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**Project A: Nature**

Goals: The goal of this project was to apply different things that we learned in class and get them to work on our browsers. We wanted to animate 3D jointed objects by combining various 3D parts and using matrix transformations to get them to translate and rotate.

User Guide: Control the speed of rotation of both the elephant trunk and the starfish arms with the up and down arrows. (up arrow key makes it more CCW, down arrow key makes it less CCW). Drag with the mouse to rotate the starfish. Click anywhere on the canvas with the mouse to translate the starfish to that position. Use the buttons below the canvas to adjust the number of arms on the starfish. Press the spacebar on the keyboard to pause and unpause the animation.

Results:



Figure 1: My elephant where its ears flap back and forth and its trunks move up and down.

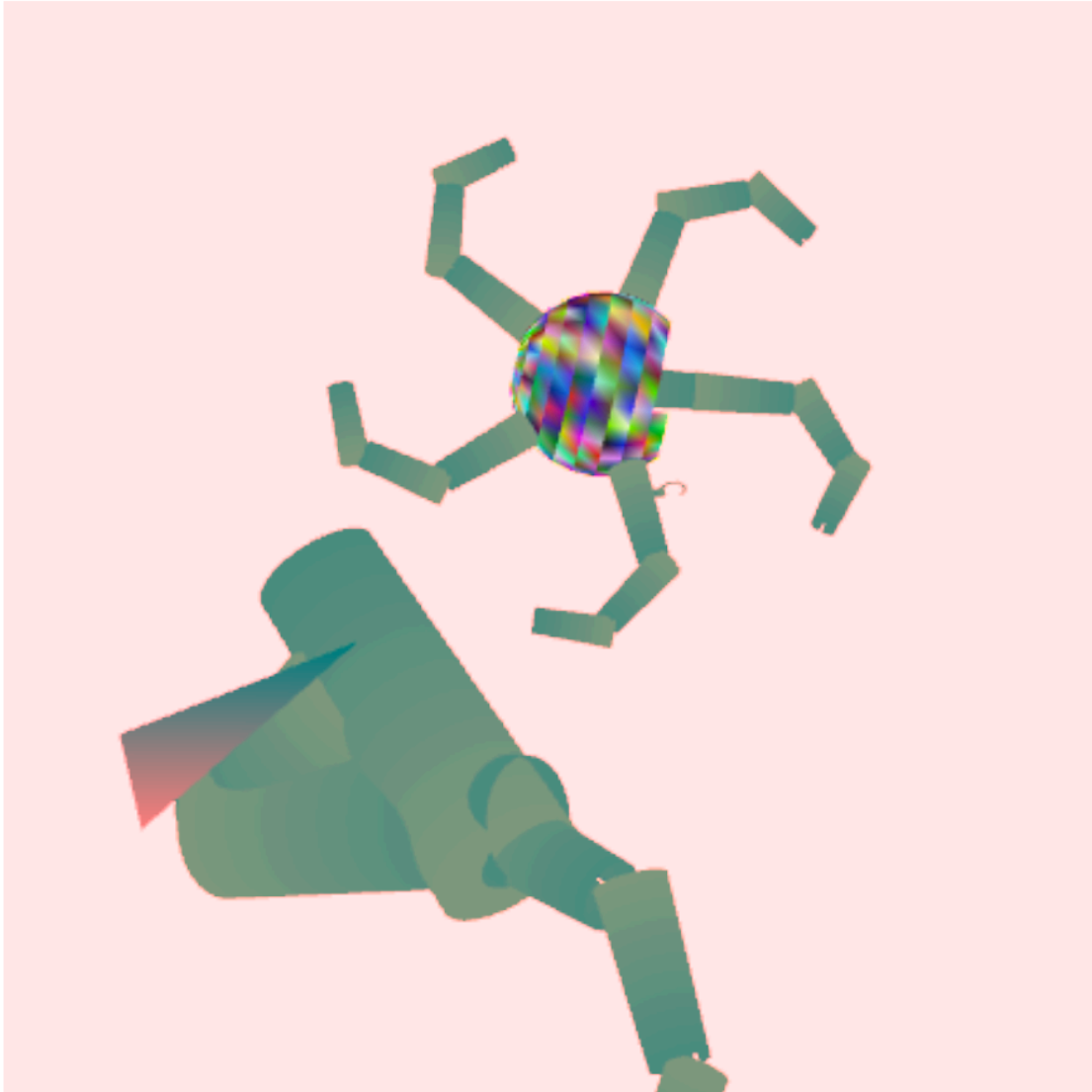


Figure 2: The starfish at its starting position with rotating arms.

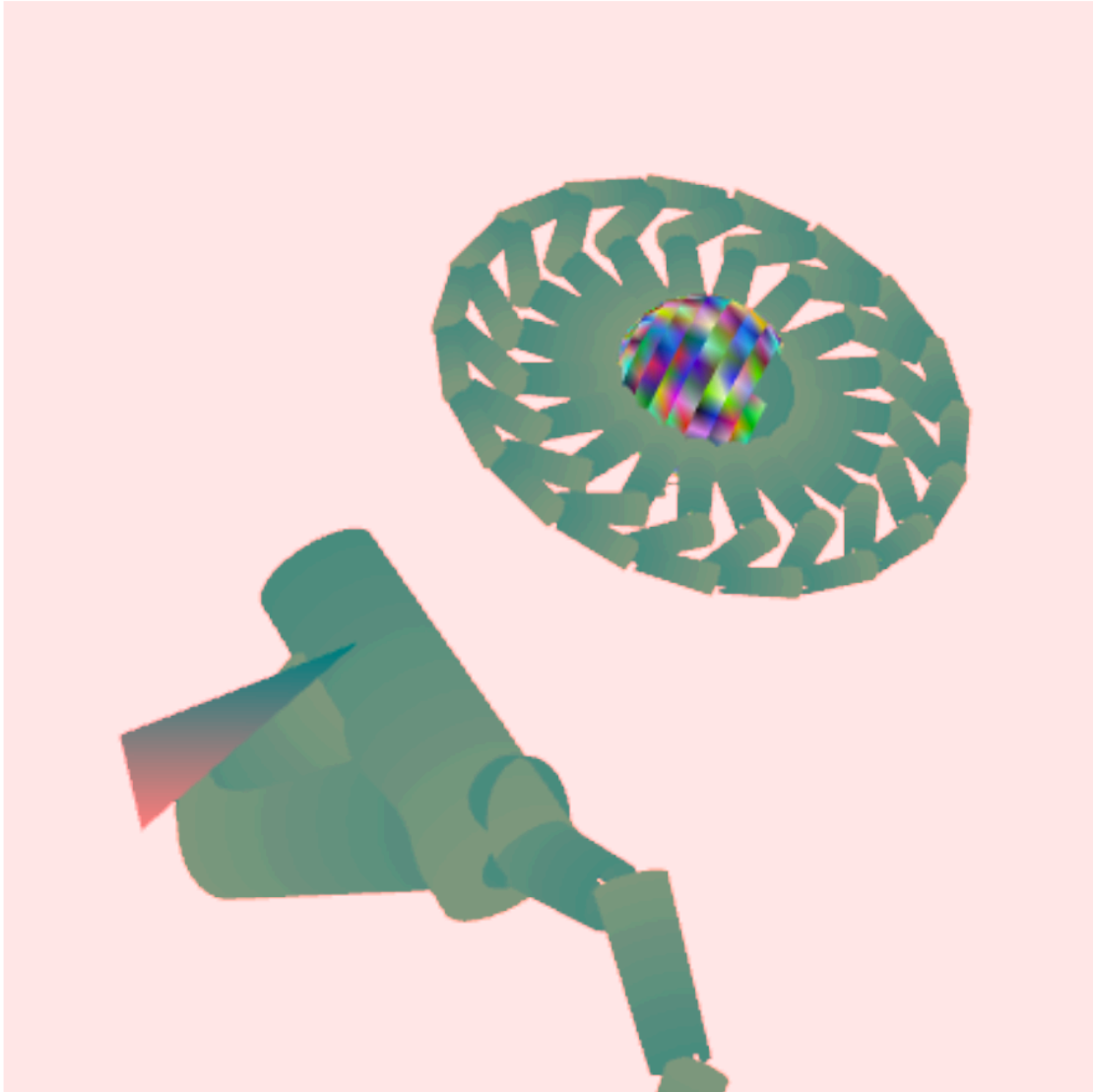


Figure 3: The starfish with more arms from clicking the “inc arm” button.



[inc arms](#) [dec arms](#) [reset arms](#)

Figure 4: The starfish translated and rotated through mouse click and mouse drag interaction.