



EcoChains: Arctic Crisis

EcoChains: Arctic Crisis is an engaging and easy-to-learn card game for all ages. This 2-4 player game of strategy and survival gives players the opportunity to learn about the components of an Arctic marine food web, the reliance of some species on sea ice, and the potential impact of future changes on the ecosystem.



SPECIES CARD ANATOMY



Some species in the Arctic are closely associated with Sea Ice for various reasons – to find out why, see the “Fun Fact” on Species cards. The bottom right corner of the card shows how many Sea Ice cards are needed to support that species. For example, the Ringed Seal has (2) in the corner, which means it needs two Sea Ice cards.

The bottom of each Species card shows possible food sources. For example, the Polar Bear has a (S) icon, which means it can eat (S) Seals. Connect the bottom of the Polar Bear card to either corner of a Seal card.



Event cards cause stress on the ecosystem by melting Sea Ice, while Action cards help sustain a diverse ecosystem by restoring Sea Ice.

EcoChains: Arctic Crisis

Starter Game

Goal is to sustain Arctic marine species in the face of a warming Arctic

Full game – <http://thepolarhub.org/project/echochains-arctic-crisis>

Preparation:

- Set aside all Goal cards (orange) and Advanced cards (cards with a ☆ in the bottom right corner)
- Locate the Starter Species cards (dark blue) and the Sea Ice cards
- Shuffle all remaining Species, Action, and Event cards (light blue) together – this is the source deck

Set up:

- Provide each player with 7 Sea Ice cards
- Using the Starter Species cards, set up each player with 1 each of
 - Ice Algae and Ice Copepod – these species are sea ice dependent so connect these with 1 of the 7 sea ice cards as shown
 - Phytoplankton and Krill – connect as shown

Game play:

- Players take turns drawing from the source deck
 - Place the species in a food chain if possible, move ice over from their sea ice pack as more ice is needed for habitat
 - The next player can either play the top card in the draw pile or draw a new card from the deck
 - If the species choices do not fit any of their food chains or ice available, that turn is lost
- Event and Action cards are played immediately when drawn
 - All players respond by turning over the indicated # of cards, melting or freezing the ice
 - Species that require more ice than is available, migrate to another of the player's food chains, if possible, or to the next player on the left
 - Species that cannot migrate, are lost to the game and set aside
- Game ends either when all sea ice is melted or you get to the end of the source deck



Win:

- Players get 1 point for each species card left in a food chain – highest total score wins

Learning:

- Arctic marine species and their relationships in the Arctic food chain
- The dependence of many Arctic marine species on sea ice
- Impacts of events and actions