

Plant Growth Mechanic

Keep a list of vertices for each part of the plant wall. Start with a straight line, and modify as the player grows the plant. Click on the middle for growing up and click the sides to grow in a direction. The player will click and hold to grow. When one side is grown, the vertices are rotated above that vertex. Only allow growth when zoomed in enough. Also show the interior of the plant when zoomed in this much.

In Progress

Add a "use seed" button that also takes strings

Make a smooth zoom option

Make a slider for zoom speed

Make an option for zoom relative to mouse

Make settings and upgrades menus in game

Add custom mouse

Game Engine

Include different speeds- day and night cycle in 10 seconds, a minute, and 10 minutes

Make the sky a gradient depending on the position of the sun

Make a sun move across the screen

Make shadows at an angle relative to the obstacle and the sun (find slope)

Make shadows gradient triangles onto to either the ground of a leaf

Save file that will take the time and day of the game, settings, fitness points, and the 2d array

Game Mechanics

Natural Death

Toxin and physical modifications

Cellular modification

Sunlight to reach, give off particle effect

Deposits of nutrition that give off particle effects

Sunlight and Nutrition per second meter

Sunlight nutrition relation chart

Upgrade Xylem speed

Nutrition depletion later on, steal from other plants

Difficulty modes, increase natural disaster (Fire, Wind, Deer, Rain), terrain, and production

Root around rocks

Make plant growth speeds dependent on type of plant and difficulty

Ability to make a seed and modify the genes (with a limit of upgrades)

Limit of upgrades is relative to how long you have survived

Player must choose how much they will invest in seeds (most will die)

Harder to root down in the deep soil, takes a lot of time and materials, but can get to groundwater