

## Goal:

You are a research scientist studying phytoplankton in the ocean in order to understand their growth patterns and conditions. You were recently given the funding and opportunity to plan three cruises around the oceans to sample and study phytoplankton! There are different benefits to studying phytoplankton in each area of the ocean, but plan carefully, as you can only stop in five locations each cruise. Try to learn as much about phytoplankton as you can!

(Phytoplankton will from here on out often be shortened to phyto!)

## Components:

- 1 rule sheet
- 5 player boards
- 5 different colors of 5 cubes each
- 1 CTD dice tower
- 1 scorepad
- 100 phyto cards
- 5 bonus cards
- 75 biomass tokens
- 5 custom dice
- 100 nutrient tokens
- 30 bloom tokens

## Set-Up:

1. Give each player a board and five cubes of the same color.
2. Shuffle the phyto cards into a cohesive deck and place them on the table.
3. Deal three cards face-up in front of the deck - these are the “tray”.
4. Shuffle the specialist cards and deal one to each player.
5. Give each player one of each of the nutrients (light, Fe, Si, N, and P).
6. Deal five cards to each player. They may keep up to 5, but for every phyto card they keep, they must discard one nutrient. *For example, you might keep 3 phytos and 2 nutrients, or 1 phyto and 4 nutrients.*
7. Randomly select the first player.

## How to Play:

Ocean Blooms is played over three rounds, each with five actions each. Players will take turns taking actions, starting with the first player and proceeding clockwise.

You have four choices for your action on every turn:

1. Play a Phytoplankton: Successfully collect a species of phytoplankton from its natural habitat by playing it on your board.

2. Gain Resources: Study phytoplankton on the coast to understand nutrient availability and acquisition by gaining resources.
3. Grow: Study phytoplankton in the open ocean to understand growth patterns and the spring bloom by adding biomass.
4. Draw Phytoplankton: Study phytoplankton in the poles to study the diversity of phytoplankton around the globe by drawing cards.

#### Play a Phytoplankton:

1. Select a phytoplankton from your hand to play and place an action cube at the top of the column in which you will play the phyto.
2. Pay the corresponding biomass cost, if any.
3. Pay the phyto's resource cost, found in the blue box at the top left of the card. There are five different types of resources that can be required to play a phytoplankton, plus a symbol for any kind of food.



Light



Nitrogen



Phosphorous



Iron



Silica



Misc

4. Place the phyto card in the leftmost exposed slot in its corresponding habitat and move your action cube to the left side of the Play a Phytoplankton row. There are three habitats, and a phytoplankton can often be placed in multiple of them:



Coastal



Open  
Ocean



Polar

Habitat

Nutrient  
cost



3



*Emiliana huxleyii*

**WHEN ACTIVATED:** All players can add 1 biomass to 1 coccolithophore on their board. You may add 1 additional biomass to 1 additional coccolithophore on your board.

**NON-BLOOM:** add 1 biomass to this card.

**BLOOM:** Remove all biomass from this card and tuck 5 cards from the deck behind this card.

*E. huxleyii* is the most prominent and well-studied coccolithophore.

*For example: If I want to play Emiliana huxleyii in the second slot of my Open Ocean habitat, I would need to spend one biomass from any card, along with one light and one nitrogen/phosphorous.*

### Gain Resources (Coastal):

Gain a number of resources equal to the number of resource die exposed in your leftmost Coastal region by removing resource die from the CTD and gaining the matching resources (N/Si means you can take either one) Activate any green Coastal region powers you wish, right to left.

### Grow (Open Ocean):

Gain a number of carbon equal to the number of carbon icons exposed in your leftmost Open Ocean region and place them on your phytoplankton card. Activate any green Open Ocean region powers you wish, right to left.

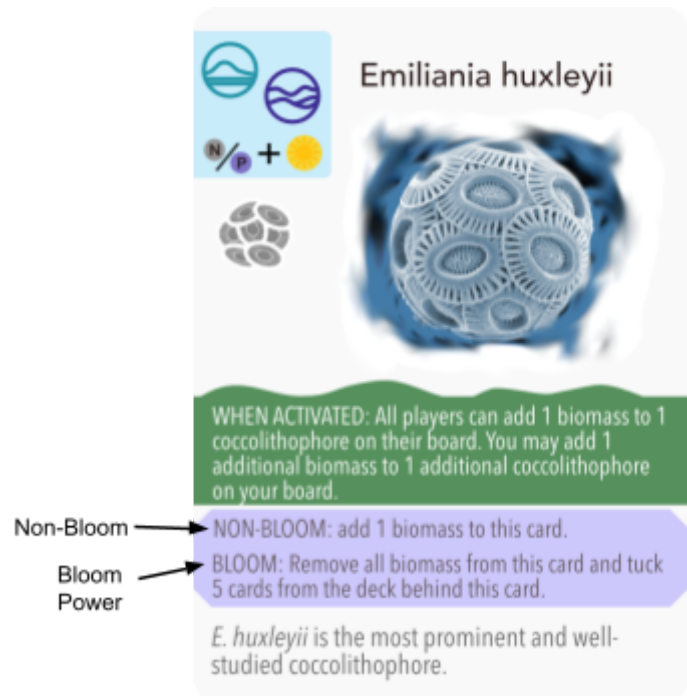
### Draw Phytoplankton (Polar Ocean):

Draw phytoplankton cards equal to the number of card icons exposed in your leftmost Polar Ocean region. Draw cards either from the three face-up cards in the middle of the play area, or draw blindly from the card stack. If you draw from the face-up cards, replace what you took from the card stack at the end of your turn. Activate any green Polar Ocean region powers you wish, right to left.

### Blooms:

Blooms are an important part of phytoplankton growth patterns. In this game, certain phytoplankton species can be triggered to bloom by collecting five biomass on the card. Every bloom species will automatically add 1 biomass to their card anytime they are activated (listed on every card as their Non-Bloom power). Once they hit five biomass, they bloom! There are often strong benefits to a phytoplankton bloom, which are listed in the Bloom section on their card. A bloom is triggered automatically upon hitting 5 biomass, and all biomass is then removed from the card. Then, the additional Bloom power is activated. After the Bloom state has been achieved,

place one bloom token on your card and ignore the Bloom and Non-Bloom sections going forward. However, blooms can also be bad. Toxic Blooms will kill an adjacent phytoplankton on your board. If a bloom is triggered on one of these cards, remove one adjacent phytoplankton from the board, losing any biomass, tucked cards, or cached nutrients on the card. If you have no adjacent phytoplankton, remove one phytoplankton from elsewhere on the board. If you have no other phytoplankton except the Toxic species that just triggered, remove it from play.



## Round Structure:

When all players have taken five turns, the round is over. Follow these steps in order:

1. Remove all action cubes from your player mat.
2. Discard all face-up phyto cards from the tray and restock the tray with cards from the deck.
3. Rotate the first player clockwise.

## End of the Game:

After round 3, score as follows on the provided scorecard:

1. Points listed on each phytoplankton card
2. Points listed on a completed special mission card
3. 1 point per:
  - >biomass on phytoplankton cards
  - >resource cached on phytoplankton cards
  - >card tucked behind another card

The player with the most points wins. If tied, whoever has the most carbon wins. If still tied, victory is shared.