Astro
- maps, models and measurement tools to make in paper, ...

With the Constellations MEMOSKY® Games you learn to read the sky in relaxation.

Aonghas von RYCKER has devised complementary rules to the basic ones of the Constellations MEMOSKY® Games with the aim of offering multiple variants with a single set for all ages and tastes. Some rules were inspired by François PETIT (author and creator of Cat's Family educational games).

8 different rules to discover the starry sky

Basic rules of the Constellation Card Game:

- | | |
|--|---|
| 1 – The Memories Tourniquet® (A. von RYCKER) | 3 |
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- | | |
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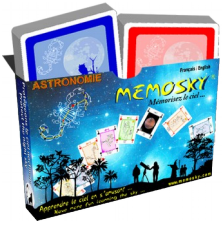
Happy game and happy learning of the sky!

Do not hesitate to get close to an astronomy club for more discoveries.

To learn more about :

Aonghas von RYCKER : www.memosky.com – www.strannikpps.com
Cat's Family : www.catsfamily.net

Presentation of the Constellations MEMOSKY® Game



It took Mr. Aonghas von RYCKER more than two years to develop the concept of this educational game/tool. He has devoted more than 2,500 hours of experimentation and development to more than 1,200 adults, children and people with memory difficulties (brain-damaged, Alzheimer's, etc.), as part of educational workshops for learning astronomy and sky observation. This game is designed for everyone regardless of age: players, sky enthusiasts, astronomy enthusiasts and professionals, animators and health professionals.

The development of the game required a long reflection and in-situation cognitive principles of memorization. It first uses immediate and spatial memory and then forces the player to develop an analytical and arborescent memory that works different parts of the brain, from body expression to semantic field.

The Constellations MEMOSKY® Game allows you to learn the sky by memorizing the stars, constellations, Messier objects (star clusters, nebulae, galaxies), but also to locate the ecliptic plane (zodiac – cards indicated by the drawing of a sun ☀️) for the observation of Planets.

Colour coding allows you to spot stars and constellations according to the seasons when switching to the meridian for observation at 9:30P.M. in universal time:

- **YELLOW** for **SUMMER**,
- **ORANGE** FOR **AUTUMN**,
- **BLUE** for **WINTER**,
- **GREEN** for **SPRING**,
- **ROSE** for **CIRCUMPOLAR** (stars visible year-round at an average latitude of 45 degrees for the Northern Hemisphere and -45 degrees for the Southern Hemisphere).

Each card to be played is a real map of the sky, astronomically right, with the identification of Messier objects (star clusters, nebulae, galaxies).

The Constellations MEMOSKY® Game is composed of the constellations of **the Northern Hemisphere (blue game)** et **South Hemisphere (red game)**, referred to in **French, English and Latin**. Its use works all over the planet earth.

The rules of the Constellations MEMOSKY® Game are multiple, simple and playful for all ages and all levels of knowledge.

It is presented as a classic double card game in The American Poker format: 2 decks of 54 cards (+1) with its classic representation of:

from Ace (1) to King under the 4 suites :
♥ hearts, ♦ diamonds, ♠ spades and ♣ clubs.

You can play all the classic games with the Constellations MEMOSKY® Game.

But the games can be disrupted! Often, players take their time before playing to watch the constellations and other wonders they have in hand!

In addition to the rules of MEMOSKY®, with the same game, you can play to:

- battle
- rami, belote, bridge, poker
- whist, pulsating, shackle, canasta
- crappie, king of hearts (bearded), and many others...

The rules of MEMOSKY® are played in cooperative or competitive mode, alone, with several, teams, within the family, a club, a school, an event.

MEMOSKY® Games are fun, real educational tools that revolutionize the learning of astronomy and the discovery of our universe.

1 – Principal rule: THE MEMORIES TOURNIQUET[©]

- **Number of players:** 1 to 8, more if as team
- **From:** 4 years old
- **Game duration:** 20 minutes to 1h depending on the pick size
- **Game mode:** cooperative or competitive
- **Game goal** (*for competitive mode*): win the most cards or the maximum points

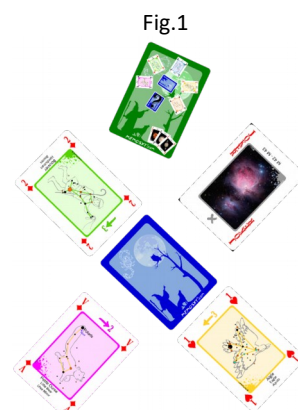


Starting the game:

- remove the green card (called choice card) from the package and mix the cards.
- Then give a card to each player (or group of players if the game is played as a team).
- Whoever has the strongest card (e.g., the King) takes the choice card (green card).
- Put all cards back in the pile, except the choice card, and then mix the game again.

The direction of play is made from the one who has the choice card, in the opposite direction of a clock (trigonometric direction).

- Put the pile of hidden cards, named pickaxe, on the table.
- Take 4 cards and arrange them around the pickaxe, face shown (fig. 1).
- **Everyone observes and memorizes each card** (name of constellation, season and other peculiarities) as well as its position around the pickaxe.



Game flow:

A – Turn over all the cards (face hidden). Whoever has the choice card puts this card in front of one the 4 cards placed face down (fig. 2).

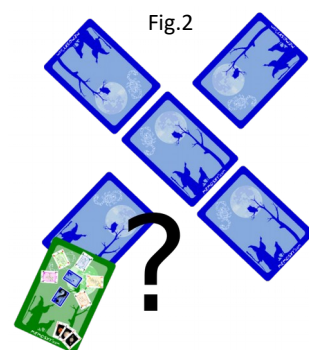
It is up to the next player, to his right, to say what the constellation (or star) is, the season and other details drawn under the card face hidden.

Once the answer(s) is given, return the map to verify.

B - If the player is wrong, his turn stops.

He repositions, in the same place, the card not found, face hidden. He then places the choice card on any other card and it is up to the next player to find it.

C - If the player is right, the choice card is moved in front of another card in the direction indicated by the arrow and of a number equal to the number indicated next to the arrow (fig. 3).

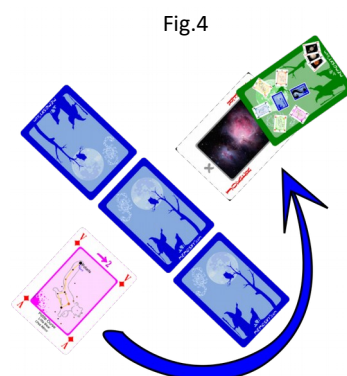
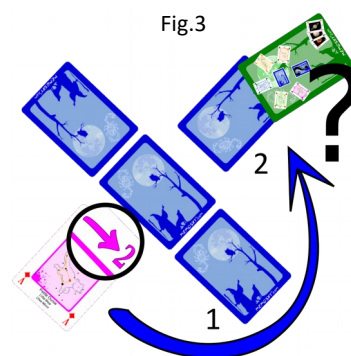


The same player must now find the designated hidden card. As long as he gives the correct answer, he continues on the same principle by following the new information given by the last card found: moving N cards in the direction of the arrow (return step C).

If the choice card arrives on a card already discovered, or if the discovery card is a wild card, the player wins and takes only that card. He poses it in front of him face uncovered or on the side in order to reconstitute all together the sky chart.

The card thus won and removed from the game is replaced by the top card of the pickaxe. It is shown and memorized by all players and then positioned face down (fig. 4).

The other cards discovered are memorized again and then returned to hide their face (return step A). The player who has just played (won or lost) takes the choice card and places it in front of any other card for the next player on his right.



Principal rule: THE MEMORIES TOURNIQUET[®] 2/2

If the player hesitates, there are 2 possibilities:

- in case of cooperative game, the player can ask for help from other players by asking them clues. The first one to give a clue must mimic the constellation or the drawn illustration.

If the player still does not find, a second player make a sound or noise that illustrates the card.

If the player still does not find, a third player verbal clue can be given (e.g. : he has scales, he is poisonous, he has horns, etc).

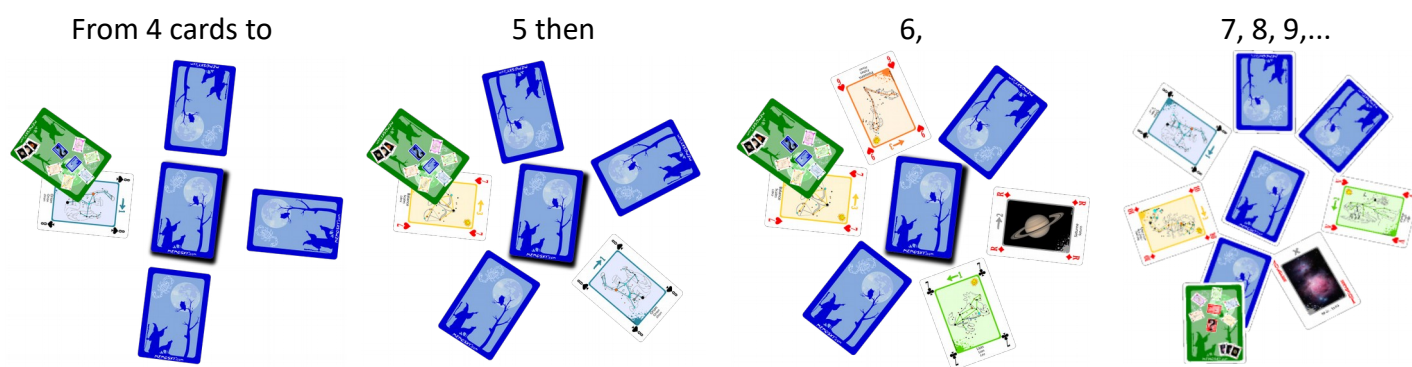
- in case of competitive game, no index is given by other players.

Finally, if the player does not find or if he is wrong, he stops his turn and does not win a card.

All cards are repositioned face down. The player takes the choice card and positions it in front of any other card for the player to his right.

After completing one or two laps with 4 hidden cards, add a fifth one to the turnstile.

Then as memory develops, add a sixth, a seventh...



The game ends when there is no more pickaxe or when the sky map is restored.

In **competitive mode**, the winner is the one who has the most cards or who has scored the most points.

Note: To calculate points in competitive mode, add all the numbers shown to the right of the arrows (numbers from 1 to 4). Jokers (one cross) count for 5 points.

Increase the difficulty of the game!

For each card. after the name of the constellation. also indicate the season when it can be observed when it passes to the meridian (colour of the map). For the stronger ones, indicate whether it is a constellation of the ecliptic plane (drawing of the sun on the top right). indicate whether an object is observable: galaxy, clusters, nebula... Also give the name of a nearby constellation...

Strengths:

- simple game for children who discover constellations.
- The game works visual attention.
- The game uses immediate, spatial and analytical memories.

2 – THE REMEMBRANCE BOARD[©]: variation to the main rule

- **Number of players:** 1 to 8, more if as team
- **From:** 4 years old
- **Game duration:** 15 minutes to 1h depending to the number of cards placed
- **Game mode:** cooperative or competitive
- **Game goal** (for competitive mode): win the most cards or the maximum points



Principle and Game Preparation:

The principle is the same as the rule of the Memories Tourniquet[©].

The difference comes from the distribution of the cards on the table.

For example, take 8 cards and arrange them on the table (2 lines of 4 cards), face shown.

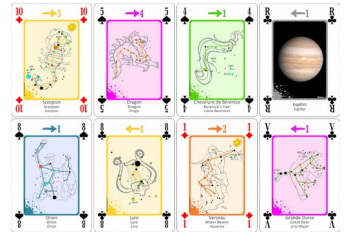
Other cards will not be used for this round.

Game flow:

Observe and memorize each of the 8 cards and their position.

Then turn over the cards (face hidden).

Whoever has the choice card places this card in front of one of the 8 cards place face down.



It is up to the next player, to his right, to say which constellation (or star) is drawn under the card.

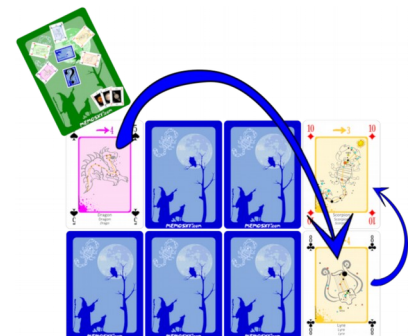
If the player has the right answer, he has to discover the next card by the direction of the arrow and the number indicated.

His turn stops if he loses or if he finds a card he has already discovered or if he finds a Joker (cross card).

All cards are turned face down again.

The player places the choice card for the next player on his right.

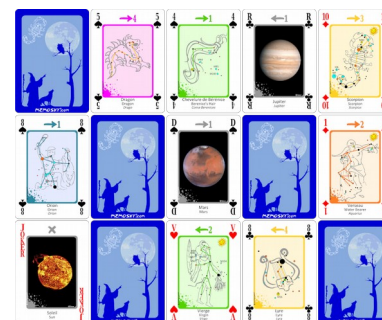
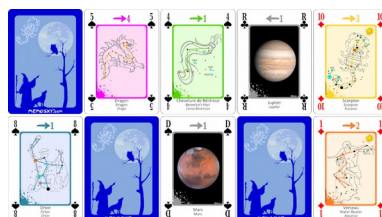
The game ends when the 8 cards have been won by the players.



In **competitive mode**, the winner is the one who has the most cards or who has scored the most points.

Note: To calculate points in competitive mode, add all the numbers shown to the right of the arrows (numbers from 1 to 4). Jokers (cross card) count for 5 points.

Then as the memory develops, take the following cards from the game and this time put 10 cards on the table, or 12, 15, 20, 25...



Strengths:

- simple game for children who discover constellations.
- The game works visual attention.
- The game uses immediate, spatial and analytical memories.

3 – THE CONSTELLATIONS BATTLE[©]

- **Number of players:** 2 to 6
- **From:** 6 years old
- **Game duration:** it can be set to 15 minutes
- **Utility cards:** all except the choice card (green)
- **Game goal:** win all cards during the round



Principle and Game Preparation:

Select one hemisphere : **blue for the North** and **red for the South**.

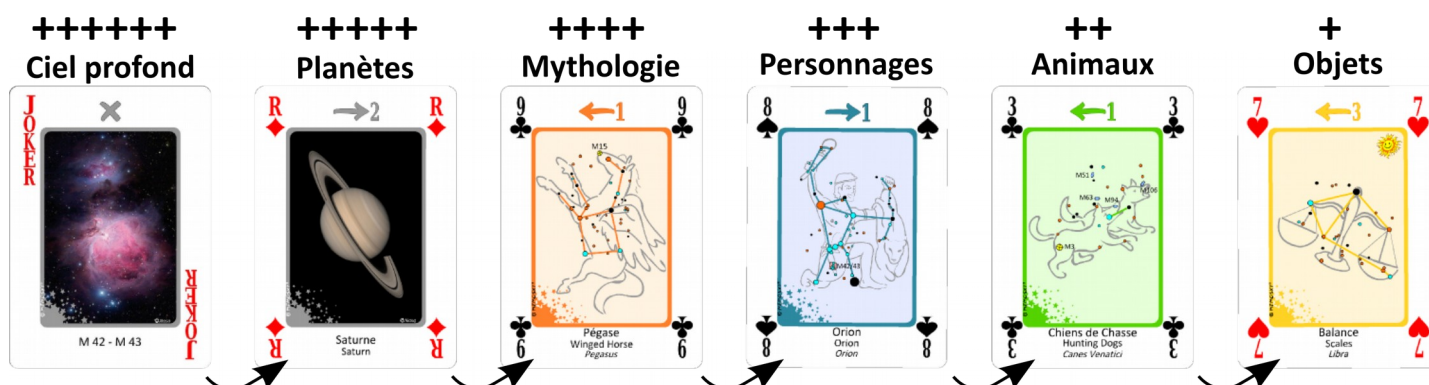
- If you select the **North (blue)** then add the deep sky cards from the **South (red)** game.
- If you select the **South (red)** then add the planet cards from the **North (blue)** game.
- If you wish to do 2 separate groups at the same time (e.g. in classroom), use the games as they are. The **North (blue)** will play without deep sky cards and the **South (red)** will play without planet cards.

After mixing the game, share the cards in equal piles.

Game flow:

The cards of the game represent several families of decreasing force:

The « **Deep Sky** » trumps the « **Planets** » which trumps the « **Mythological Animals** » which trumps the « **Characters** » which trumps the « **Animals** » and which trumps the « **Objects** ».



At the same time, all the players return the first card of the pile. The player with the strongest card picks up the card from other players and puts them under his package.

In case of a tie for the strongest card, the players concerned put a card face down on the discovery card and discover a third card. The player with the strongest card in this new battle wins the cards of all players and puts them under his package.

The player with the most cards wins the game.

Strengths:

- simple game for children who discover and learn constellations.

4 – The Sky 7 families

- **Number of players:** 2 to 6
- **From:** 6 years old
- **Game duration:** 15 to 20 minutes
- **Utility cards:** some cards from the **blue (North)** game or the **red (South)** see below
- **Game goal:** win the maximum number of families



Game preparation:

If possible, print on thick paper (160g – 250g /m²) and laminate the **7 families Northern and Southern hemispheres board** that you will find below.

Sort the **blue (North)** or **red (South)** game by selecting only the cards forming the families described on the **7 families boards**.

You need to get a set of 42 cards for the **blue (North)** game and a set of 41 cards for the **red (South)** game as the Winter family only has 5 cards.

Keep the boards visible to everyone to identify each family during the game.

Game flow:

Mix the sorted cards and hand out 7 cards to each player.

The remaining cards are the pickaxe.

It is always the youngest player who starts.

Note: a player can only apply for a family card if he already has one in his game.

The first player asks the player of his choice if he has the card he wants, for example: in the Autumn family, Northern hemisphere, I would like «the Aries».

- If the other player has the card, he has to give it to the first player. The winner continues and asks the same player or another player if he has another card he wants. As long as he wins, he continues.
- If the other player does not have the card requested, the first one takes a card from the pickaxe.
- If the card matches the requested card, the player announces « Good Pick! » and shows the card to other players. He wins and keeps playing.
- If the card does not match the requested card, the player hands the card under the pickaxe and passes the turn to the player on his right.
- If the pickaxe is empty, it is directly to the next player on the right to play.

As soon as a player has a complete family (6 cards), he announces it and place it on the table.

- If a player has no more cards after having placed a family on the table, he takes the first card from the pickaxe or a random card in the player's game to his left (if the pickaxe is empty) and he continues to play.
- If a player loses his last card, he is out of the game and he waits for the end of the game.

When all families have been won, the player with the most families wins the game.

- Strengths:

- simple game for children who discover the numbers.
- Teach the main constellations of the seasons, some planets and Messier objects.
- Game that works memory.

4 – 7 families Northern Hemisphere Board

To print in colour on paper from 160g to 250g /m².
Then laminate the page and cut every card.

7 families Northern H.

AUTUMN

- Andromeda
- Winged Horse
- Ram
- Fishes
- Water Bearer
- Sea Goat



7 families Northern H.

WINTER

- Charioteer
- Crab
- Twins
- Bull
- Orion
- Greater Dog



7 families Northern H.

SPRING

- Herdsman
- Hunting Dogs
- Berenice's Hair
- Little Lion
- Lion
- Virgin



7 families Northern H.

SUMMER

- Eagle
- Hercules
- Archer
- Serpent Bearer
- Scorpion
- Libra



7 families Northern H.

CIRCUMPOLAR

- Cassiopeia
- Cepheus King
- Dragon
- Giraffe
- Great Bear
- Little Bear



7 families Northern H.

Solar system PLANETS

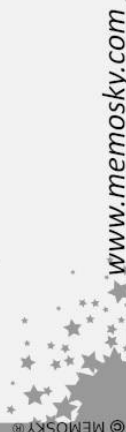
- Mercury
- Venus
- Earth
- Mars
- Jupiter
- Saturn



7 families Northern H.

Deep sky

- Globular Cluster M13
- Open Cluster M45
- Active Nebula M42
- Planetary Nebula M57
- Galaxy M31
- Galaxy M51



4 - 7 families Southern Hemisphere Board

To print in colour on paper from 160g to 250g /m².
Then laminate the page and cut every card.

7 families Southern H.

AUTUMN

- Sextant
- Crow
- Cup
- Compass
- Centaur
- Female Water Snake

7 families Southern H.

WINTER

- Southern Crown
- Shield of Sobieski
- Wolf
- Square
- Telescope

7 families Southern H.

SPRING

- Southern Fish
- Phoenix
- Microscope
- Crane
- Furnace
- Sculptor

7 families Southern H.

SUMMER

- Stern
- Hare
- River Eridanus
- Dove
- Flying Fish
- Easel

7 families Southern H.

CIRCUMPOLAR

- Southern Cross
- Toucan
- Swordfish
- Octant
- Southern Triangle
- Fly

7 families Southern H.

Solar system PLANETS

- Mercury
- Venus
- Earth
- Mars
- Jupiter
- Saturn

7 families Southern H.

Deep sky

- Little Magellan
- Open Cluster M44
- Planetary Nebula M27
- Galaxy M33
- Galaxy M104
- Active Nebula M42

5 - The CONSTELLO[®] (inspired by the UNO[®] Game)

- **Number of players:** 2 to 6
- **From:** 7 years old
- **Game duration:** 15 to 20 minutes
- **Utility cards:** blue (North) game alone or mix with the red (South) game
- **Game goal:** get rid of all his cards



Game preparation:

Select the blue (North) game or both games, blue (North) and red (South).

Mix the cards.

Each player draws a random card.

Whoever has the strongest card (Kings, Lady, Jack, 10, 9, ..., 1) opens the game.

Put the cards back.

Hand out 7 cards to each player. The remaining cards are the pickaxe.

The first card from the pickaxe is turned over and placed on the side. It is called the Talon. If the Talon is the choice card (green), the player who opens the game then draws 2 cards as a penalty and passes his turn to the player on his right.

Remember: COLOUR coding allows you to spot stars and constellations according to the seasons when switching to the meridian for observation at 9:30P.M. in universal time:

YELLOW for **SUMMER**, **ORANGE** for **AUTUMN**, **BLUE** for **WINTER**, **GREEN** for **SPRINGS** and **ROSE** for **CIRCUMPOLAR**.

Every constellation could be classified in a family following its representation :

- **Family « Objects »**, examples: arrow, lyre, furnace, scale, compass...
- **Family « Animals »**, examples: Great Bear, Swan, Fly, Toucan, Scorpion...
- **Family « Mythological Animals »**, examples : Sagittarius, dragon, Pegasus, unicorn...
- **Family « Characters »**, examples : Orion, Andromeda, Cassiopeia, Ophiuchus, Charioteer, Cepheus king...

Note : Berenice's Hair is considered part of the **Family « Objects »**.

The constellations of the ecliptic plane (Zodiac) have a sun drawn at the top right of the card .

It is only in these constellations that it is possible to observe the first 8 planets of our solar system.

There are also « **Planets** » cards and « **Deep sky** » cards (grey colour).

Game flow:

When it is his turn, each player poses, if he wishes, a card on the Talon according to the following sequence:

- if the Talon is a card showing a « **Constellation** », the player checks in his game and can play:
a card of the **same COLOUR** (season or circumpolar)
or a card of the **same Family** (object, animal, mythological animal, character)
or a card « **Planets** » or « **Deep Sky** » (if the red (South) game is mixed with the blue (North)) and **only if the « Constellation » laid is a constellation of the ecliptic plane (card with the Sun ).**
- if the Talon is a card showing a « **Planets** » or the « **Deep sky** », the player can play:
a card « **Planets** » or « **Deep sky** »,
or a card « **Constellation** » of the ecliptic plane (card with the Sun .

If a player has the choice card (green), he can play it when it is his turn to play and whatever his game is. In this case, he designates the player of his choice who will suffer a penalty of 2 cards taken from the pickaxe.

As soon as a player cannot play, he must draw a card.

If his pick is right, he plays his card on the Talon, otherwise he keeps the card and passes the hand to the player on his right.

The first player who runs out of cards wins the game.

Variation : associate the objects of the deep sky with their constellation.

This requires attention and speed.

If a player plays a constellation (e.g. Hercules) and another player has the corresponding « **Deep Sky** » card (e.g. M13), he can put down his card before the next player plays. If it is his turn, if he can play a card and if he also has the two cards associated in his game, he can play the two cards at the same time in the order he wants.

Strengths:

- the game is simple, playful and dynamic without however penalizing slow players.
- The game allows to associate the constellations with the seasons, the planets with the ecliptic and with the variation, the deep sky with the corresponding constellation.

6 – The Celestial Minute[©]

- **Number of players:** 2
- **From:** 8 years old
- **Game duration:** 1 minute per player
- **Utility cards:** the blue (North) game or the red (South) one
- **Game goal:** find the season of observation of a maximum constellations in 1 minute
- **You also need:** a chronometer or a watch



Principle and Game preparation:

Select a game: blue (North) or red (South)
Remove of the game every cards « **Planets** » and/or « **Deep sky** ».
Only keep « **Constellations** » cards.

Use a chronometer or a watch.

A game master is designated and he mixes the cards.
He then lays them in front of him in a pile, face down.

Every player prepares himself to the one minute challenge.

Game flow:

The game master returns the first card and looks at it.
At the top of the chronometer (or watch), he gives the name of the constellation.
The player must find the observation season, that is the one that corresponds to the colour of the card:

YELLOW for **SUMMER**,
ORANGE for **AUTUMN**,
BLUE for **WINTER**,
GREEN for **SPRING**
ROSE for **CIRCUMPOLARS**.

(Remember: COLOUR coding allows you to spot stars and constellations according to the seasons when switching to the meridian for observation at 9:30P.M. in universal time).

3 answers are possible:

- **If the player gives the right answer**, the game master keeps the card in hand and immediately takes a new card. He then question the player again.
- **If the player gives the wrong answer**, the game master gives the right answer and lays the card on **the right** of the pickaxe. He then immediately takes back a new card and questions the player again.
- **If the player says « I'll pass »**, the game master gives the right answer et lays the card on **the left** of the pickaxe. He then immediately takes back a new card and questions the player again.

After 1 minute, the game ends.

The game master counts the point :

- right answer : +2 points
- wrong answer (right pile) : -1 point
- « I'll pass » (left pile) : 0 point

Tip: it is better to say « I'll pass » than to give any other answer.

The player must then practice to increase his result the next time.

20 right answers in 1 minute is a very good result.

Note : the game can also be practiced between 2 players who exchange roles or as part of a challenge of players, with sleeves and table of accumulated points.

Strengths:

- verify the knowledge of constellation observation periods.
- Apply some pressure (stress management) and observe reactions.
- Interesting game regardless of age.

7 – The Season Challenge[©] (inspired by the JUNGLE SPEED[®] Game)

- **Number of players:** 3 to 8
- **From:** 7 years old
- **Game duration:** 15 to 20 minutes
- **Utility cards:** blue (North) or red (South) or both together
- **Game goal:** gain the maximum number of cards by typing as quickly as possible on the correct "Identification" card placed in the centre of the table



Game preparation:

If possible, print on thick paper (160g – 250g /m²) and laminate **The Season Challenge board** that you will find below.

Place the various « Identification » cards: Spring, Summer, Autumn, Winter, Circumpolar, Solar System/Planets (blue game) and/or Deep Sky (red game) in the centre of the table.

Mix the game and distribute all cards in equal numbers between players. Excess cards are put back into the case.

It is possible to set a limited number of cards per player in order to shorten the game or give a time limit to the round.

Each player puts down his stack of cards without looking at them face down.

The oldest player starts the game.

Game flow:

The first player says. « Put your hands on the table or on your knees and be quiet ». Then he takes the card from the top of his stack without showing it to others and reads the name of the card aloud.

As soon as possible, the other players put their hand (only one) on the « Identification » card which they think is the right solution.

Note: only one hand is placed and it must be on a single « Identification » card. otherwise the player loses this shot. Similarly, if a player puts his hand on a card and then changes cards, he loses that shot.

The player who read the card then announces the solution, that is: Season, Solar System, Deep Sky.

The player who first placed his hand on the correct « Identification » card receives the card he found and places it under his pile.

If no one has found the right solution, the player who made the announcement puts his card under his heap.

The round ends as soon as a player no longer has a card or at the end of a set time at the beginning of the game.

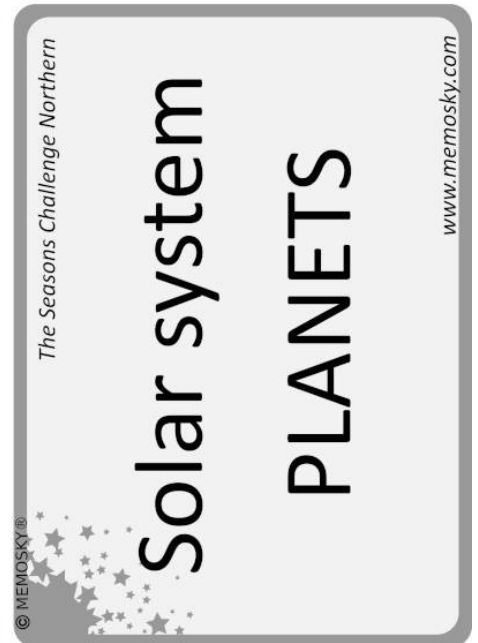
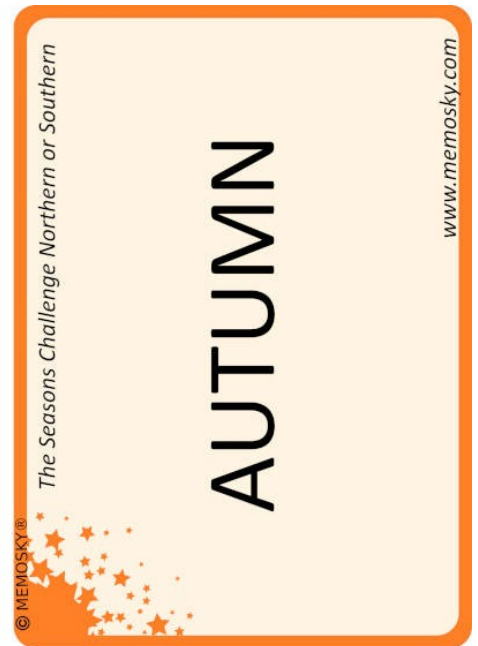
The player with the most cards wins the game.

- Strengths:

- the game is simple, playful and dynamic.
- The game works with speed of analysis and auditory concentration.
- The game allows to associate and memorize the constellation or object with its observation season or characteristic.

7 – The Season Challenge[©] Board

To print in colour on paper from 160g to 250g /m².
Then laminate the page and cut every card.



8 - The Mimosky[©]

- **Number of players:** 1 to 8 and more
- **From:** 4 years old
- **Game duration:** according to the motivation
- **Utility cards:** blue (North) and/or red (South)
- **Game goal:** win the maximum number of cards by having discovered the mimed card by another player



Game preparation:

Mix the game: blue (North) or red (South) or both together.

Place the card pile, named the pickaxe, face down in front of the group of players.

The youngest player starts the game.

Game flow:

The first player discreetly pulls the first card from the pickaxe and observes it. He then rests the card and describes it only by mime and noises.

The first player who gives the correct answer wins the card.

The player on the right of the first player selects a card and the mime, the noise.

The end of the game ends when the players decide or when all the cards have been found.

The one who won is the one who, at the end of the game, collected the most cards.

This game is very simple, easy and very fun regardless of age.

For adults, it forces them to break the taboo of the other's gaze on themselves and to be imaginative.

It is possible to play in teams.

The mime is done together at 2, 3, 4... which can be even more hilarious.

While some cards are very easy to mime or sound. others require great skill. Imagine how you will mimic and sound the constellation of the Virgin, the planet Venus or simply a nebula.

Plan the tissues, it's « to die laughing ».

BONUS - THE 21 ASTRO®

- **Number of players:** 2
- **From:** 5 years old
- **Game duration:** a few minutes
- **Utility cards:** The 21 ASTRO®
- **Game goal:** be the first player to get 21 points or more by betting on the opponent's tactics



Cards presentation:

Cards numbered 1 to 5 show :

- 1 – active nebula: place where stars are born.
- 2 – System Star/Planets: planets formed and orbiting around their star.
- 3 – Star clusters: stars are organized into star clusters.
- 4 – All stars, clusters, nebulae and others (black holes) form galaxies.
- 5 – All galaxies and dark matter and others form our local universe.

Game principle:

Each player receives a set of 5 cards: one **the blue series (B)**, the other **the red series (R)**.

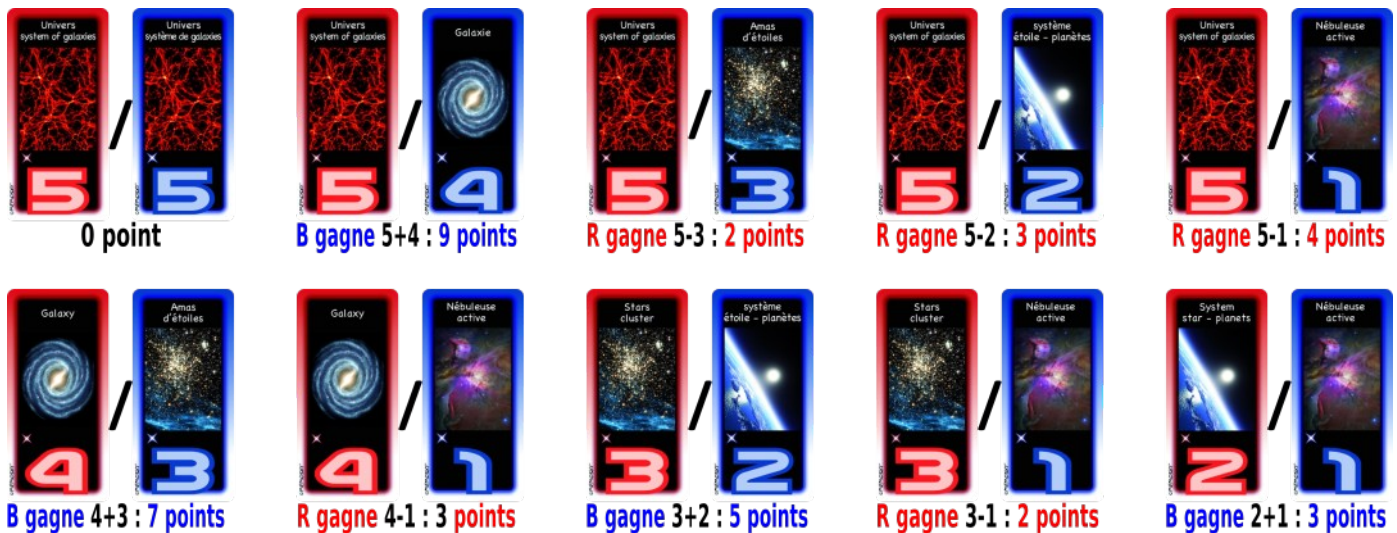
Each player takes his 5 cards in hand and, at the same time, both players present the card of their choice, then they count their points.

By comparing the two maps thus presented, we can read the result:

- **if there are at least 2 points of difference**, the player who presented the largest number wins the number of points of the difference between the number of his card and that of his opponent.
 - **if there is 1 point difference**, the player with the smallest number wins the total of the points presented by the two players.
 - **if there are 0 points of difference** (identical cards), everyone takes their card back and plays again.
- So there's no point in playing the big numbers too often, your opponent could be advantaged.
Each player then takes his card back, puts it back in his heap and chooses a new card to present. It may be the same as the one from the previous blow.

End of the game: the first player reaching 21 points or more wins the game.

Calculation of the points: example **Red game player (R)** vs **Blue game player (B)**



Proposed variations:

- if a player reaches exactly 21 points, his game is worth 50 points.
- The game is won only by the one who gets exactly 21.
- Chinese players in the 21Astro® play « blind »: it means cards in their back.
- Play per ROUND: set the number of players and games. Accumulate the number of points won per opponent. The winner is the one with the most points.
- **Strengths:**
 - the game is simple, playful and dynamic.
 - The game increases the memory of results and the simple mental calculation.
 - The game allows to structure and visualize the organization of the universe.

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