

# Board Games for Climate Justice

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## Game: Planet

Goal: 4 (teams of) students create their own 3D planet using magnetic images of ocean, forest, desert and glacial ecosystems in order to make a welcoming home for as many endangered species as they can.

Supplies needed for Climate Justice adaptation: print triangles on sticky back magnetic paper to represent changed ecosystem types (grey for industrial, blue for ocean, yellow for desert, brown for mountain, green for forest, black for ocean dead zones)

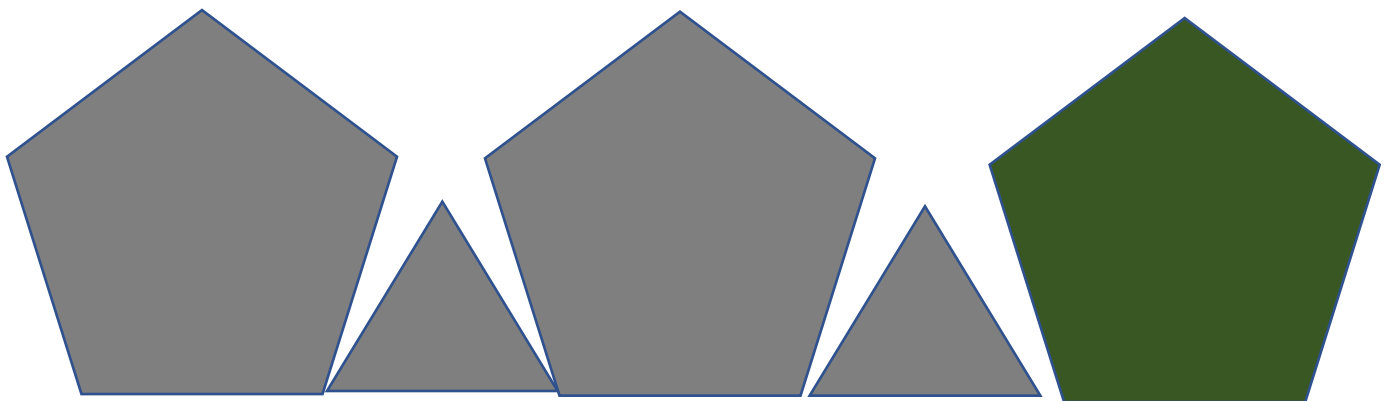
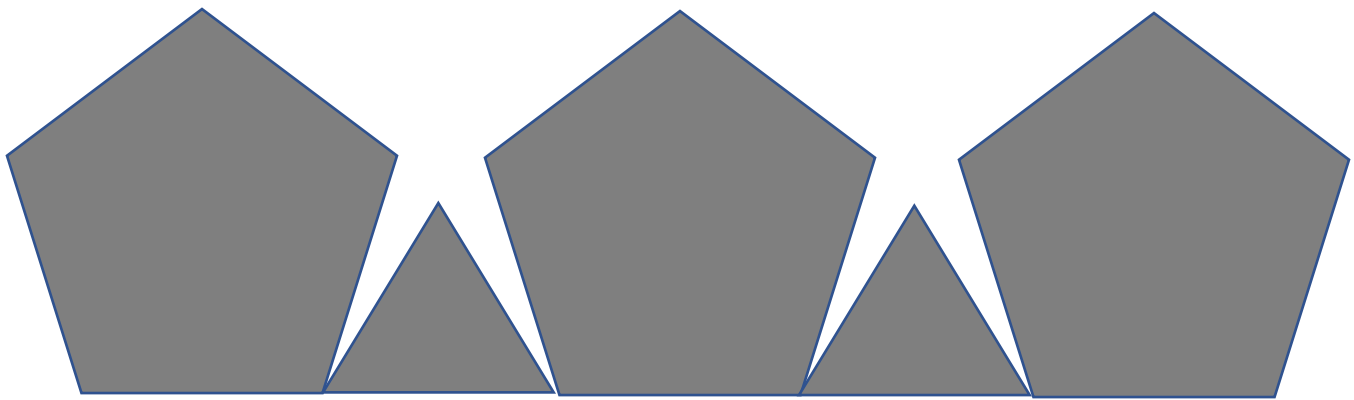
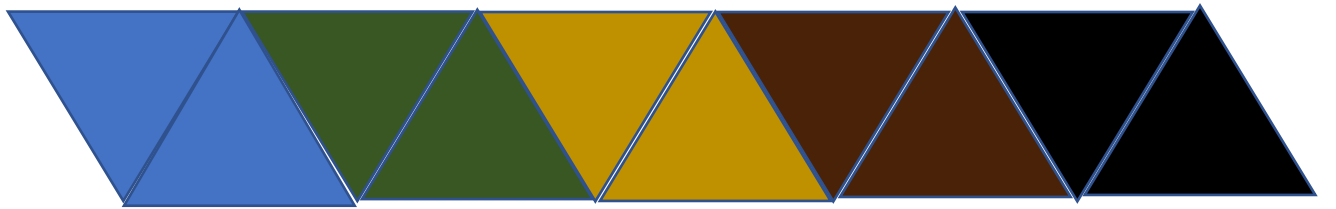
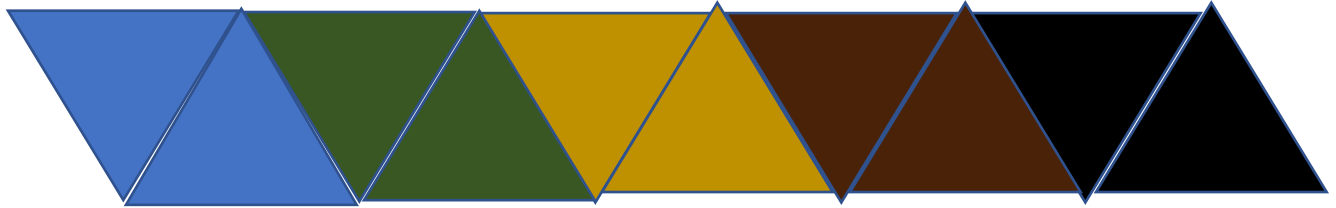
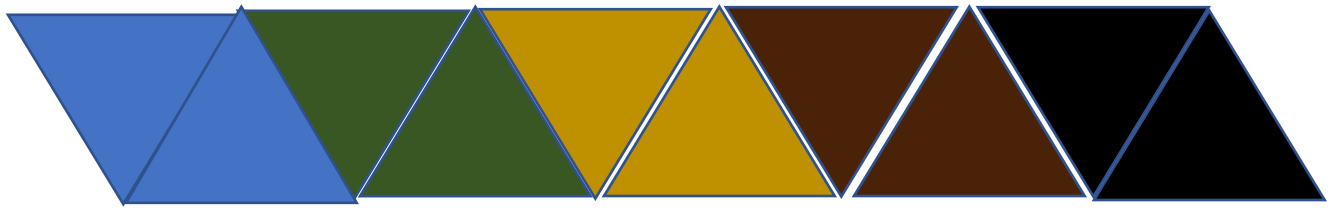
- a. Climate Game adaptation: once students have built their planet and won their animal cards, give them a chance to earn money by converting ecosystems into industrial areas.
  - i. Students choose which ecosystem types and cover them with grey industry, then lose the animal cards that can no longer live on their ecosystem. If another student can offer these animals a better home on their planet, they can win them.
  - ii. For each triangle of ecosystem converted to industry, students earn:
    1. forest = 5 million
    2. mountain = 4 million
    3. ocean = 3 million
    4. ice = 2 million
    5. desert = 1 million
- b. Introduce a series of “climate calamities” that change the composition of their planets’ ecosystems.
  - i. Global warming = Increase in drought and fire causes desertification of forests  
Polar ice caps / Glaciers melt = ice fields turn into oceans or mountains, depending which ecosystem type is adjoining)
  - ii. Sea level rise = oceans expand and take over forests and desert
  - iii. Ocean acidification = parts of the ocean turn into black “dead zones”

With each climate calamity, students cover over the relevant ecosystem types with new ones and then lose the animal cards that can no longer live on their planet. If another student can offer these animals a better home on their planet, they can win them. Some animals may not be able to live on any of the planets and must be returned to the game box or “fossil record”.

With each round of a climate calamity, for every triangle of industrial area, two triangles of ecosystems are impacted. With every triangle of forest replanted, this impact from an industrial area is reduced by half. It costs 6 million to replant each triangle of forest. With each round of a calamity, students earn 2 million from each industrial area. (*These ratios may have to be adjusted in future depending on testing*)

- c. To achieve climate justice, the student (team) wins who can make their planet habitable for the most species. They may achieve this through:
  - i. Creating a diverse ecosystem in the first place
  - ii. Not trading their forests for industry in the second place
  - iii. Use money to replant forests on industry, deserts or mountains

Planet Supplies for Climate Justice Adaptation



## Gaming for Climate Justice: Board Games

### 1. Photosynthesis

- a. 4 (teams of) students compete for sunlight to grow their species of trees in a shared forest.
- b. Climate Game adaptation: once students have had 4 seasons to grow their trees and won some points, introduce a series of “climate calamities” that change the composition of their forest’s ecosystem. Each round, each player loses two trees tree if the following applies:
  - i. Sea level rise = oceans expand and take over edge zone of forest
  - ii. Increase in drought causes death of smallest trees
  - iii. Increase in fire causes death of medium trees
  - iv. Increase in “wacky weather” causes death of seeds (unpredictable freezing and warming cycles makes it hard for trees to decide when to reproduce)
- c. Impact of climate calamities is different for different types of trees, so each round, each player may not lose a tree if the following applies:
  - i. Firs are more fire resistant
  - ii. Arbutus are more resistant to salt water
  - iii. Oak are more resistant to drought
  - iv. Maples are actually more vulnerable to wacky weather, but their seeds can travel anywhere
  - v. Biggest trees sequester more carbon dioxide than little trees, so for every smaller tree that is at risk, if there is a big tree of the same species that is safe, it will reduce the impact of the climate calamity and protect one smaller tree.
- d. How to achieve climate sustainability: choose to grow biggest trees in the middle of the forest, as these are the most protected, with richest soil.