

RULES

The Microbes Phylo Starter Deck!

Explore the huge diversity of microbial life! From viruses to bacteria to protists and more, this deck highlights a number of microbes that showcase the huge variation in forms, environmental roles, applied uses, as well as a few notable pathogens. Along the way, you'll also be introduced to a number of important scientific, environmental, health related and societal concepts where microbiology looms large on this planet and in your life!

Objective

The objective of the game is to obtain as many points as possible. The player with the most points at the end of the game is the winner. Points are gained by completing *Microbe Cards*. In order to complete a *Microbe Card* the appropriate combination of *Resource Cards* must be collected. At the end of the game, points from any incomplete *Microbe Card* is subtracted from your total score.

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The Deck

This deck contains a total of 120 cards which includes 25 *Microbe Cards*, 71 *Resource Cards*, and 24 *Modifier cards*. This game is best played with 3 to 5 players, but can be played with 2.

Length of playing time is approximately 30 to 60 minutes depending on the start pile number of *Microbe cards* used (see below).

Microbe Cards:

Players obtain points upon completion of *Microbe Cards*. Each of these cards requires a specific combination of *Resource Cards* which must be assigned to the Microbe in order to be completed.

Usually, the number of *Resource Cards* required to complete a project is the number of points collected by the player upon completion. At the end of the game, incomplete *Microbe Cards* result in negative points equal to the point value of the card.

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Symbols for resources required for microbe completion (includes info like type of microbe, etc)*

Name and some interesting facts about the microbe.

Number of points won if the microbe is completed. Points lost if incomplete.

Resource Cards:

Resource Cards include *Classification cards*, *Habitat Cards* and *Specialty Cards* which contribute towards completing *Microbe Cards*.

Classification Cards: The type of microbe as defined taxonomically.

Habitat Cards: These cards reflect the preferred environment where the microbe is found.

Specialty Cards: These cards highlights special traits, such as those found in health, industry, or special abilities.

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Modifier Cards:

These cards generally reflect concepts related to microbiology and have effects (explained in the card text) that can impede or help players complete their *Microbe cards*. Note that about 1/2 of these cards are “bad”, and about 1/2 are “good” or “neutral.”

Set Up

The Playing Field

There are 5 main card “piles” in the game.

1. **Microbe Card pile**– contains the *Microbe Cards* face down.
2. **Resource Card pile** – contains the shuffled up *Resource Cards* face down.
3. **Modifier Card pile**- contains the *Modifier Cards* face down.
4. **Discard pile** – contains discarded cards face Up. These are still technically “in play” (at the beginning, this will be empty).
5. **Burn pile** – (also empty at the beginning) contains any cards that are “out of play.”

Once the *Resource Card* pile is completely used up, the *Discard pile* (minus the top card) is shuffled and used to replenish a new *Resource Card* pile.

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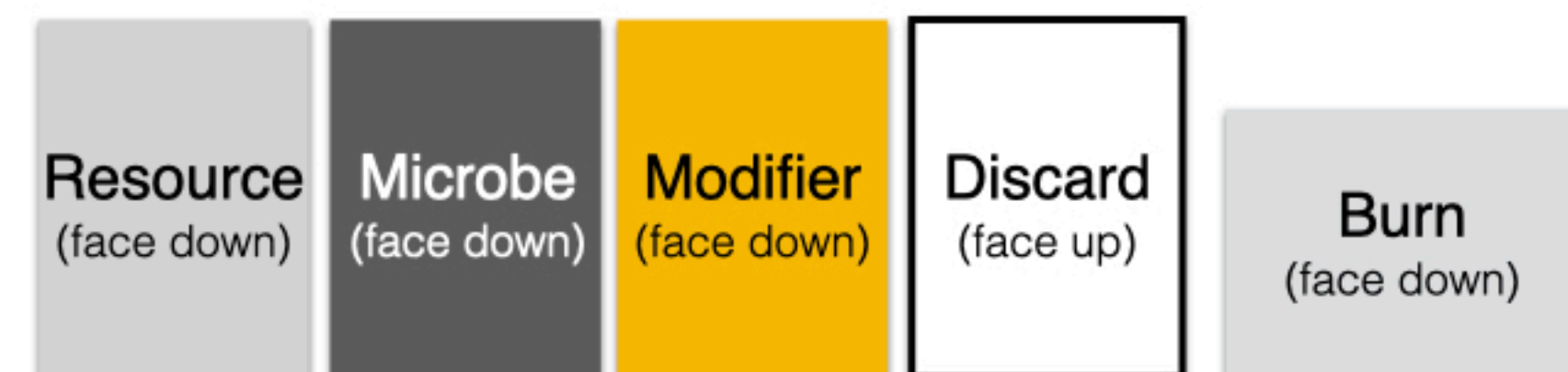
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To start the game, place all the *Microbe*, *Resource* and *Modifier* Cards face down in three separate piles between the players. As the game progresses, a Discard pile and a Burn pile will also be generated. Position the piles can be as below:



Note that because the end game starts when all microbe cards are picked up, you can adjust the length of the game by adjusting the size of this pile. 25 cards will play for at least an hour, 10 or so cards is good for a much shorter game.

Playing

Each player starts with a hand of two *Resource Cards*, and two *Microbe Cards*. Every turn consists of three basic phases: A draw phase, an action phase and a discard phase.

1. Draw: At the start of their turn (youngest player goes first), the player draws three cards, in any combination, from the *Microbe Card* pile, the *Resource Card* pile, the *Modifier Card* pile, or the

Discard pile (ie. 1 card from few piles, 3 cards from one pile, 2 from one and 1 from another, etc). Only the top cards in each pile can be drawn (ie. this includes the *Discard* Pile - i.e. you cannot look through *Discard* pile).

2. Action: The player can now choose to do as many of the following actions during their turn.

i) Start and/or work on a Microbe Card.

To start a Microbe card, place a *Microbe Card* face up in front of you. By doing this, you commit to finishing the card. If you do not finish it by game's end, you will be deducted the point value of the project. There is no limit to the number of projects you can work on at the same time. Finishing a Microbe card involves placing required *resource cards* from your hand beside the *microbe card* on the playing field.

ii) Complete a Microbe Card.

A microbe is completed when you have acquired all the *Resource Cards* needed for the project and placed them beside the *Microbe Card* on the playing field. Take the completed *Microbe Card* and

set it aside. Place the associated *Resource Cards* face up in the *Discard* pile.

iii) Use a Modifier Card.

If a *Modifier Card* is picked up, this may result in special actions. They might help complete or disrupt a player's progression. Read these cards carefully. Many require you to use them immediately, but there are a few that let you keep in your hand. *Note that all used Modifier Cards will go to the burn pile and will be out of play for the remainder of the game.*

3. Discard. At the end of your turn, you must discard cards from your hand into the *Discard* pile face up if your hand size is LARGER than the number of active *Microbe Cards* you have in progress (i.e. on the table). For example, if you are working on one *Microbe Card*, you can only hold one card in your hand at the end of your turn. If you have no active *Microbe Cards* (completed *Microbe Cards* do not count), you must discard your entire hand. Note that *Microbe Cards* can only be discarded if they are in your hand (ie. Active ones on the table cannot be discarded).

Ending the Game

The end game officially begins when the last *Microbe Card** is drawn from the *Microbe* pile.

Then, when the next player completes a *Microbe Card* (by collecting all resources needed), all players get **one more turn** before the game ends.

At that point, players will tally up all their points: positive points for completed *Microbe Cards* and negative points for unfinished *Microbe Cards* left on the field. The player with the most points wins the game!

For example: Dave completed a 4-point card, a 2-point card, but has an unfinished 3-point card. He gets $4 + 2 - 3 = 3$ points at the end of the game.

Game Design: Elena Greenall and Annie Tsoromocos. With thanks to Sidney Ang, Genevieve Leduc-Robert, Lu Li, Sam McKinnon, and David Ng.

Art by Sandra Black, Emile Clarke, Chelsea O'Byrne, Aviva Reed, and Diana Sudyka. Card back design by Suzanne Norris, Phylo logo by Haley Fiege.

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For more information about the PHYLO card game, please visit <http://phylogame.org>