BioHACK

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RULEBOOK

Story

⎮ Corpse

It all started with a single fire.

A small wooden house, secluded on a hill north of the Delbrutsk 46 district, was on fire.

The firefighters thought it was an abandoned building as it was an outdated private house still using electricity instead of flowshell. However, the burnt body of a man was found in the house after the fire was extinguished.

Johann Maischberger. A man who was once accused of playing God.

It has been twenty years since he disappeared from the public.

The famous laboratory of Professor Maischberger's laboratory was the biggest money maker at Xebedelia University. The university built a new research building for him, which was known as the "Castle of Maischberger" . The castle attracted young and ambitious scientists from various fields. However, it was not just a technical exchange. Together with those researchers, Maischberger secretly started a series of experiments to create and modify human beings using genetic engineering techniques.

These rumors led the academic society to form a dedicated committee to investigate the issue. The team of investigators found an unrecorded culture plant in the "castle" . The plant was completely broken and empty with only a faint red light of flowshells. However, they found some hairs and blood inside the chamber, showing that there was a human - or something similar to a human - inside. The confiscated experimental records were sufficient to support the allegations, although some parts are ciphered with incomprehensible words and symbols. They headed to the residence to arrest Maischberger, but he was already gone.

The committee decided to expel those young researchers involved in the experiments from academia for their lack of bioethics. They left the scene, regarded as "mad scientists" by society. And all experimental records were completely sealed.

This scandal was called "Biohack Incident" named after the codename in the record.

Twenty years have passed since then.

Long missing Maischberger's death shocked the whole country. The autopsy revealed that he had weak legs, suggesting he had someone to care for him. However, no caregiver was found, dead or alive. Soon after, it was reported that his daughter, who has been separated since the biohack incident, took the burned house.

⎮⎮ Letter

An anonymous letter was delivered to the research institute of Dyne Naga Associates (DNA Inc.), a half year later from the fire.

DNA Inc. is famous for its gene therapy business called "D- Doping" which improves human abilities. D-Enhancement quickly became popular along with the worldwide increase of flowshell usage. Flowshell causes strong red phosphene and the phosphene can not be treated by any other means than D-Enhancement. This brought DNA Inc. to one of the top companies in the world.

Franz Mauer, CEO of DNA Inc. said in an interview:

"You should consult us, DNA Inc., not ophthalmologists nor opticians."

"These are the only parts of the research data I own. I hope that DNA Inc. would be interested in purchasing the whole dataset."

The director of the research institute was skimming the research data attached to the letter in Mauer's office. The anonymous letter containing a few research records about genetic experiments had reached Mauer via employees, executives, and the director.

"These look like genetic blueprints of some kind of organisms," said the director. "There are so many words and symbols that make no sense. It will take a lot of time and effort to understand these if there is any meaningful information here."

Mauer was thinking silently by himself but realized that the director was staring at him. He cleared his throat and tossed the letter on his desk.

"Well, there are some people who try to deceive with fakes"

Then he reached out to the director to receive the documents.

"Maybe a sci-fi paranoia. I think we should ignore this."

However, Mauer knew that this was not a fake at all.

The mysterious words and symbols on the document were the same as those on the experimental records of the biohack incident. Mauer had seen those as a member of the investigation committee twenty years ago.

⦀ Basement

On the next day off, Mauer was standing at Maischberger's burnt house. He thought that the documents were taken from here.

"The castle of Maischberger, huh..."

He gently pulled the door to find it was not locked, unexpectedly. Everything in the house was burnt and that sight disappointed him. It seems that no records could survive in the house in paper or electronic form. Then, where did the documents come from?

"Mr. Mauer?"

Mauer was surprised by a sudden call behind him. He turned around and found a man standing at the entrance. The man looked young and healthy, but his voice and face lacked any expression.

"I have the order to guide you."

The man pointed to the back of the house. Mauer turned around again and was surprised again.

Another man was standing in the kitchen and in front of him was a gaping staircase to the basement.

He went down the stairs following the men and entered a basement room. Several men were standing still at the wall with no expression on their faces.

"So you know where the documents come from." said the lady sitting at the desk.

"I hope that you are interested in the deal."

The lady called herself Gene Maischberger, a daughter of Johann Maischberger.

And she said:

She took over the house after Dr. Maischberger died and discovered the hidden basement. She found an electric device full of research data in the basement. The device was locked but she could unlock it easily somehow. There were also those men with no expression. She called them "Noman" and explained that they are bioroids created by Dr. Maischberger who are absolutely obedient to humans. Dr. Maischberger was already disabled when he was in this house and living by ordering Nomans for help.

"He was studying the technology to create humans with modified abilities for a long time. Nomans are the most successful examples."

Nomans looked like humans although they did not have their own will. They only followed the orders given and tried to collaborate with other Nomans to accomplish the order.

"If I tell them to kill you, they will work together to kill you immediately, without a hint of hesitation."

So, in a sense, Dr. Maischberger's research was already completed.

However, it seems that he continued his research and tried to create new species by combining many genes of various living species. The limited experimental capacity of the basement prevented him from actually creating new species by himself, yet he had already completed the genetic blueprints of some creatures, some of which were based on myths and legends. Gene proposed to Mauer to buy these genetic blueprints.

Mauer thought:

This "biohack" technology can be the next big business for the labor or military market, once established. Their D-Enhancement technology is very popular but the demand is becoming saturated already. We need the next things...

Recent political situations should be considered too. The fear of a flowshell depletion has heightened a sense of urgency around the world. Someone said that the next world war will begin when the red lights go out.

Ethical views on gene engineering technologies have changed gradually over the past decades. At first, D-Enhancement was strongly avoided by most people, but now almost all people accept it.

However, it is still risky to deal with the "biohack" technology openly.

"Your proposal is definitely worth considering." Mauer began. "However, there is a problem that cannot be ignored. Those incomprehensible words and symbols in the blueprints. I cannot understand them. Researchers in my company cannot understand either. And even you cannot understand, I presume, Ms. Maischberger?"

Mauer thought that she looked too young as the daughter of Dr. Maischberger.

"If we can't decipher them, the blueprint is nothing more than an old man's delusion. Do you have a blueprint of a code-breaking creature?"

Mauer grimed with his own joke until Gene replied to him.

"You should know who to ask."

It was an unexpected answer for him. He felt like the light in the basement flickered.

"Who are you talking about?"

"I'm sure you know them very well."

Gene smiled.

OK. She was expecting this from the beginning, Mauer understood.

"Find the apprentices of Johann Maischberger, who lost everything by the academia."

And thus you were called.

IV **Biohack**

You first met Mauer.

He gave you the keys to an empty warehouse named "Biofarm" equipped with culture plants. Then he explained the followings:

This biohack research has nothing to do with DNA Inc. but is a private project designed and conducted by you.

We offer you the biofarm and the initial funds. You also have three Nomans each to participate in physical labor in and out of the laboratory. You will need to collect creature blueprints, the necessary genes, and additional funds by yourselves. Nomans would be helpful in those tasks.

Any progress should be reported accordingly.

Once the biohacking technology is established, we will invite the most contributing person among you as the principal investigator with the executive position. That means, one of you can regain your life after 20 years of distressing time......

Then you met Gene Maischberger.

She gave you some blueprints and information about the black market of various genes.

"I don't care about the result of the research. I don't care if you succeed or fail. I just want to deny his life by exchanging his lifework for money. That's all."

Then he looked over your faces.
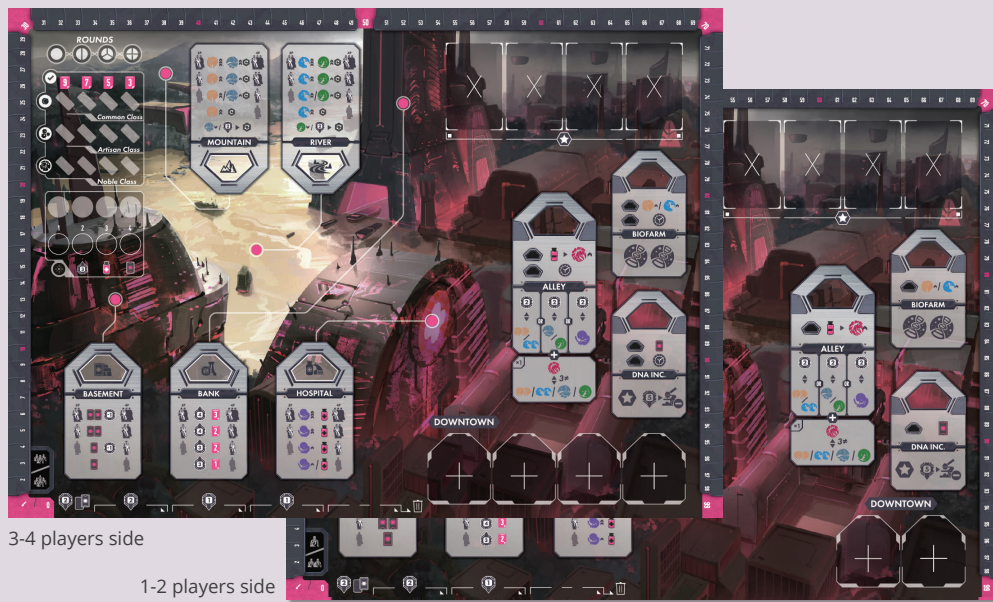
"I'm sure you will understand."

You realized that you have seen her before. Her eyes are the same as the eyes watching you from inside the culture plant 20 years ago.
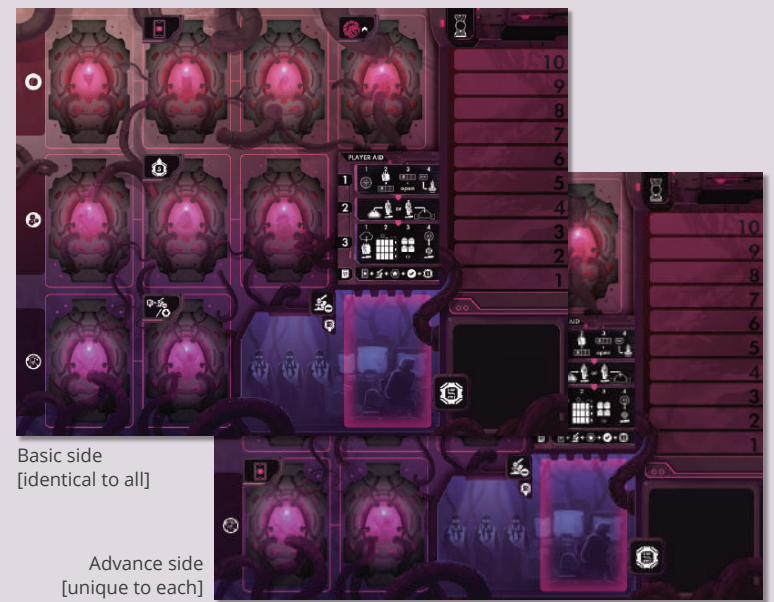
3-4 players side

1-2 players side

Double-sided Main Board x1

Basic side
[identical to all]

Advance side
[unique to each]

Double-sided Player Board x4
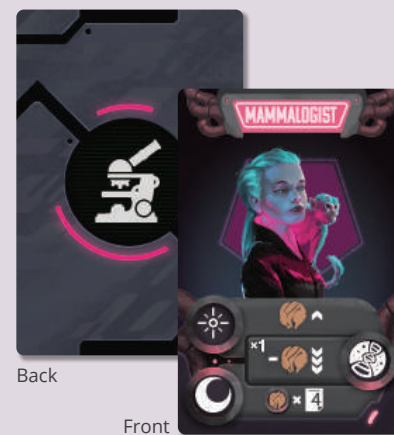
Back
Front

Back
Front
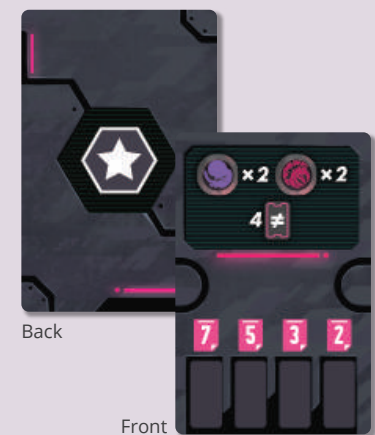
Back
Front

Back
Front

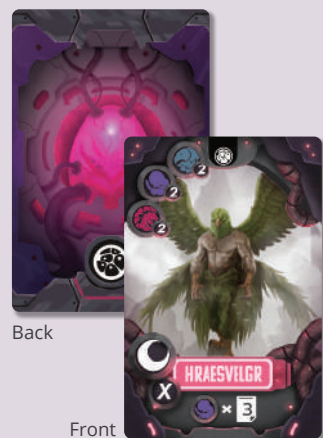**Location Cards x20**
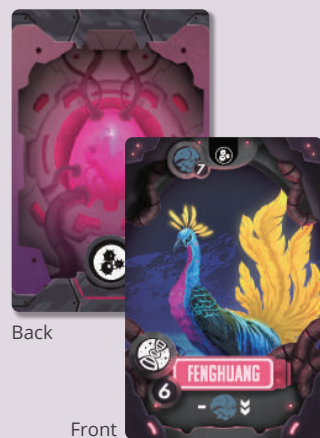
(4 colors x 5 each)

Back

Front

MAMMALOGIST

Scientist Cards x6
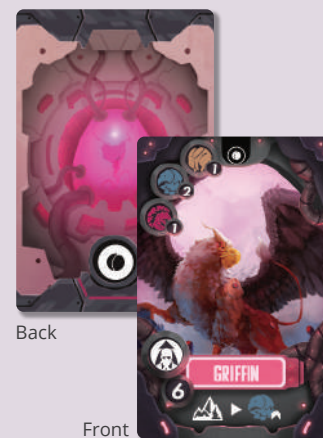
Back

Front

Milestone Cards x10

Back

Front

HRAESVELGR

Back

Front

FENGHUANG

Back

Front

GRIFFIN

Creature Cards x48

(Noble class x12, Artisan class x16, Common class x20)

Back

Front

DOWNTOWN

Government Office

Downtown Tiles x20

Danger Die x1

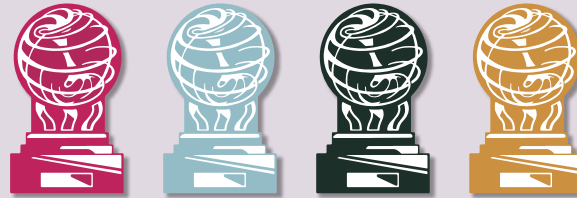**Coins (value 1) x20**

Coins (value 5) x8
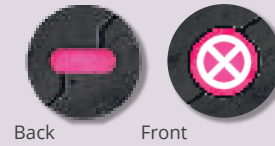
Lock Tiles x8

Back   Front

Noman Tokens x12
(4 colors x 3 each)

Milestone Tokens x28
(4 colors x 7 each)

Evaluation Point (EP) Tokens x4
(4 colors x 1 each)

Turn Order Tokens x8
(4 colors x 2 each)

Mammal   Aquatic   Avian   Reptile   Primate   Feral

Gene Markers x24
(6 types x 4 each)

Full side   Empty side

Medicine Tokens x8

First Player Token (for 2 players) x1

Round Marker x1

Overview

"Biohack" is a medium weight game for 2-4 players about bioengineering experiments in the dark future.

Players take the role of scientists who are expelled from academia for participating in the notorious "Biohack" project led by a mad genius, Dr. Johann Maischberger. Now, a global biotech conglomerate, DNA Inc., is interested in the lost legacy of the Biohack project and gives you a second chance. With the help of specialized worker bioroids called "Nomans" , you will try to progress the project. The most prominent one will be awarded status and prestige as a principal scientist of DNA Inc.

Now is the time to show your talent and courage to face the dark side of science.
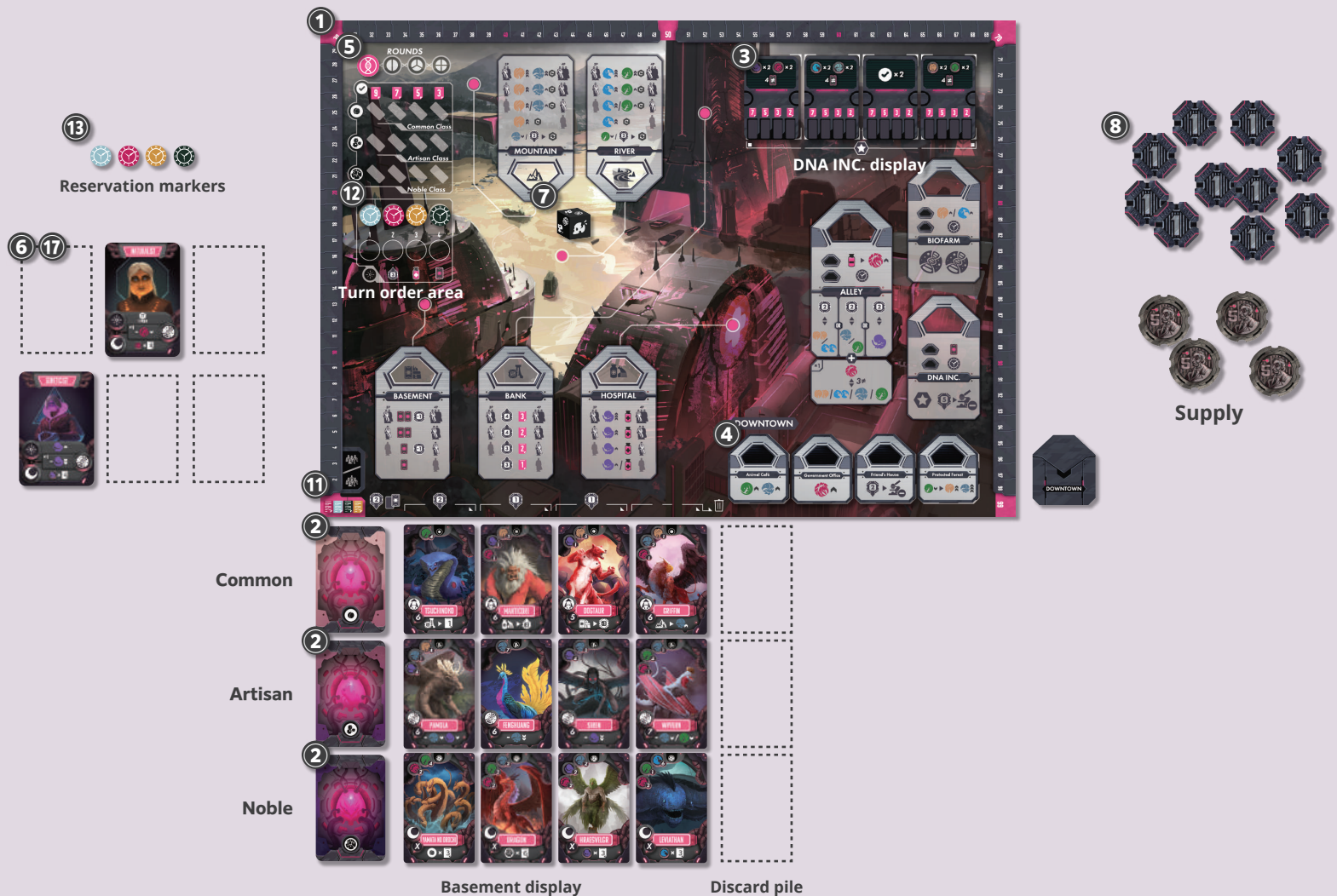
NOTE: The following rules are for 3-4 players game. For 2 players game, please refer to page 21. For solo game, please refer to page 23.

Play Area Setup

① Place the **main board** with the 3-4 players side (/) facing up in the center of the table.

② Sort the **creature cards** by their classes **(common , artisan , or noble)** and shuffle them separately. Place the 3 decks face down below the BASEMENT area of the main board starting with the common class deck at the top, the artisan class deck at the middle, and the noble class deck at the bottom. Draw 4 cards from each deck and arrange them face up next to the corresponding deck to form a 4 by 3 grid. This is called the basement display. Please keep the right side of the display open for discard piles.

③ Take 4 random **milestone cards** and place them face up on the spaces in the top-right of the main board. This area is called the **DNA Inc.** display. Return the rest of the milestone cards back to the box.

④ Shuffle all **downtown tiles** and place them as a face-down stack near the DOWNTOWN area at the bottom-right of the main board. Take 4 tiles and place them face-up on the spaces in the DOWNTOWN area.

⑤ Place the **round marker** on the 1st space of the round track at the top-left of the main board.

⑥ Place all 6 **scientist cards** face-up near the main board.

⑦ Place the **danger die** near the MOUNTAIN and RIVER space on the main board.

⑧ Place **coins** next to the main board to form a **supply.**

Reservation markers

DNA INC. display

Turn order area

Supply

Common

Artisan

Noble

Basement display

Discard pile

Player Setup

⑨ Each player chooses a color and takes **7 milestone tokens, 3 Noman tokens, 1 EP marker, and 2 turn order markers** of matching color. In addition, each player receives a set of **gene markers, 2 medicine tokens, 2 lock tiles, and a set of location cards**. When playing with 3 or fewer players, return all unused components back to the box.

⑩ Each player randomly takes a **player board** and places it in front of them with their preferred side facing up. We recommend using the basic side in your first game. The side of the player board can be different among players.

⑪ Each player places their **EP token** on the "0" space of the EP track at the bottom-left of the main board. Each time a player gains EP during the game, they advance their EP token a number of spaces equal to the amount of EP gained.

⑫ Take one of each player's **turn order tokens**. Place them in random order on the upper row of the turn order area (initiative track) at the left side of the main board. This determines the turn order in the first round: leftmost goes first and so on. These tokens are now referred to as initiative markers.

⑬ Each player then places the other turn order token near the turn order area (outside the main board). These tokens are used to reserve the turn order in the future using the bottom row of the turn order area (reservation track) and are referred to as reservation markers.

⑭ Place the **milestone tokens** near the player board.

⑮ Stand the 3 **Noman tokens** on the Noman space of the player board.

⑯ Place the 6 **gene markers** on the "0" space of the gene storage area at the right side of the player board.

⑰ Each player picks one **scientist card** in reverse turn order. Place the card in the scientist area at the bottom of the player board. Put the lock tiles face-down ( ) on the middle and bottom rows of the scientist card to represent that these abilities are not available yet. Return the remaining scientist cards back to the box.

⑱ Each player takes any **one face-up creature card** from the basement display for free in reverse turn order and keeps it in their hand. Once every player has taken a card, repeat the process again in the same reverse turn order. Then, slide the remaining creature cards in the basement display from left to right so that the empty spaces are on the left side of the display. Fill all empty spaces by drawing creature cards from each corresponding deck.

⑲ Each player receives a certain amount of **coins** based on their turn order from the supply (6/7/8/9 coins for turn order 1/2/3/4). Place the coins on the coin area at the bottom right of the player board.

⑳ **Medicine tokens** have two sides: full side ( ) and empty side ( ). 1st and 2nd players in their turn order place one of their medicine tokens with the full side up and the other with the empty side up. 3rd and 4th players place both of their medicine tokens with the full side up.

㉑ Each player places their 5 **location cards** face-down in front of them.

Gameplay

The game continues up to **4 rounds**, and each round consists of the following three phases. However, in the last round of the game (4th round or the round in which a player created their **7th creature**), skip the ③ Cleanup Phase, and the end game scoring will take place immediately after the ② Research Phase.

In the end game scoring, each player counts all the EP they have gained. The player with the most EP wins the game.

① **Planning Phase**	② **Research Phase**	③ **Clean Up Phase**

① Planning Phase

Each player performs the following five steps in order.

1	Reset turn order	2	Resolve planning effects	3	Remove reservation markers	4	Select location cards	5	Reveal location cards and place Noman tokens

1. Reset turn order

NOTE: Skip this step in the first round.

Reset the turn order for this round based on the **reservation track** (the bottom row of the turn order area). Each player who **has not placed their turn order marker on the reservation track** yet must place their unused marker on the leftmost empty space there, following the order in the upper row.

Then, rearrange the markers on the initiative track (the top row of the turn order area) so that they are in the same order as in the reservation track. Shift tokens to the left to fill the empty space (if any) on the initiative track.

NOTE: Do not remove the turn order markers from the reservation track yet at this point!
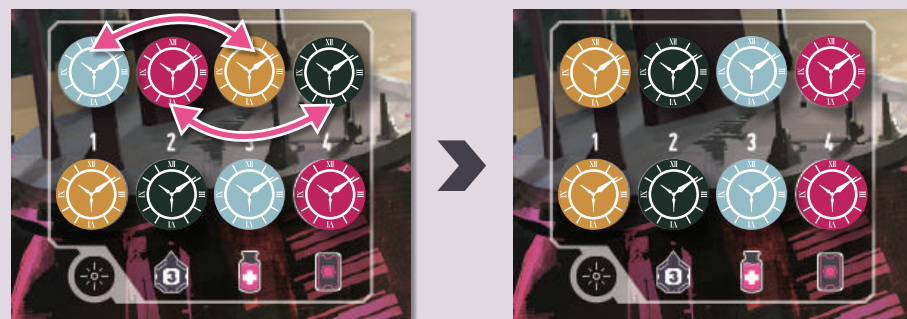
Example

In this 3-player game, the RED player (🕐) placed a turn order marker in the "4" space at the reservation track [A] in the previous round. The BLUE player (🕐) and YELLOW player (🕐) did not place their reservation markers in the previous round. As BLUE is earlier on the initiative track, BLUE places the remaining turn order marker in the leftmost "1" space on the reservation track. Then YELLOW places the marker in the "2" space [B]. After every player places their markers on the reservation track, markers on the initiative track are rearranged in the same order as the reservation track (BLUE-YELLOW-RED), then shift the rightmost marker to fill the empty space [C].


A   **B**   **C**
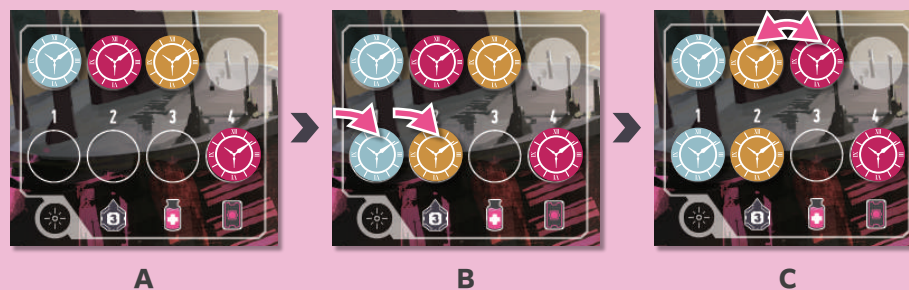
2. Resolve planning effects

Each player resolves all of their **planning effects** (⟶☀⟵) in any order. This effects resolution is optional, each player may decide not to resolve the effect(s) they have. All players may resolve simultaneously. However, you may resolve based on the turn order if any player wishes to do so.

Each player has at least one planning effect, which is shown on the top row of their scientist card. Players can gain access to the second planning effect by placing their turn order marker on the "2", "3", or "4" space in the reservation track. The effects are indicated by the icons below the space.

See the Icon List on page 27 for detail.
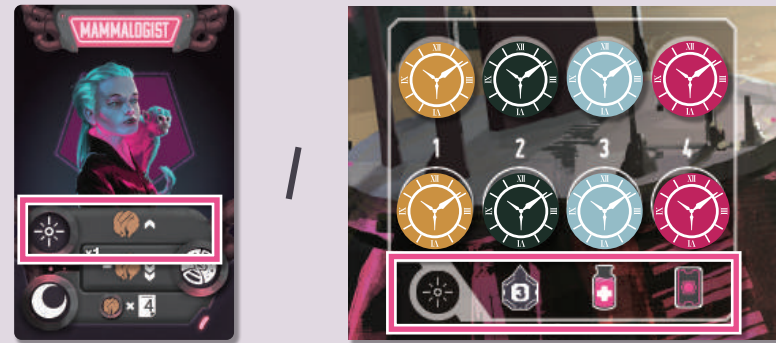
3. Remove reservation markers

Remove all turn order markers from the reservation track, and place them back near the turn order area (outside the main board).
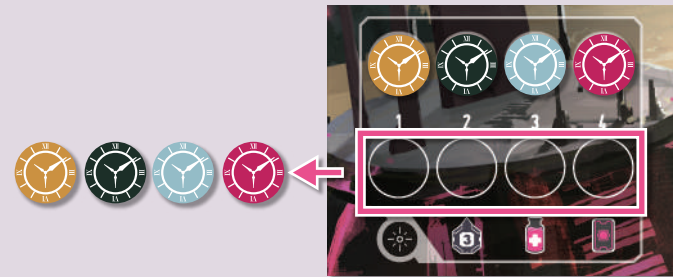
4. Select location cards

Each player chooses as many **location cards** as their **active Nomans** (see below) from the set of 5 location cards. Place the selected location cards face-down secretly. Do not let the other players see the location names on the front side.

Noman and Medicine

Nomans can be either "active" or "injured". Nomans **standing** on the main board or in the Noman area on the player board are considered to be **"active"**. Nomans can be injured during Research (see Danger Die on page 9). **"Injured"** Nomans should be **laid down** in the Noman area on the player board. Injured Nomans are not counted toward the number of locations to select (①-4. Select location cards) and cannot perform any research or experiment (② Research Phase).

At any time during the game, you can heal one of your injured Noman to the active state by flipping one of your medicine tokens from its full side ( ) to its empty side ( ).

Every time you gain a medicine ( ), flip one of your medicine tokens from the **empty side** ( ) to the **full side** ( ). If both of your medicines are already full, gaining another medicine has no effect.
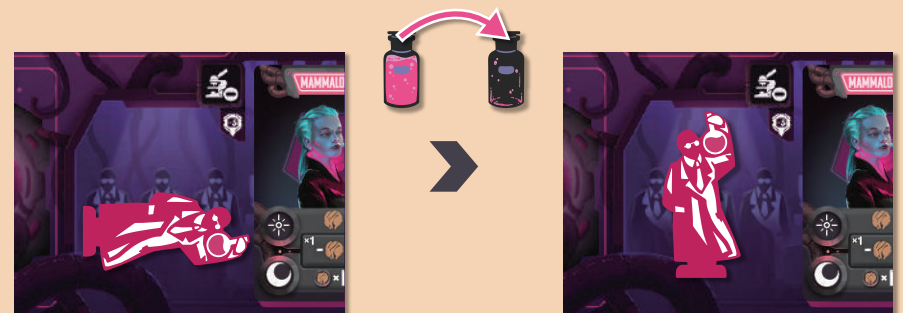
5. Reveal location cards and place Noman tokens

Each player reveals the location cards they selected simultaneously. Then each player places one of their **active Nomans** in each location they selected.

The 5 locations indicated in the location cards are called **public spaces**.

Players take their location cards back and keep the cards in front of them until the next round.
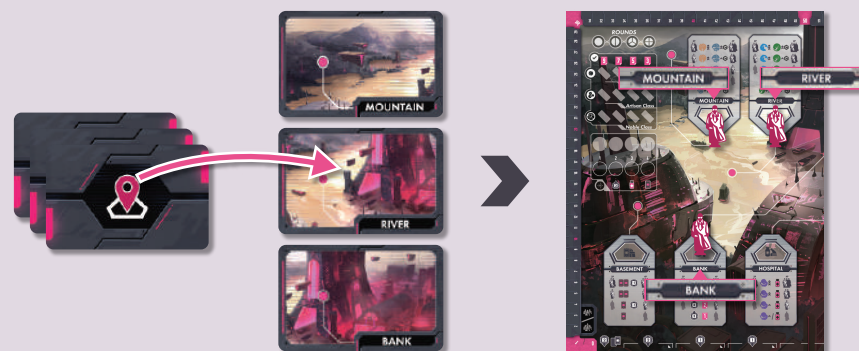
② Research Phase

Players take turns based on the markers on the initiative track from left to right. When the rightmost player has finished their turn, then the leftmost player will take a turn again. On a turn, the player must take one of the following options.

Research	/	**Experiment**	/	**Pass**
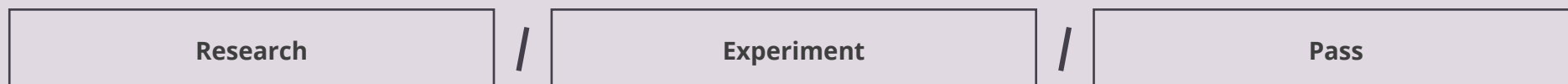
If a player chooses to pass, the player cannot take any more turns in the rest of the phase. who passed on their turn cannot take turns for the remainder of this phase. Once every player chooses to pass, the research phase ends.

Research(= retrieve a Noman from a public space)

Retrieve one of your Nomans from a **public space** on the main board. and place it standing up in the **Noman space** of your player board. Then, perform the action shown in the space.

The resources you can gain by the action depend on the **number of players** in the game and the **number of Nomans remaining** in the space after retrieving your own Noman.
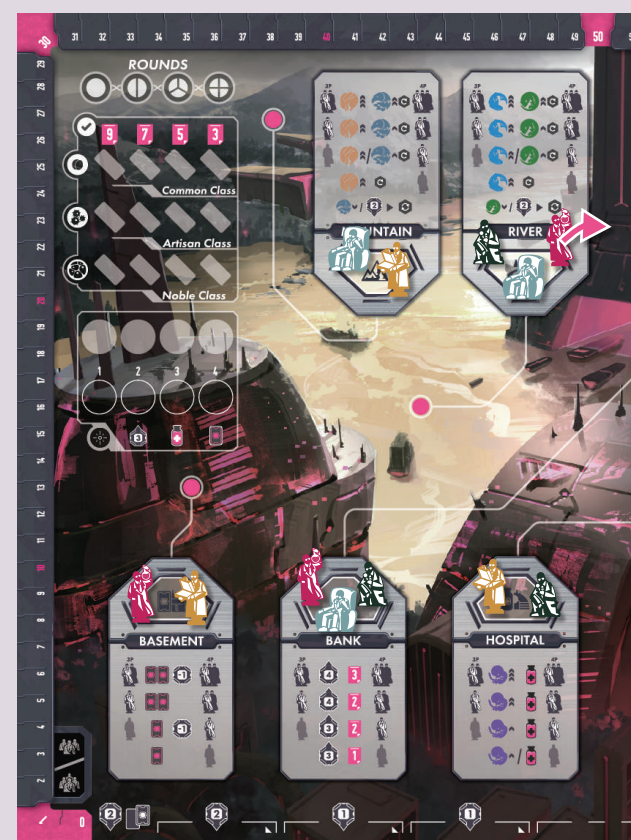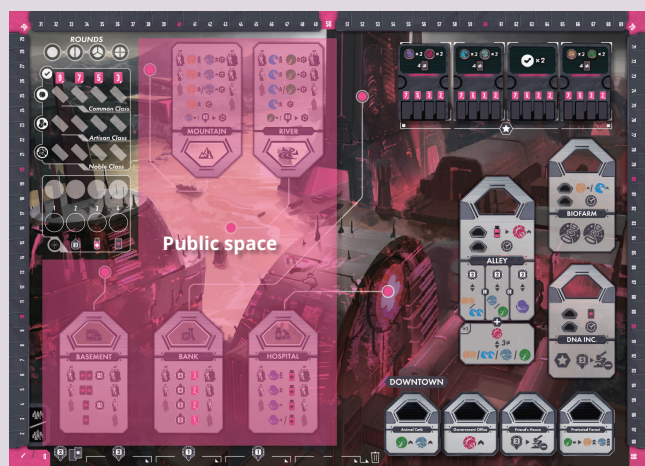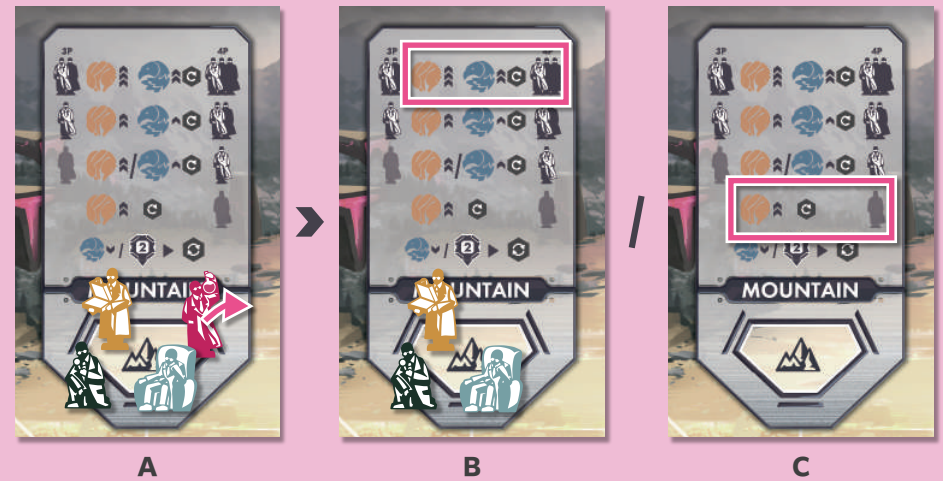

Public space

Example

In a 4-player game, the RED player ( ) took a Noman from the MOUNTAIN public space [A].

As there are still 3 Nomans remaining in the space after RED retrieved the Noman, RED performs the action indicated in the first row of the MOUNTAIN space [B].

If RED retrieves the Noman later in the phase when there are no other Noman left in the space, RED will take the action shown in the fourth row which has weaker effects [C].

A   B   C

Gene and Coins

Most of public spaces provide Genes or coins.

Each time you gain (or pay) a **gene**, move the corresponding **Gene marker** one step up (or down) on the gene storage area of your player board. You can store up to 10 genes for each type. If you gain a type of gene more than 10, the excess will be lost.

When you gain **coins**, take that amount of coins from the **supply** and place them on the coin area of your player board. When you pay coins, return that amount of coins to the supply from your player board. There is no limit to the number of coins a player can have. In the rare situation that the coins run out, please use appropriate substitutes.

Danger Die

Collecting genes always comes with risks from various dangerous beasts.

When researching at MOUNTAIN or RIVER, you must roll the **danger die** once and apply the effect of the icon shown as a part of an action (see the Icon List on page 27 for details).

You may gain a valuable **feral gene** ( ), or your Noman may get **injured**, or both, depending on the result of the die roll. You may reroll the danger die by paying the reroll cost indicated in the space. You can **reroll** the die any number of times as long as you can pay the cost. Only the result of the last roll is applied.

Some planning effects enable you to roll a danger die in the planning phase.

Die Roll

 Lay down the Noman used for this action (or any 1 active Noman if rolled as a planning effect) and put it in its injured state.

 Gain 1 feral gene. Also, lay down the Noman used for this action (or any 1 active Noman if rolled as a planning effect) and put it in its injured state.

 Gain 1 feral gene.

 Gain 1 mammal gene or 1 aquatic gene.

Public space : MOUNTAIN

Remaining number of Nomans in 3 player game	Remaining number of Nomans in 4 player game	Action
2	3	Gain 3 mammal genes and 2 avian genes. Then roll the danger die once.
1	2	Gain 2 mammal genes and 1 avian gene. Then roll the danger die once.
0	1	Gain 2 mammal genes or 1 avian gene. Then roll the danger die once.
-	0	Gain 2 mammal genes. Then roll the danger die once.
Danger die reroll cost		Pay 1 avian gene or 2 coins.

Public space : RIVER

Remaining number of Nomans in 3 player game	Remaining number of Nomans in 4 player game	Action
2	3	Gain 3 aquatic genes and 2 reptile genes. Then roll the danger die once.
1	2	Gain 2 aquatic genes and 1 reptile gene. Then roll the danger die once.
0	1	Gain 2 aquatic genes or 1 reptile gene. Then roll the danger die once.
-	0	Gain 2 aquatic genes. Then roll the danger die once.
Danger die reroll cost		Pay 1 reptile gene or 2 coins.

Public space : BANK

Remaining number of Nomans in 3 player game	Remaining number of Nomans in 4 player game	Action
2	3	Gain 4 coins and 3 EP.
1	2	Gain 4 coins and 2 EP.
0	1	Gain 3 coins and 2 EP.
-	0	Gain 3 coins and 1 EP.

Public space : HOSPITAL

Remaining number of Nomans in 3 player game	Remaining number of Nomans in 4 player game	Action
2	3	Gain 3 primate genes and 1 medicine.
1	2	Gain 2 primate genes and 1 medicine.
0	1	Gain 1 primate gene and 1 medicine.
-	0	Gain 1 primate gene or 1 medicine.

Public space : BASEMENT

Remaining number of Nomans in 3 player game	Remaining number of Nomans in 4 player game	Action
2	3	May purchase up to 2 cards from the basement display or from the top of the deck with 1 coin discount from the total purchase cost.
1	2	May purchase up to 2 cards from the basement display or from the top of the deck.
0	1	May purchase up to 1 card from the basement display or from the top of the deck with 1 coin discount from the total purchase cost.
-	0	May purchase up to 1 card from the basement display or from the top of the deck.

Purchasing Creature Cards

In "BASEMENT" public space, you may purchase creature cards from the basement display or creature card decks and add it to your hands.

When purchasing from the display, the purchase cost of each card is 2 coins / 1 coin / 1 coin / free (in order from the leftmost column). Empty spaces after purchase will not be replenished with cards until the ③ cleanup phase.

When purchasing from the decks, the purchase cost is 2 coins per card. Look at two cards from the top of any deck, add one to your hand, and return the other to the bottom of the deck. If the deck runs out in the middle, shuffle all the cards in the corresponding discard pile face down and make a new deck.

If you are able to buy two creature cards, you may combine the two methods above.
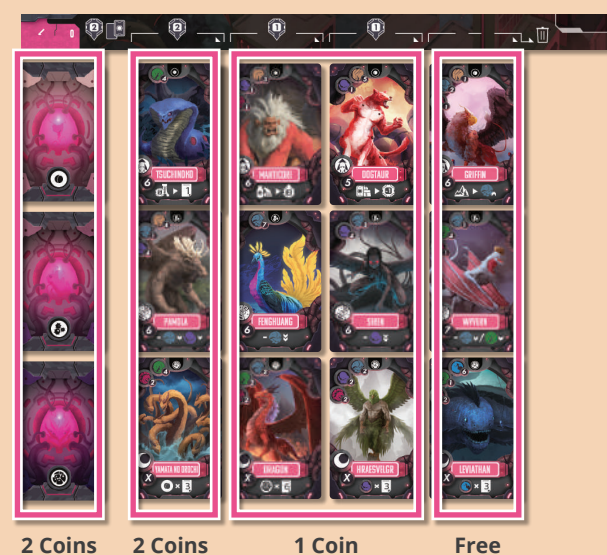

2 Coins   2 Coins   1 Coin   Free

Experiment (= place a Noman)

Take one of your active Noman from your player board (either you have retrieved from a public space or healed from injury) and deploy it in **one of the experiment spaces** on the main board in a standing position. Then, perform the action shown in that space.
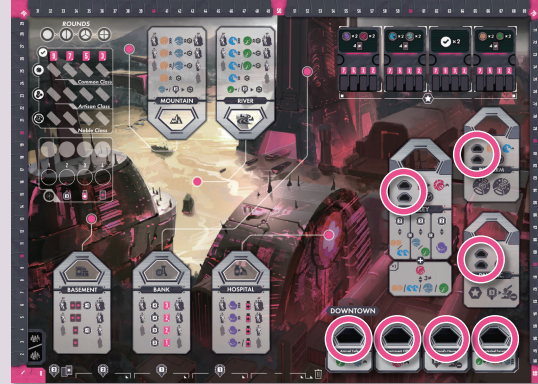
There are two types of experiment space: Advanced and Basic.

Basic experiment space
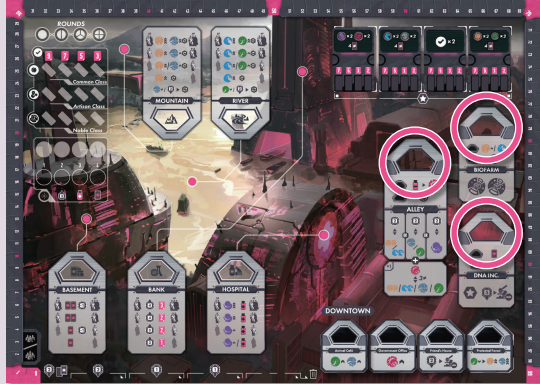
Large experiment spaces where any number of Nomans can be placed. Perform the main actions shown below without the bonus action.

Advanced experiment space

Small experiment spaces with advanced technology. You may gain the **bonus action** indicated by the icons on the right side of the space before performing the main actions shown below. **Only one Noman can be placed in each advanced experiment space.**

Basic experiment spaces : BIOFARM

In BIOFARM, you may **create up to 2 creatures** from your hand and place the creature cards on your player board. For each creature card to create, follow the steps below.

① Make sure your player board has a **space** for the creature card to create. You can place a maximum of 4 common class creatures on the top row, 3 artisan class creatures on the middle row, and 2 noble class creatures on the bottom row. You can not create the creature if there is no empty space in the corresponding row.
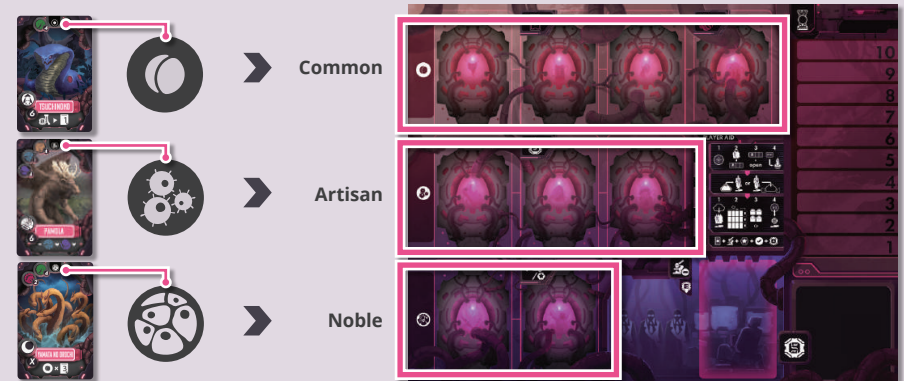
② Pay the **creation cost** of that creature card. You can activate your artisan class creatures on your player board to discount the creation cost. If you have already unlocked the middle row ability of your scientist card, you may also apply the discount shown there up to once per round (see below).

③ Place the creature card in the leftmost empty space of the corresponding row on your player board. If there is a **bonus** icon in the top-left corner of that space, you gain that bonus immediately.
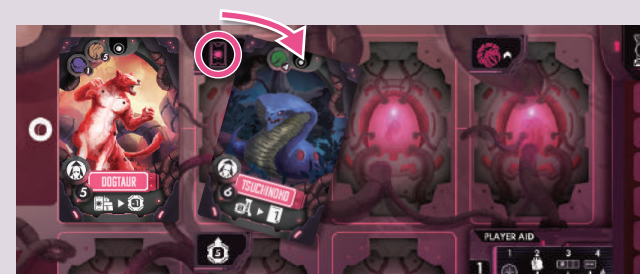
Creature Card

Creation Cost
The type and amount of genes you must pay to create the creature.

Timing
The timing at which the ability can be activated.

EP
The EP gained in the end game scoring if the creature has been created.

DOGTAUR

Class
There are three classes of creatures: Common, Artisan, and Noble. Most creatures have an **ability** that can be activated once they are created. Each creature class has a specific type of ability (see below).

Name

Ability
Activating the ability gives you the benefit shown here.

Type of Creature Card

Common class (research effect)
Once per round, you can activate the creature to improve an action at a specific location. If you have multiple creatures that enhance the same action, you can activate all of them at the same time to apply them to a single action.

Artisan class (discount effect)
You can activate their abilities to discount the costs when creating a creature. Icons on the card show the type and amount of genes to discount. If you have multiple creatures that can discount a single creature card, you can activate all of them at the same time and apply all the discounts to the creature.

You can activate the ability once per creation. Thus, a single creature can discount two creatures in a turn. You can activate the creation ability of the first creature you created to discount the cost of the second creature in the same turn.

Noble class (final score calculation effect)
Gain **EP** as indicated in the end game scoring.

Creation Milestones

There are 3 rows in the creation milestone area shown on the top-left of the main board which corresponds to the 3 creature classes. To achieve a creation milestone, you need to fill all spaces in the corresponding row on the player board with creatures.

During your turn, if you create a creature in the last empty space of any row on your player board, take one of your milestone tokens and place it in the leftmost empty milestone space of the corresponding row. Then, resume your turn.

At the end of the game, you gain the EP shown at the top of the milestone spaces with your milestone tokens.

◉	**Common class creature milestone**	You have created 4 common class creatures.
😀	**Artisan class creature milestone**	You have created 3 artisan class creatures.
🎯	**Noble class creature milestone**	You have created 2 noble class creatures.

Basic experiment spaces : ALLEY

In ALLEY, you may perform **one of the actions in the top row, or action in the bottom row, or both.** You can perform a top-row action and a bottom-row action in any order.

Top row: Option ①

You can pay either **"2 coins"**, **"2 mammal genes"**, or **"2 aquatic genes"** to gain one of the other options.

Repeat this **as many times as you want** in any combi-nation.

Top row: Option ②

You can pay either **"2 coins"**, **"1 avian gene"**, or **"1 reptile gene"** to gain one of the other options.

Repeat this **as many times as you want** in any combi-nation.
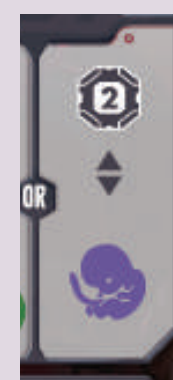
Top row: Option ③

You can pay either **"2 coins"** or **"1 primate gene"** to gain the other.

Repeat this **as many times as you want**.

+

Bottom row

You can pay **1 feral gene** to gain 3 of the following options: **"2 mammal genes"**, **"2 aquatic genes"**, **"1 avian gene"**, and **"1 reptile gene"**. You can not choose the same option multiple times. Alternatively, you can pay 3 of the following options: **"2 mammal genes", "2 aquatic genes", "1 avian gene", and "1 reptile gene"** (you can not choose the same option multiple times) to gain 1 Feral gene.

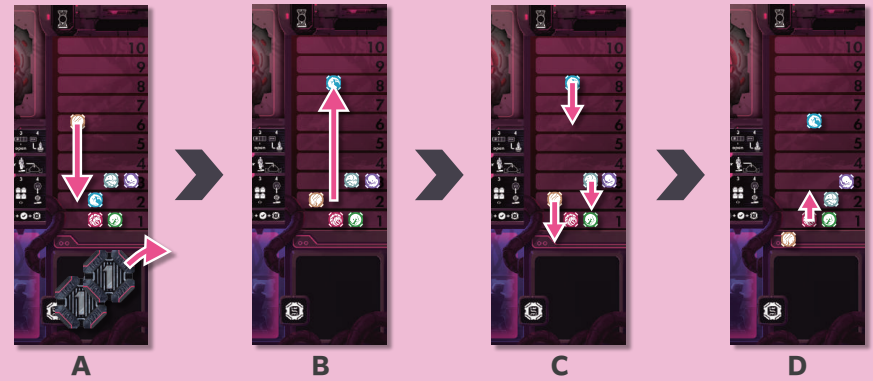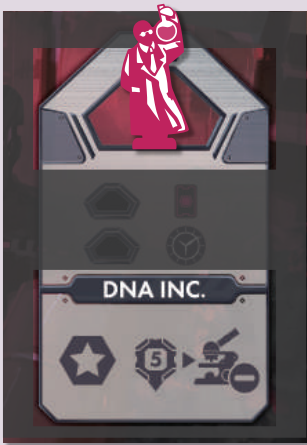**You may perform either one only once per action.**

Example

RED player places a Noman in the ALLEY and decides to perform option ① in the top row and the action in the bottom row.

First, RED paid 2 coins and 4 mammal genes [A] to gain a total of 6 aquatic genes (option ① on the top row) [B].

Then, RED paid 2 aquatic genes just received, 2 mammal genes, and 1 avian gene [C] to gain 1 feral gene (bottom row) [D].

A   B   C   D

Basic experiment spaces : DNA INC.

In DNA INC., you may perform two types of action: **report a research milestone** and **unlock a scientist card ability**. You can perform either one of the actions or both of the actions in any order.

Report a research milestone

You can report your achievement to place one of your milestone tokens on one of the milestone cards in the DNA Inc. display if the following two conditions are met:

· **You fulfilled the condition indicated on the milestone card**
· **You have not yet placed your token on the milestone card**

Place one of your milestone tokens on the leftmost empty space under the milestone card. In the end game scoring, you can gain as much EP as indicated in that space. You may only achieve one milestone per action.
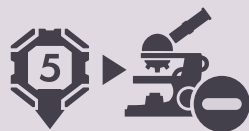
Unlock Scientist Card Ability

If your scientist card has one or more locked abilities, you can unlock one of the abilities by paying **5 coins**. Remove the **topmost lock tile** (⊖) from your scientist card and put it near your player board. Now you can use the unlocked ability. You may only remove one lock tile per action. You have to unlock the 2nd ability (middle row) before unlocking the 3rd ability (bottom row).
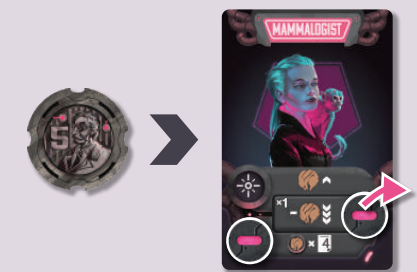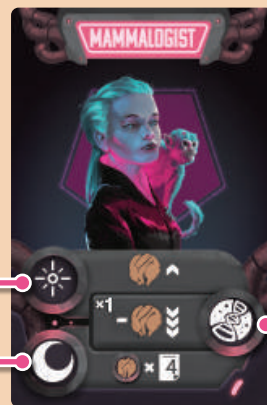

Scientist Card and its Effect

Top Row (Planning Ability)

During the planning phase, you can activate this ability to gain the indicated bonus. You can use this ability from the start of the game.

Bottom Row (End Game Scoring Ability)

In the end game scoring, gain EP as indicated. You need to unlock the scientist card ability twice to gain this bonus EP.

Middle Row (Creation Discount Ability)

When creating a creature in BIOFARM, you can activate this ability to discount the creation cost as shown by icons. Note that this ability can be activated once per round, unlike the discount ability of creatures.

Place a lock tile face-down (⊗) after activation as a reminder. This tile will be removed later in the Cleanup Phase. This ability will be available after the first unlock.

Advanced experiment spaces : DOWNTOWN

There are **4 unique tiles in the downtown** area every round.

Each downtown tile has one **advanced experiment space**. You can place a Noman in an empty space on a downtown tile to immediately gain the bonus indicated at the bottom of the tile. See page 27 for details of icons.

Advanced experiment spaces : BIOFARM

Before performing the BIOFARM action, gain 1 mammal gene or 1 aquatic gene.

Before performing the BIOFARM action, place your reservation marker on any empty space in the reservation track.

Advanced experiment spaces : ALLEY

Before performing the ALLEY action, flip a medicine from its full side to its empty side to gain 1 feral gene.

Before performing the ALLEY action, place your reservation marker on any empty space in the reservation track.

Advanced experiment spaces : DNA INC.
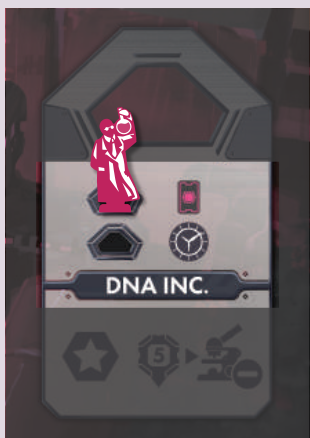
Before taking the DNA INC. action, you may take one creature card from the basement display to your hand by paying its purchase cost.

Before performing the DNA INC. action, place your reservation marker on any empty space in the reservation track.

Pass

You can withdraw from the current research phase by choosing to pass. You must **retrieve all of your active Nomans from public spaces** before passing. Although it is unlikely to happen, you may pass with your active Nomans remaining on your player board: you don't need to place all of your active Nomans in experiment spaces.

You cannot take further turns for the rest of this phase once passed. When all players have passed, the ② research phase ends.

③ Clean Up Phase

Skip this phase in the **4th round** or in the round in which a player created their **7th creature**, and move to the end game scoring immediately after the ② research phase.

Otherwise, follow these 5 steps in order.

| 1 | Collect Noman Tokens | ❯ | 2 | Replenish Basement Display | ❯ | 3 | Update DOWNTOWN Tiles | ❯ | 4 | Collect Tile from Science Card | ❯ | 5 | Advance Round Marker |
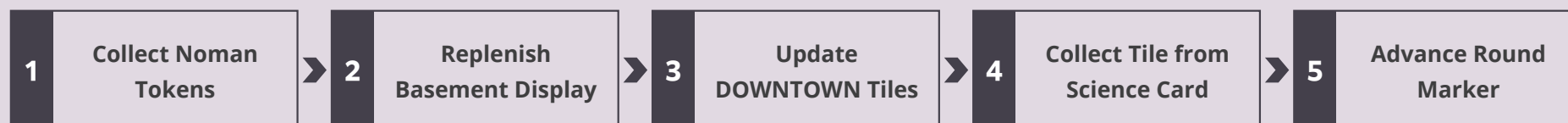
1. Collect Noman Tokens

Each player collects all of their Nomans (including those on the downtown tiles) from **experiment spaces** on the main board and places them standing on the Noman space of their player board.

In addition, all the injured Nomans in the Noman space must stand back up and return to its active state. Each player lose 12 EPs for each Noman they recover in this way. As a result, the EP of the player may fall below 0.
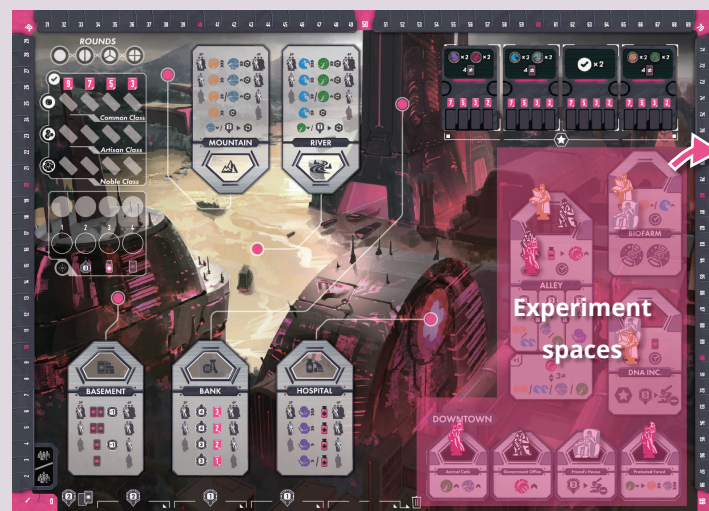
2. Replenish Basement Display

If there are any remaining creature cards in the rightmost column of the basement display (the column with no purchase cost), discard them to the corresponding discard pile.

Then, slide all remaining creature cards in the basement display to the right and fill all empty spaces by drawing creature cards from the corresponding deck.

If any creature card deck runs out, shuffle all the cards in the corresponding discard pile to make a new deck. If this happens during the replenishment, continue filling the empty spaces with the new deck. If there are not enough cards to fill the display, leave the rest empty and continue to play.

Discard

Fill
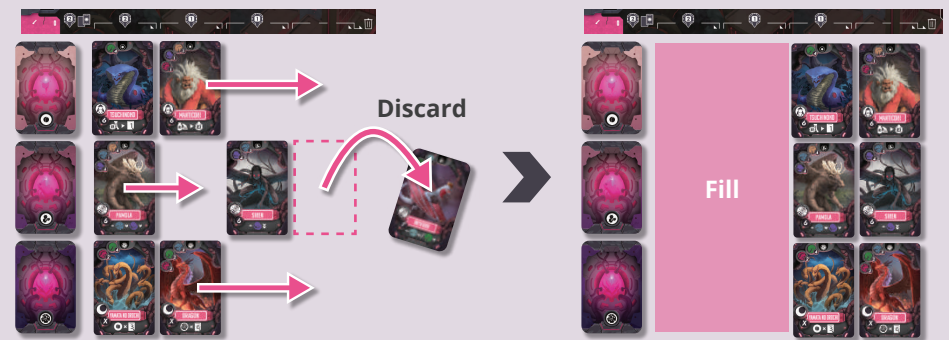
3. Update DOWNTOWN Tiles

Remove all face-up downtown tiles from the DOWNTOWN area of the main board and put them back in the box.

Then, draw 4 new tiles from the stack and place them face up in the DOWNTOWN area.

4. Collect Tile from Science Card

If you have activated the 2nd ability of your scientist this round, remove the reminder lock tile (⊗) from the middle row of your scientist card and place it near your player board.

You can activate this ability again next round.
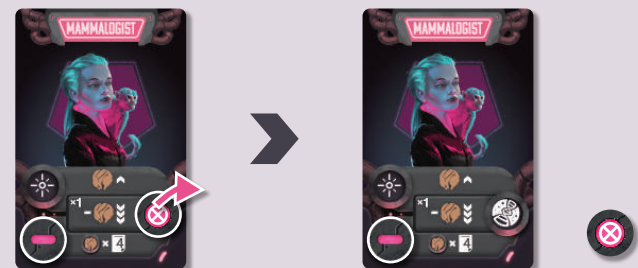
5. Advance Round Marker

Advance the Round Marker one space to the right on the round tracker.
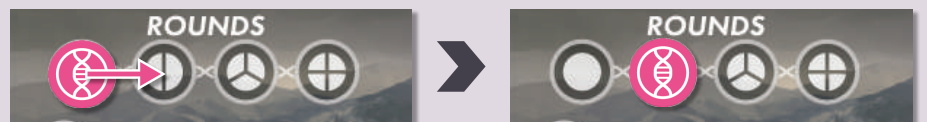
After the ② research phase in the **4th round**, or in the round in which a player has created their **7th creature**, the game ends.

Each player advances their EP token for each EP they gained from the following categories:

Creature Cards	✚	Scientist Card	✚	Creature Milestones	✚	Milestone Cards	✚	Coins
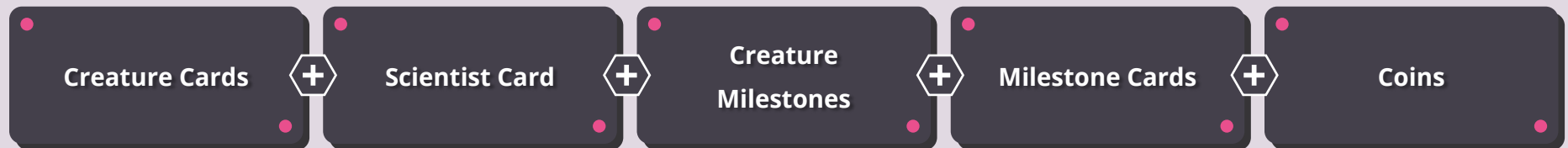
The player with the **most total EP** wins the game. If there is a tie, the winner will be determined by the following tiebreakers (in order).

1. Number of the creature cards on the player board
2. Number of the noble class creature cards on the player board
3. Number of the artisan class creature cards

If there is no single winner after the tiebreakers, the tied players share the victory.

Creature Cards

Each noble class creature on your player board grants EP based on its ability.
Each artisan and common class creature grants EP shown on the card.

NOTE: Some cards have gene icon(s) like (⬤) and (⬤), as noble class creature abilities or requirements of milestone cards for example. These icons refer to a creature card whose **creation cost includes that kind of gene type**. Each creature can be counted once for each noble class creature's effect ability and each reported milestone.

Avian icon

Reptile icon
Feral icon

/

EP

EP
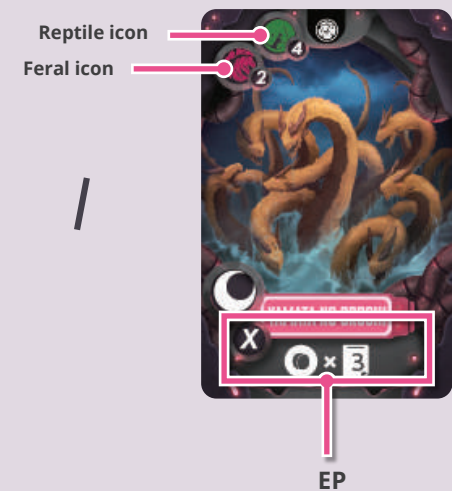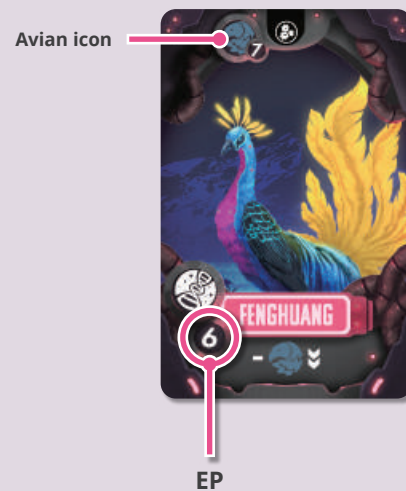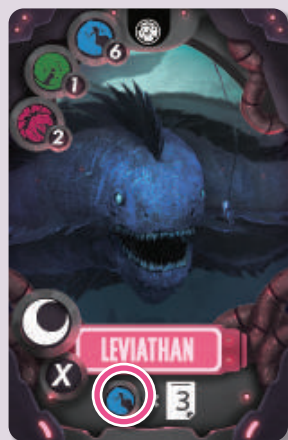
Scientist Card

If you have unlocked the bottom row ability of your scientist card, you gain EP from that ability in the same manner with end game scoring abilities of noble class creatures.
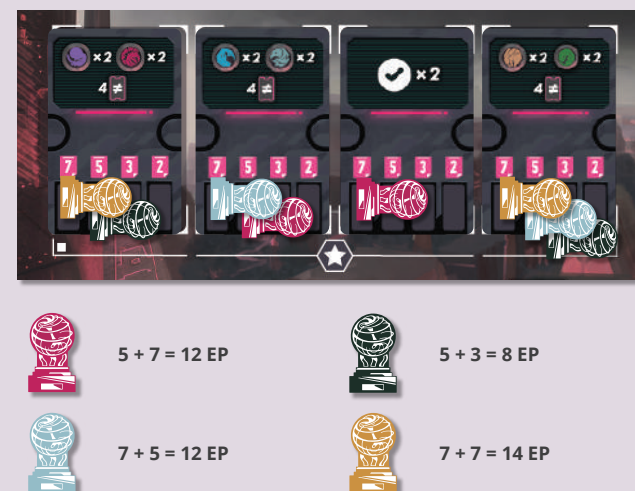
EP
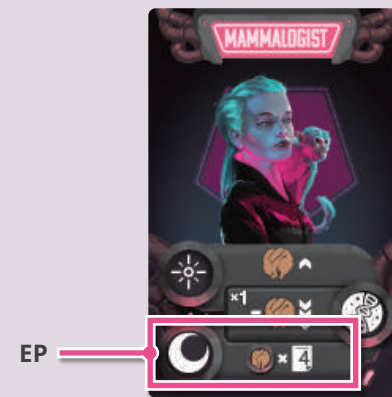
Creation Milestones

You gain EP from each of your milestone tokens on the creation milestone area as indicated in the top row.

9 + 7 = 16 EP

7 + 7 = 14 EP

9 EP

9 EP

Milestone Cards

You gain EP from each of your milestone tokens on the DNA Inc. display as indicated in that space.

5 + 7 = 12 EP

5 + 3 = 8 EP

7 + 5 = 12 EP

7 + 7 = 14 EP

Coins

You gain 1 EP for every 4 coins you have.

1 EP

2 Player Rules

Follow the game setup and rules as in the 3- or 4-player game, except for the following points.

• Use the 1-2 player side (👤 / 👥) of the **main board**.

• **The game** ends after the ② research phase in the **5th round** or in the round in which a player created their **7th creature.**

• **There is no turn order area on the main board,** and there is no "1. Reset turn order" and "3. Remove reservation markers" steps in the ① planning phase. Instead, randomly determine the first player in the first round and give that player the **first player token** during the game setup. At the end of the ③Clean Up Phase of each round, **pass the first player token to the opponent to switch the turn order.**

• There will be only 2 spaces in DOWNTOWN. Update 2 downtown tiles each round.

• The actions in **public spaces** are modified as follows:

Public space : MOUNTAIN 🏔

Remaining number of Nomans in 2 player game	Action
1	Gain 2 mammal genes and 1 avian gene. Then roll the danger die once.
0	Gain 2 mammal genes or 1 avian gene. Then roll the danger die once.
Danger die reroll cost	Pay 1 avian gene or 2 coins

Public space : RIVER 🏞

Remaining number of Nomans in 2 player game	Action
1	Gain 2 aquatic genes and 1 reptile gene. Then roll the danger die once.
0	Gain 2 aquatic genes or 1 reptile gene. Then roll the danger die once.
Danger die reroll cost	Pay 1 reptile gene or 2 coins

Public space : BANK

Remaining number of Nomans in 2 player game	Action
1	Gain 4 coins and 3 EP.
0	Gain 3 coins and 2 EP.

Public space : HOSPITAL

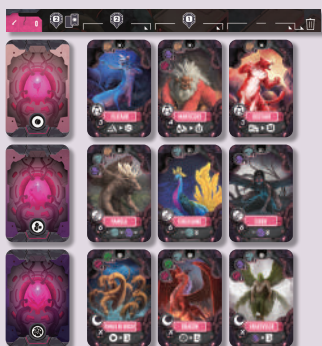| Remaining number of Nomans in 2 player game	Action
1	Gain 2 primate genes and 1 medicine.
0	Gain 1 primate gene and 1 medicine

Public space : BASEMENT

Remaining number of Nomans in 2 player game	Action
1	May purchase up to 2 cards from the basement display or from the top of the deck.
0	May purchase up to 1 card from the basement display or from the top of the deck.

There are only 3 columns in the basement display instead of 4 in the normal game (only one column with the cost of 1 coin per card).

Solo Rules

COMPONENT

Assistant side

Police side

Solo cards x15

(5 type of location names on the assistant side, 3 of each type)

Setup

Follow the setup for 2-player games, but with the following changes:

① Do not use the start player token.

② On the far-right space of the round track, place an unused **lock tile** face down (youwill only play up to 4 rounds).

③ The number of face-up Downtown tiles revealed is 2, but instead of drawing them together, draw them one at a time and place them **from left to right** (this is important for the order of the tiles).

④ After receiving your color's components, choose 2 colors other than your own and prepare 2 Noman tokens for each color. Call the 2 Noman tokens of one color **"assistant" tokens** and the 2 Noman tokens of the other color **"police" tokens**. Place the assistant tokens on **the left side of the main board** (off the board) and the police tokens on **the right side** (off the board).

⑤ Divide the 15 solo cards into 5 stacks according to the location names indicated in the lower-left corner of the assistant side (MOUNTAIN, RIVER, BANK, HOSPITAL, BASEMENT). Take one card from each stack and, without looking at the police side, shuffle them and place them assistant side up next to the main board. This is called the solo deck. Return the remaining 10 solo cards to the box.

Game Objective

The player takes consecutive turns alone. The game ends after the **4th round** or when the player has played their **7th creature card** and the 2 Activity Phase is over, as in a 3-4 player game. Before that, aim to play creature cards effectively while earning more points and/or successfully completing your self-determined challenges.

GAMEPLAY

Unless otherwise noted, follow the flow of a 2-player game. However, there are these following changes in each phase:

① Planning Phase

Instead of the regular procedure, perform the following five steps in order:

1.Placement of the first assistant token
2.Resolve Planning Effects
3.Select Location Cards
4.Revealing location cards and placing Noman tokens
5.Placement of police tokens and the second assistant token

1. Placement of the first assistant token

Check the location name in the lower-left corner of the top card of the solo deck's assistant side (which is already facing up). Place one assistant token standing on the collaborative activity space of that location.

4. Revealing location cards and placing Norman tokens

Resolve these steps as in a 2-player game.

5. Placement of police tokens and the second assistant token

Flip the top card of the solo deck and place it police side up next to the deck (from the 2nd round onwards, place it on top of the card already next to the deck). The police side shows **two experiment space names**. Place one **police token** standing on each of the corresponding priority experiment spaces. If "DOWNTOWN" is indicated, place the police token on the left Downtown tile. Also, by flipping one solo card, a new assistant side of a card is revealed on top of the solo deck. Place another **assistant token** standing on the collaborative activity space of that location.

② Research Phase

The player performs consecutive turns. The available options remain the same, but assistant tokens assist the player, and police tokens hinder the player.

Assistant tokens, like other players' Noman tokens, enhance the player's actions during collaborative activities. The player will perform the top action if there is an assistant token on the collaborative activity space, and the bottom action if there is not.

Police tokens, like other players' Noman tokens, block priority experiment spaces. **The player cannot place a Noman token on a priority experiment space with a police token.**

③ Cleanup Phase

Follow the regular procedure, but there are the following changes to "1. Collecting Noman tokens," "2. Updating Basement display," and "3. Updating Downtown."

1. Collect Noman Tokens

After collecting the player's Norman tokens, remove all assistant and police tokens from the main board. Return the assistant tokens to the left side of the main board and the police tokens to the right side.

2. Replenish Basement Display

Instead of discarding cards from the rightmost column of the Basement display, check the right half of the top card of the solo deck (assistant side). If there are creature cards remaining in the spaces **marked with an X**, discard them all. Then, replenish the creature cards according to the regular procedure.
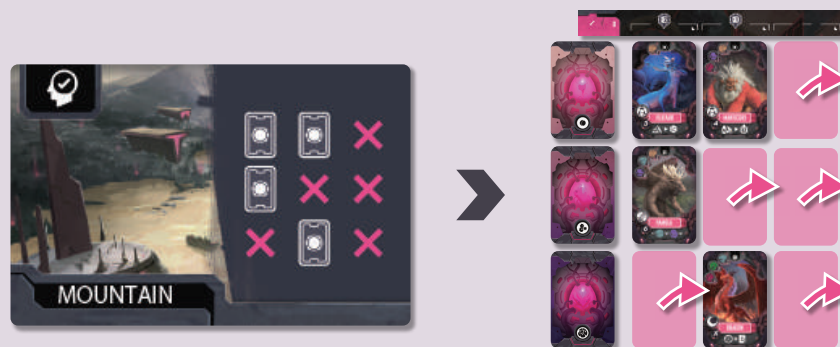
3. Update DOWNTOWN Tiles

As in game setup, draw and place Downtown tiles one at a time from left to right, instead of drawing two tiles together.

Game End and Victory Conditions

The game ends after the **4th round** or after the round in which the player has played their **7th creature card** during the 2 Activity Phase. Immediately check for victory or defeat.

· If the player has played 6 or fewer creature cards

The player **loses** the game.

· If the player has played 7 or more creature cards

Perform the final score calculation as usual. However, if the player has played the 7th creature card before the start of the 4th round, they earn an additional 20 EP.

→ If the total is **100 EP** or more, the player **wins** the game. You are a top scientist!
→ If the total is **99 EP** or less, the player **loses** the game.

Challenges

Instead of aiming for 100 EP, you can also aim for the following challenges. Unless otherwise noted, playing **7 or more creature cards** is a prerequisite for victory.

1. Small Creature Challenge

If both of the following conditions are met, the player wins the game.

· Played 4 common creature cards
· Total EP are 100 or more

2. Report Mania Challenge

If both of the following conditions are met, the player wins the game.

· Achieved 3 or more milestone cards
· Total EP are 105 or more

3. Professional Challenge

In this challenge, the game does not end when the 7th creature card is played; it ends only after the 2 Activity Phase of the 4th round. **If all of the following conditions are met,** the player wins the game.

· Played 9 creature cards
· Unlocked scientist cards up to the bottom row
· Achieved 2 or more milestone cards
· Have at least 5 coins remaining

4. Survival Challenge

In this challenge, you cannot acquire injury potions. When you obtain medicine potions during the game, instead gain the same number of primate DNA. The medicine potion token with the full side ( ) up that you have at the start of the game can be used as usual.

If you need to put a Noman token in the injured state due to the result of the danger dice, you can avoid it by paying **5 coins**. Other than using the 1st medicine vial, there are no other ways to heal an injured Noman token. When you have only **one active Noman token**, the player immediately loses the game.

In the final score calculation, gain an additional 10 evaluation points for each active Nrman token.

If both of the following conditions are met, the player wins the game.

· Played 3 or more creature cards that include wild animals in their cost and
· The total EP are 105 or more

If you come up with other challenges, post them on the BGG "Biohack" page or introduce them on social media with the tag **#Biohacksolo.**

General

	Mammal gene.		Avian gene.		Primate gene.
	Aquatic gene.		Reptile gene.		Feral gene.

Main Boards

MOUNTAIN location or performing an action in the MOUNTAIN.	**×1** — The indicated effect can be performed only once per action.
RIVER location or performing an action in the RIVER.	**3≠** — 3 different types of genes.
BANK location or performing an action in the BANK.	Gain 1 medicine (flip from empty side to full side) / Pay 1 medicine (flip from full side to empty side)
HOSPITAL location or performing an action in the HOSPITAL.	**Purchase Creature Cards:** Take up to one creature blueprint card from the basement display to your hand by paying its purchase cost.
BASEMENT location or performing an action in the BASEMENT.	Gain the indicated amount of EP.
/ — Choose one of the options separated by the slash.	**Reserve the turn order:** Place your Turn order marker on any empty space on the reservation track.
Gain 1 resource indicated by the icon / pay 1 resource indicated by the icon.	Gain the indicated amount of coins.
Gain 2 resources indicated by the icon / pay 2 resources indicated by the icon.	Pay the indicated amount of coins.
Gain 3 resources indicated by the icon / pay 3 resources indicated by the icon.	Gain the indicated amount of discount from the total purchase cost.
Gain 4 resources indicated by the icon / pay 4 resources indicated by the icon.	**Create a Creature:** Choose a creature blueprint card in your hand. Pay its creation cost and play the card to the leftmost empty space of the corresponding row in your player board.
By doing what is indicated on the left of the arrow, gain the effect indicated on the right.	**Report an Milestone:** Complete one milestone card on the DNA Inc. display
By paying what is indicated on one side of the arrow, gain what is indicated on the other side.	**Unlock Scientist Card ability:** Pay 5 coins to remove 1 lock tile on the topmost row from your scientist card.

Danger Die

	Roll the danger die once.		Reroll the danger die once.		Lay down the Noman used for this action (or any 1 active Noman if rolled as a planning effect) and put it in its injured state.

Creature Cards

◖	Common class creatures.		Each time you perform the indicated action, gain the following effect.	X	Gain EP based on the ability
⚙	Artisan class creatures.	⬡★	A reported milestone.		
⬡	Noble class creatures.	✔	A completed creature milestone.		

Scientist Cards

☀	**Planning Effect:** During the planning phase, gain the indicated effect.	☾	**End Game Scoring Ability:** In the end game scoring, gain EP as indicated.	C	During the planning phase, before choosing the location cards, you may roll the danger die once.

Achievement Cards

	Mammal gene icon on your player board.		Avian gene icon on your player board.	4 ≠	4 different creatures are required to report this milestone.
	Aquatic gene icon on your player board.		Primate gene icon on your player board.		
	Reptile gene icon on your player board.		Feral gene icon on your player board.		

Downtown Tiles

	Any gene.	-1	Gain the indicated amount of gene discount from the total creation cost.