Environmental Impact

This is a project based on GUI—Graphical User Interface. Examples of GUI are buttons and sliders, both of which are used in this project to allow the user to interact with the planet’s inhabitants via the sliders and button. As a zero-waste vegan, the topic of environmental impact is an important one for me, and so I wanted to create a form of advocacy through code. Some of the most significant and easily changeable lifestyle factors contributing to the current climate crisis are meat consumption, dairy consumption, plastic and disposables use, a lack of recycling, and incorrect recycling (resulting in more landfills). On the flipside, the easiest and most effective ways to reduce your carbon footprint is to avoid meat, dairy, plastics, and single-use products. There are numerous resources online to get you started, and it’s fun!

This code utilizes object-oriented programming to define custom methods and properties, which are adjusted through user input—specifically by dragging the sliders and clicking the button. Conditional statements and built-in controls for accepting user interactions determine which slider is being adjusted by the user. The y-coordinate of the sliders, when dragged by the user, are mapped on a scale from 0-1 which are added to or subtracted from a variable that determines how many indexes the array list containing the objects should have, which in turns affects how many objects are drawn to the screen. To keep track of the variables for the sliders, for loops are used to cycle through an array. The locations of the objects in an x, y, z coordinate plane are first randomized then inserted into trigonometric equations to place them tangent to a sphere, and their rotations are also based off trigonometric equations to make them normal to the surface of the sphere. The objects themselves are .obj files found online and imported as PShapes, and I created the texture for the sphere myself in InkScape.