

Luna

Expansion



Rulebook

In the 16th century, astronomers like Tycho Brahe studied the Moon's movements and phases using precise measurements and simple instruments. Galileo Galilei's telescope revealed craters and mountains on the Moon, thereby disproving the ancient hypothesis of its perfect smoothness. These observations changed our understanding of the Moon and of the entire universe.

Components



9 Moon tiles



4 Character Boards (*Isaac Newton, Sophia Brahe, Elizabeth Hevelius, Maria Cunitz*)



16 Constellation tiles (*Elizabeth Hevelius*)



1 Overlay tile (*Sophia Brahe*)



2 Sun and Venus tokens (*Sophia Brahe*)



1 Moon Achievement tile



9 Moon Observation tiles



9 Grand Inquisitor figures



5 Solo Movement tiles



9 Scoring tiles



1 Solo Action tile



1 Comet book tile for 1- and 2-player games



4 Achievement tokens (1 per player)



6 Action tiles for Isaac Newton (*marked N*)



6 Action tiles for Maria Cunitz (*marked C*)



1 Bonus Board



2 Dividing tiles



6 Note tiles (*Maria Cunitz*)



2 *Urania Propitia* wooden tokens (*Maria Cunitz*)



1 *Urania Propitia* board (*Maria Cunitz*)



7 Quadrants (1)
3 Quadrants (3)

Luna

Luna is an expansion for the game Galileo Galilei which introduces the Moon as a new gameplay element. The Moon is gradually revealed as you observe its surface through your telescope to earn new bonuses. This expansion also introduces a new type of inquisitor. Additionally, it includes four new characters which can be freely combined with characters from the base game. Characters from the base game can also be used freely with the Luna expansion.

Game Setup

1. When building the Discovery deck, place the Dividing tile for Tier II on the first Tier II card, and the Dividing tile for Tier III on the first Tier III card. Otherwise, set up the base game as usual.
2. To create the Moon, arrange the nine Moon tiles dark side up in a 3×3 square to the right of the Game Board. The tiles' background image will depict the Moon. **Note:** Use the Roman numerals on the Moon tiles to help you with setup.
3. Turn the Scoring tiles face-down and shuffle them. Randomly select three Scoring tiles, and place them face-up on the Moon's left column.
4. Randomly place the remaining Scoring tiles face-down on the rest of the Moon.
5. Place one Grand Inquisitor figure on each Moon tile.
6. Place the Bonus Board beneath the Moon with a randomly selected side face-up.
7. Stack the nine Moon Observation tiles in numerical order, with #5 on the top and #13 on the bottom. Place the stack near the Moon.
8. Place the Moon Achievement tile over the deck setup table, to the left of the University.
9. Each player takes a fifth Achievement token in their color, and places it with the others near their Player Board.



Moon Observation

When you use the Observe action, you may choose a new Major Object: **the Moon**. Observing the Moon requires using observation dice of **all three colors** to pay the observation cost on the current Moon Observation tile.

Note: You can use Comet tokens to discount the Moon's observation cost as usual.

You can choose to Observe any Moon tile with a face-up Scoring tile on it. During the game, more tiles will be turned face-up as the Moon changes phase. You can choose to observe a Moon tile from any phase that has already been turned face-up



Observable Moon tile

Unobservable Moon tile

Once you've paid the observation cost, flip the top-most Moon Observation tile face-down and place it next to your Player Board. The next tile reveals the Moon's new observation cost.

After paying to Observe, you earn the **observation reward** at the top of the Moon tile. You also earn victory points from the **Scoring tile**. When you Observe the Moon, you earn the Scoring tile's **bonus scoring**. However, **all other players** earn the tile's **basic scoring**.



Sophia wants to Observe the Moon. The game just began, so she can select any Moon tile in the left column of the Moon.



1. Sophia checks the Moon Observation tile, and sees the observation cost is 5. She has three observation dice which add up to 4, and uses a Comet token to reduce the cost by 2. Even though Sophia's dice are worth more than the discounted observation cost, she still must spend all three because the Moon requires three colors of dice.



2. After Sophia returns her observation dice to the supply and moves her Comet token to the Book of Comets, she takes the current Moon Observation tile and puts it near her Player Board. The Moon's next observation cost is 6.

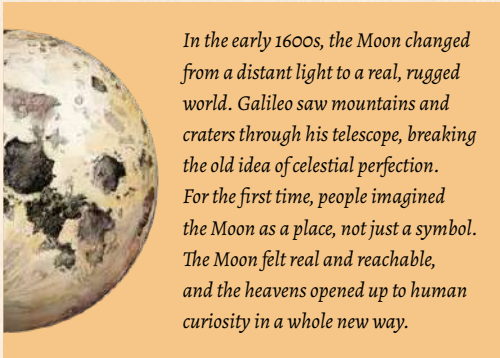


3. Sophia gains the Moon tile's observation reward—2 Quadrants and 6 victory points. She also gains bonus points from the Scoring tile! Sophia gains 2 victory points per Major Object in her Library.

Next, take the **Grand Inquisitor** figure and place it in the leftmost space of the cellar on your Player Board. To finish this Observe action, return the Scoring tile to the game box, and flip the Moon tile you just observed to its **light side**.



The group icon at the bottom of the Scoring tile is a reminder that the tile's basic points are scored by all of the other players.



In the early 1600s, the Moon changed from a distant light to a real, rugged world. Galileo saw mountains and craters through his telescope, breaking the old idea of celestial perfection. For the first time, people imagined the Moon as a place, not just a symbol. The Moon felt real and reachable, and the heavens opened up to human curiosity in a whole new way.

Phases of the Moon

The Moon starts in its first phase, during which the Moon's leftmost column of Scoring tiles are face-up.

When a Dividing tile is revealed from the Discovery deck, the Moon turns to its second phase. Flip the next column of Scoring tiles face-up. The second phase is revealed at the beginning of Tier II, and the third phase at Tier III. After revealing the Moon's next phase, return the Dividing tile to the box.

You may Observe any face-up Scoring tile on the Moon, even if the tile is from a prior phase.

Note: Remember to return the Scoring tile to the box when you finish observing the Moon.



- After Sophia gains the Scoring tile's victory points, the other players gain its basic points. They gain 1 victory point per Major Object in their Libraries, too.



- Sophia takes the Moon tile's Grand Inquisitor figure, and places it on the leftmost space of her cellar.



- Finally, she flips the Moon tile she just observed to the light side.



Grand Inquisitor

When you Observe the Moon, you gain a Grand Inquisitor figure. Its rules are a little bit different from normal Inquisitors.

PERSUADE

When you Persuade, you can move a Grand Inquisitor figure forward like a normal Inquisitor. Once it reaches the rightmost space of your cellar, a Grand Inquisitor does not remain on your Player Board. Instead, fully-persuaded Grand Inquisitors automatically leave your cellar.

After fully persuading a Grand Inquisitor, place the figure on any open space on the Bonus Board. This board is placed beneath the Moon during setup. You gain the reward indicated on the Bonus Board's space. The rightmost space on the Bonus Board may have any number of Grand Inquisitors. The other eight spaces may have only one figure.

INTERROGATION

If you are interrogated during the Cleanup Phase and have a Grand Inquisitor in your cellar, watch out! A Grand Inquisitor is worth **double** the penalty of its cellar space. Apply the value of ordinary Inquisitor figures during the interrogation, too.

Note: Grand Inquisitors automatically leave the cellar when fully persuaded. They can never double the rightmost space's bonus during an interrogation.

End of game

A game using the Luna expansion ends as described in *Galileo Galilei*. All effects of the Moon and the Grand Inquisitors do not alter the usual rules for ending the game and scoring bonus victory points.



Sophia played Persuade action and has two steps. She chooses to move her Grand Inquisitor two spaces to the right.

Because she persuaded an Inquisitor, Sophia is interrogated during the Cleanup Phase! She has two inquisitors in her cellar, both on the space worth -1 Reputation. However, her Grand Inquisitor's penalty is doubled! It is worth $2 \times -1 = -2$ Reputation. Thus, Sophia moves her Tribunal token three steps to the left on the Reputation track.



The next turn, Sophia pays three Quadrant tokens to persuade both Inquisitors and move them onto the rightmost space of her cellar. She immediately removes the Grand Inquisitor figure, and places it on the Bonus Board.



Since the eighth space was empty, Sophia places her Grand Inquisitor there. As a reward, she places her leftmost Comet token on the Game Board and gains 1 victory point.

Scoring Tiles



You gain 2 victory points for each of your upgraded Action tiles. Your opponents gain 1 victory point for their upgraded Action tiles.



You gain 1 victory point for each space your University tokens have moved up the Scale tiles. Your opponents gain 1 victory point per two spaces their tokens have moved, rounded down.



You gain 2 victory points for each Inquisitor figure in your cellar. This includes the Grand Inquisitor gained from observing the Moon. Your opponents gain 1 victory point for their Inquisitors.



You gain 2 victory points for each Comet token removed from your Player Board. Your opponents gain 1 victory point for their removed Comet tokens.



You gain 2 victory points per Constellation token removed from your Player Board. Your opponents gain 1 victory point for their removed tokens.



You gain 2 victory points per Major Object in your Library. Your opponents gain 1 victory point for Major Objects in their Library.



You gain 4 victory points for each space the leftmost Book token in your Library has moved. Your opponents gain 2 victory points per space for their leftmost Book token.

Note: The leftmost Book token is the one which has moved the least!



You gain 1 victory point per space the Inquisitor figures in your cellar have advanced (excluding the removed ones). Your opponents gain 1 victory point per two spaces, rounded down.

Example: At -4 an Inquisitor figure has moved 0 spaces, while at +1 it has moved 3 spaces.



You gain 4 victory points per Achievement token placed on the Game Board. Your opponents gain 2 victory points per placed token.

Bonus Board Rewards

Side A



1. Gain any two observation dice from the supply and add them to your Player Board with a value of 2.
2. Observe one constellation on a Discovery card with an observation cost of 4 or less. This reward doesn't require spending observation dice, and is an exception to the usual limit on how many times you can Observe during your turn. Gain the reward below the removed Constellation token on your Player Board as usual. **Note:** If you have already used all seven Constellation tokens, you can't benefit from this reward.
3. Gain any type of observation die from the supply, and take the Lecture action.
4. Take the Persuade action three times. You may choose the same Inquisitor three times, or choose multiple Inquisitors.
5. Select a Book token in your Library. Gain all bonuses for spaces that Book token has already passed (including its current space). Evaluate the bonuses **from right to left**!
6. Take the moving action (and only the moving action) of any Action tile. Then, rotate that tile to the beginning of your queue.
7. Gain one Quadrant token, and swap any two Action tiles with one another.
8. Take the Spot a Comet action, and gain 1 victory point. **Note:** If you have already used all seven Comet tokens, you can't benefit from this reward.
9. Gain 4 victory points. You can place a Grand Inquisitor figure here any number of times.

Side B



1. Gain any type of observation die from the supply, and add it to your Player Board with a value of 5.
2. Upgrade one Action tile.
3. You may move your telescope to any space. Take the fixed action (and only the fixed action) of the Action tile at which your telescope points. Do not trigger or rotate the Action tile.
4. Gain four Quadrant tokens.
5. Move any of your Inquisitor figures to the rightmost space. **Note:** This includes Grand Inquisitors! If you move a Grand Inquisitor, remember to claim a second reward on the Bonus Board.
6. You gain 1 victory point per Library space moved by your rightmost Book token (including its current space).
7. Gain the bonus for each space your University tokens are currently occupying on the Scale tiles. **Note:** You don't have to take the Inquisitor figures.
8. Take the Partial Writing action three times and gain 3 victory points.
9. Gain 4 victory points. You can place a Grand Inquisitor figure here any number of times.

New Characters

You can use these new characters to play with or without the Luna expansion. Between the base game and this expansion, a total of eight characters can be used to play either version of *Galileo Galilei*.



Isaac Newton (1643–1727)

This English physicist and mathematician revolutionized astronomy not only with his theory of gravitation, but also with the invention of the reflecting telescope. Newton's telescope used a primary mirror to concentrate light and a secondary mirror to redirect the image to the eyepiece. This eliminated the chromatic aberration which plagued refracting telescopes. This invention allowed for more accurate observations of stars and planets, and became the foundation for modern astronomical instruments.

GAME SETUP



Use Isaac Newton's set of six Action tiles instead of the regular tiles. Place the two special tiles shown below at the bottom of the starry sky, on the two spaces marked with . Then, place the remaining four tiles randomly.



Ability

The two special tiles represent the primary and secondary mirrors of Newton's telescope. The bonus from activating these two tiles depends on their position in the starry sky. The higher they are, the more times you will receive the depicted bonus. The bonus from these tiles therefore increases from 1× to 4× once at the top of the starry sky.

In the example on the left, if you used the moving tile at the very top, you would gain four Quadrant tokens.



Isaac Newton also has two personal Book of Comets pages.

When the first is covered, Newton may move one of his special tiles up to two spaces in the queue. Move the skipped tile(s) back one space.

When the second is covered, Newton gains victory points from his highest special tile. Newton gains 2 victory points times the bonus for that tile's position. *For example, you would gain 8 victory points from a special tile at the top of the starry sky.*





Elizabeth Hevelius (1647–1693)

Elizabeth Hevelius was a pioneering astronomer whose work cataloging stars contributed to a scientific mapping of the night sky. Persevering after her husband's death in 1687, Hevelius published their monumental *Prodromus Astronomiae* which documented over 1,500 stars. This catalog was one of the most important astronomical works of the 17th century.

GAME SETUP

Shuffle Hevelius's 16 Constellation tiles, and arrange them in a deck face-down to the left of your Player Board. Reveal the top three tiles, and place them in a column below the deck to form **the offer**. Place the Constellation tiles face-up with their icon in the bottom-left corner.



Note: Hevelius will need extra space to the left of the Player Board for building her constellations.

Ability

Your goal is to assemble Hevelius's tiles to create closed constellations. Whenever you complete a constellation, you will receive a reward based on the number of stars it contains.

Each turn, you can meet a condition of **one** of the revealed Constellation tiles. Remove that tile from the offer, and place it among your constellations to the left of the Player Board. The first Constellation tile you take always begins a new constellation. You can add further tiles to that constellation, or use them to begin another new constellation. Each Constellation tile requires performing a specific action (such as increasing a certain observation die's value, upgrading an Action tile, etc.), shown in the tile's bottom-left corner.

Note: You have to be able to perform the action to claim the Constellation tile. For example, if you have three red observation dice you can't increase a blue die—even if your telescope points at an Action tile that would let you do so.

If you do not meet the condition of any of the offer's constellation tiles during your turn, you may instead **discard** any number of tiles from the offer.

After taking or discarding a Constellation tile, always **refill the offer** so there are three face-up tiles for your next turn.



Each Constellation tile's condition is indicated in its bottom-left corner.

A Constellation tile has one to three stars, which determine the reward for completing a constellation. They also have one to three connections to other tiles. When placing a new tile, you can rotate it however you wish to build the constellation.



Hevelius can earn one of three rewards each time she completes a constellation, based on the amount of stars:

- **2 stars:** No reward!
- **3–4 stars:** Write twice in your Library, and gain one Quadrant token.
- **5–6 stars:** Gain 4 victory points, and take one observation die of any color from the supply.
- **7+ stars:** Gain 10 victory points.

You can have **any number of constellations** at a time. However, you can't connect one constellation to another—you can **only add new tiles** to a constellation. You can also claim a Constellation tile and complete a constellation at **any time during your turn**.

After gaining the reward for a completed constellation, **discard the Constellation tiles** in a face-down pile beside the deck. If your Constellation deck runs out of tiles, shuffle your discard pile to form a new deck.

Note: Building large constellations may get your tiles “stuck” forming incomplete constellations. If you get too greedy, you may end up with no Constellation tiles in your deck or your discard!

Hevelius uses her moving action to increase the value of her blue observation die from 2 to 3. After completing that action, she has met the condition of the offer's middle Constellation tile. At any point during her turn, Hevelius can claim that tile (so long as she hasn't already claimed another).

She decides to take this tile immediately. Rotating her new tile, Hevelius adds it to one of her constellations. Since no more connections are open, she has completed the constellation! This constellation has 5 stars. Thus, Hevelius gains 4 victory points and an observation die.

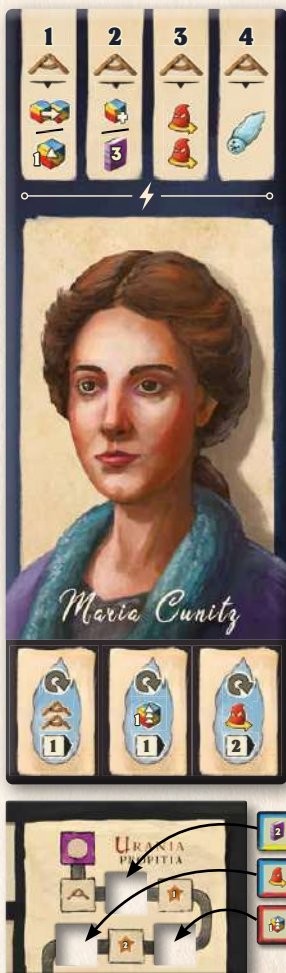
If she completed the other constellation, Hevelius would have gained 10 victory points (since it would have 7 stars). However, she wants another observation die for next turn, so completing the smaller constellation is a better choice.



This Constellation tile's condition is met when Hevelius increases the value of her yellow observation dice. She currently has two ways to do so: one of her Action tiles, and a space in her Library.

As a reward for another action, Hevelius gets to increase the value of a single observation die of any color by 2. Even if she chooses a yellow die, she won't be able to claim this Constellation tile. The action's icon has to match the Constellation tile exactly.





Maria Cunitz (1610–1664)

Maria Cunitz was a prominent German-Silesian astronomer and mathematician of the 17th century, known for her book *Urania Propitia*. This book, written in both Latin and German, simplified Kepler's complex calculations of planetary motions. Cunitz's work made them accessible to a broader circle of scientists and amateur astronomers.

Cunitz was one of the first modern women to significantly contribute to scientific knowledge, and her work helped promote the heliocentric theory. Due to her innovative calculation methods and bold approach to the study of astronomy, she earned recognition as one of the most educated women of her time and is still remembered today as a pioneer of science and women's intellect.

GAME SETUP

Take the *Urania Propitia* board and place it to the right of your Player Board. Fill all six spaces of *Urania Propitia* with six Note tiles at random. Place Cunitz's round token on the rotating arrow symbol at the bottom of this board, and then place the square token on the first space at the top of the track.

In addition, use Cunitz's six personal Action tiles instead of the usual set.



Ability

Maria Cunitz's goal is to gain rewards from working on her book on the *Urania Propitia* board. You progress on the board's track and your aim is to match the round token to the color(s) of a Note tiles. When the colors match, you gain the indicated reward. You complete these goals using the two new icons on Cunitz's personal Action tiles:

The **Focus** icon is included on each single-color **increase** icon on Cunitz's Action tiles. After you evaluate the left-hand side of her Action tile, you may move the **round token** at the bottom of the *Urania Propitia* board onto the same color as the increase icon.

The **Move** icon allows you to move the **square token** forward a number of spaces equal to the icon's number. This icon is always in the right-hand side of the Action tile—you can't benefit from both Focus and Move with one moving action.



The *Urania Propitia* board has **colorless** and **colorful** spaces. When you move the square token onto a colorless space, you gain the indicated reward. When you move it onto a colorful space, compare the Note tile's frame with the color below the round token. If the **square and round token colors match**, you gain the indicated reward. Align your tokens on the *Urania Propitia* board to maximize your rewards!



Cunitz also has three personal Book of Comets pages. Each page allows her to Focus, moving the round token onto any space. Her pages also provide additional rewards:

- Gain 2 Quadrant tokens, and advance the square token 1 space on the *Urania Propitia* board.
- Increase a single observation die's value by 3, and advance the square token 1 space on the *Urania Propitia* board.
- Persuade an Inquisitor once, and advance the square token 2 spaces on the *Urania Propitia* board.

Note: When you place a token on the Book of Comets, you may gain Cunitz's rewards in any order.



The next space on the *Urania Propitia* board has a blue/red frame. To earn its reward, Cunitz needs to move her round token onto the red or blue space.

1. First, she points her telescope to an Action tile with the increase red observation dice icon. She selects it as her moving action for the turn.
2. After evaluating the moving action, the Focus icon allows Cunitz to move her round token onto the matching space. She moves it onto the red space.
3. For her fixed action, Cunitz decides to Observe. She uses a Comet token worth 2 to discount a Major Object, and spends the appropriate observation dice.
4. Once Cunitz finishes evaluating the Observe action, she places her Comet token onto the Book of Comets. She chooses to place it on her personal left-hand page.
5. Cunitz gains two Quadrant tokens, may move her square token 1 space forward, and may Focus. She may choose her rewards in any order. Cunitz moves her square token first. Because the color matches, Cunitz Persuades one of the Inquisitors in her cellar. Finally, she evaluates the Focus icon and moves her round token onto the blue circle (since the next colorful Note tile is blue).



Sophia Brahe (1556–1643)

The Danish astronomer and sister of the famous Tycho Brahe played a key role in his observations and calculations, including precise recordings of celestial objects. Her work with her brother contributed to the creation of one of the most accurate star catalogues of her time, *De Stella Nova*. Her records and mathematical skills laid the foundations for precise astronomical measurements.

GAME SETUP



Place Sophia's Overlay tile on the action space for upgrading on your Player Board. Near your Player Board, place Sophia's Sun and Venus tokens and set them so that Venus overlaps the Sun, as shown in the example below.

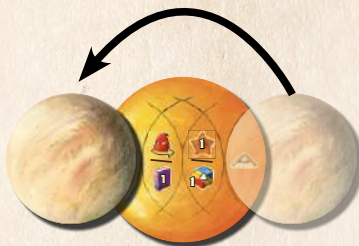


Ability

Whenever you move past the Upgrade action with your telescope and return to the bottom of the starry sky, move the Venus token one space to the right. The Overlay tile on your Player Board serves as a reminder to move Venus. This way, you will gradually change the revealed rewards on the Sun token. Whenever you Observe, you will additionally receive **all visible rewards** on the Sun **after** evaluating the action.



After moving past the Upgrade action the first time, the Venus token moves one space forward.



When Venus covers only the right-hand space of the Sun token, it will move back to the first position the next time Sophia's telescope passes the Upgrade action.

Moon Objective

The Luna expansion adds a fifth Achievement token for all players. Once you have **observed the Moon twice**, place one of your Achievement tokens on the **Moon Achievement tile**. After doing so, you may gain either 3 victory points or two Quadrant tokens.

The Moon Achievement tile is a shared space available to all players. The tile's reward remains the same, even if another player has already placed an Achievement token on it.

Solo Game

When playing a solo game, the Luna expansion gives Tycho Brahe five new Movement tiles and one new Action tile.

You may choose one of the four difficulty levels. Use the set of six movement tiles according to the scheme on the right.

The solo game has no additional rules—just Tycho's new tiles.

During the setup, put the new action tile on random position among the set of five from the base game. Create a line of six Action tiles.



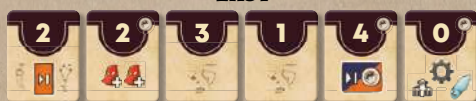
Tycho uses a combination of Movement tiles from Luna and the base game, as listed nearby. Make a stack of six tiles and shuffle them. Each turn, Tycho evaluates one Movement tile as usual.

There are additional bonuses for Tycho on some Movement tiles. When evaluating these tiles, Tycho first gains the bonuses (comet token, new dice, lecture or inquisitor token), then moves his telescope and evaluates the Action tile as usual.



Sophia just finished her second Observe action targeting the Moon. After evaluating the Scoring tile, Sophia places one of her Achievement tokens on the Moon Achievement tile. She decides to take two Quadrant tokens as her reward so she can pay for another free action.

EASY



NORMAL



HARD



FLAMING



MOVEMENT TILE ACTIONS:



Tycho's token moves 4 spaces. If it reaches an Action tile with the Moon, the token stops early.



Upgrade the current Action tile or the closest one to the right. Then, Tycho Lectures and Spots a Comet.



Tycho gains an observation die, then moves 3 spaces. If it reaches an upgraded Action tile, the token stops early.



Tycho's new Action tile allows him to Observe the Moon. He needs to pay two dice and there must be a revealed Moon tile to be observed.

Tycho always selects the Moon tile for which the Scoring tile will gain him the most victory points.

Tycho gains victory points from the Moon tiles' observation rewards. He only gains victory points, not other rewards (discovery cards, quadrant tokens, etc.). Next, Tycho gains the Scoring tile's bonus scoring, and you gain the tile's basic scoring.

Finally, Tycho places the Grand Inquisitor on the leftmost space of the Bonus Board without gaining a reward for doing so. **He never places Grand Inquisitors in his cellar!**

After observing the Moon, Tycho moves one of his Comet tokens, adds a Discovery card to his Library, gains 10 victory points, and moves his Book token right 1 space.

Comet book tile

In a 1-player or 2-player game, you may cover the four unused pages in the Book of Comets with this tile, so the unused pages do not confuse any players.



After drawing this Movement tile, Tycho's token moves two spaces to the right, because it has to stop on the Moon Action tile. He begins to evaluate the new Action tile from the Luna expansion.

Tycho doesn't have two or more unpersuaded Inquisitor figures in his cellar, so he can't take the top row's actions. However, he has four observation dice! Tycho can perform the tile's second action and Observe the Moon. He pays two observation dice.

Currently, two Scoring tiles are face-up. Tycho can gain 4 victory points from the first because he has removed two Constellation tokens. Alternately, he can gain 6 victory points from the second because he has three Major Objects. Thus, Tycho chooses the latter.

First Tycho gains the 6 points as an observation reward from the moon tile.

Then he gains the bonus scoring and player gains the basic scoring from the tile.



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