The environment for our game will be the backyard of a small house in the woods. The trees at the edge of the clearing will form a barrier, limiting the playable environment to the yard. Within the yard the user will be able to explore a small garden area with plants, gardening pots, and yard tools. The remainder of the yard will be covered in grass, and filled with a variety of common garden objects (e.g. lawnmower, lounge chair, birdhouse, soccer ball). The majority of these objects will be publicly available models. The portions of the environment that we will likely build ourselves are the back of the house, the terrain of the yard, and the details of the flowerbed. We plan on modeling these objects in Blender.

In order to make our game more widely accessible, we are planning on implementing it in WebGL, a web standard based on OpenGL ES 2.0. We will also use a number of a number of open-source JavaScript libraries to emulate OpenGL functionality that is not present in WebGL, including the vector and matrix manipulation library glMatrix[[1]](#footnote-1). To implement our advanced features (real time shadows and real time specular highlights) we will rely on the popular Learning WebGL tutorial series, specifically Lesson 14: specular highlights[[2]](#footnote-2). We are also planning on modelling our fireflies off of the star objects from Lesson 9 of the same tutorial series[[3]](#footnote-3). We may also use WebGL’s particle system to add life to our pre-scripted objects.

1. http://glmatrix.net [↑](#footnote-ref-1)
2. http://learningwebgl.com/blog/?p=1658 [↑](#footnote-ref-2)
3. http://learningwebgl.com/blog/?p=1008 [↑](#footnote-ref-3)