

Modeling Project

For this particular project, we were given a story/situation we needed to model using 2 of the following 3: JavaScript, AgentCubes, and Vensim. The story I was given was Levi has left his home and moved to a new world in seek of land to conquer for himself. In this new world there are trees, smurfberry bush, and a small lake. This items have no function other than to spawn randomly on the new world. Also in this new world there are x number of villagers and x number of builders that spawn randomly on the world. The builder will then start collecting wood and storing it at the central storage unit. If the population is in need of housing the builder will take " x " pieces of wood to build a new house. Each house can hold " x " number of people. Houses will deteriorate only when no one has slept in it for " x " number of days. The villagers that spawn in the world are to move towards the water and the smurfberry bush to gather food and water. Once they get food and water they store the it in the central storage unit. Villagers cannot eat/drink when transporting food or water. When the workers have enough food and water they are happy and will reproduce. build another section to the village. With more sections more people are able to live in the village. When trees and bushes are harvested they die and go back to grassland then over time steps the bushes and trees regrow on the grassland. If the villages do not get enough food the village will start to deteriorate and the people will soon die. Also the builders can build during the night time so that all the people can live in a house. The max number of people to a house is 10.

First of all, I would have started out by doing an AgentCubes model and a Vensim model. I would have created a spawn function through the random generator for the trees, smurfberry bush, and a small lake. I would have set 10 for the full house capacity. In addition to that, I would have used a set number for the days before a house could deteriorate. I would have also had a set number that starts builders gathering wood to build houses when there are a low amount. For the next part of, the villagers population I would have them exponentially grow and then stop at a randomly generated carrying capacity. When the Villagers spawn I will have their spawns random but close to the food and water. I would have also made sure that each villager is controlled by a function on how much food they can eat and how much they need. I would have included a die function as well that would be triggered when villagers don't get enough to eat.

