

## The Game:

### The Cards:

There are 4 cards of each species. The number on each card is relevant for changing colours during the game and also to learn about the rough sequence of appearance of the species on the substrate.

Green cards	Yellow cards	Blue cards	Red cards (Predator cards); Special cards
1. Bacteria 2. Diatoms 3. Green Algae 4. Red Algae 5. Brown Algae	6. Ciliates 7. Snails 8. Isopods 9. Hydroids 10. Bryozoans	11. Tubeworms 12. Sea Anemone 13. Tunicates 14. Barnacles 15. Mussels	<ul style="list-style-type: none"> <li>• Starfish</li> <li>• Crabs</li> <li>• Shrimp</li> <li>• Nudibranch/Slug</li> <li>• Jellyfish</li> </ul>

### Game Rules:

There is a total of 80 cards for the basic game consisting of the green, yellow, blue and red cards. In addition to the basic game, there are two variations, which may or may not be played. For Variation 1, the black cards are added to the basic cards and for Variation 2, the purple cards are added. The players may choose to play only the basic game with no variation, or with only one or both variations. The cards for the Variations are mixed and shuffled with the basic game cards. The Variations are recommended for older students.

The aim of the game is to be the first to be able to discard all of your cards and to get the lowest number of points at the end of the agreed number of rounds. A round ends when one player has discarded all his cards.

1. The game is for 2-6 players, ages 7 and older.
2. Shuffle all the cards and place the deck on the table. Depending on the number of players, each is dealt with a set number of cards:
  - 2 players receive 10 cards each,
  - 3 players receive 7 cards, and
  - 4 or more players receive 5 cards.

3. The rest of the cards are placed face down in a “Draw Deck”.
4. Next to the deck a space on the table is cleared. This simulates the substrate where the organisms will grow (the “Discard pile”). The players simulate the growth of fouling organisms on the substrate in the right order (succession). And the game begins.
5. The first card, which can be discarded should be any of the green cards. The lowest green card starts the game. If more than 1 player have the lowest number, the fastest to discard his card starts the game. The game proceeds in a clockwise direction.
6. If there are no green card holders, the card with the lowest number starts first.
7. The next player should discard a card, which matches the **colour** of the last discarded card. If a player has no match or chooses not to play any of his cards even though he might have a match, he must draw a card from the Draw Deck. **If this card is a match, this should be played at once.**
8. The colour of the card in play can be changed by playing an appropriate red card during a player’s turn or by playing cards in a specific sequence:
  - When a player discards a **brown algae (5; green)** card, the same player can immediately follow this up with a **ciliate (6; yellow)** card, or
  - When a player discards a **bryozoan (10; yellow)** card, he can immediately follow this up with a **tubeworm (11; blue)** card.
  - When the player who discarded the brown algae or bryozoan card cannot follow this up, any other player can discard the ciliate or the tubeworm card after shouting “**Upgrade**”. The fastest player to shout “Upgrade” gets to discard his card. After this, he can discard 1 more card of the same colour.
  - After the “upgrade” the game proceeds with the player to the left of the “upgrader”.
9. A red (predator) card can be played only during a player’s turn and each corresponds to a given action. The next player will proceed as indicated on the red card.
  - **Starfish:** all players get 5 new additional cards from the draw deck and the game starts all over again. The lowest card starts

- the game. The discard pile does not have to be reshuffled.
- **Crab:** the player can choose a number and immediately discard a card with this number; the direction of the turns reverses.
  - **Shrimp:** the player can choose a number and immediately discard a card with this number; the next player draws 2 new cards.
  - **Nudibranch:** the player can change the colour of the card in play; all other players get 2 new cards.
  - **Jellyfish:** the player can change the colour of the card in play; the next player skips a turn.
10. At any time, if the Draw Deck becomes depleted and no one has yet won the round, take the discarded cards, shuffle them, and turn them over to regenerate a new Draw Deck.
  11. The game continues until a player has one card left. The moment a player has just one card they must say “**Last card**”. If they are caught not saying “**Last card**” by another player before any card has been played by other players, the player must draw **2 new** cards. Every time when a player has only one card left, he must say “Last card”.
  12. Winner of the game is the player who can discard all of his cards first. When playing the last card, the player must say “**Winner**”. Failure to say “Winner” means he has to draw 2 new cards.
  13. **Points:** If desired, the number of points can be counted at the end of a round/game to determine, which player is in second place, third place, etc. The number of points for all undiscarded cards will be added. Each green, yellow and blue undiscarded card is worth 1 point and each red card is worth 3 points. The lower the total number of points, the higher the placement.

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## The Succession Card Game

by Sally Soria-Dengg

### Description:

This card game aims to make students learn more about “succession” on a hard substrate. Succession is the process of change of the structure of the ecological community over time. This is determined by the kind of species settling on the substrate, which follows a more or less definite sequence depending on the prevailing environmental conditions. The game starts with the earliest settlers (**green cards**), the “pioneer” species, which are mostly autotrophs. Many of the settlers in the second group (**yellow cards**) are the first sessile invertebrates on the discs or are grazers, which feed on the autotrophs. The last group (**blue cards**) to settle are mostly filter feeders although some can also be predators. The last to settle are mostly the most dominant species one can find on the established ecosystem growing on a hard substrate. On the way to its development to a stable ecosystem, the species composition and the community structure can be altered by predators (**red cards**). These feed on all organisms growing on the substrate or may have special food preferences.