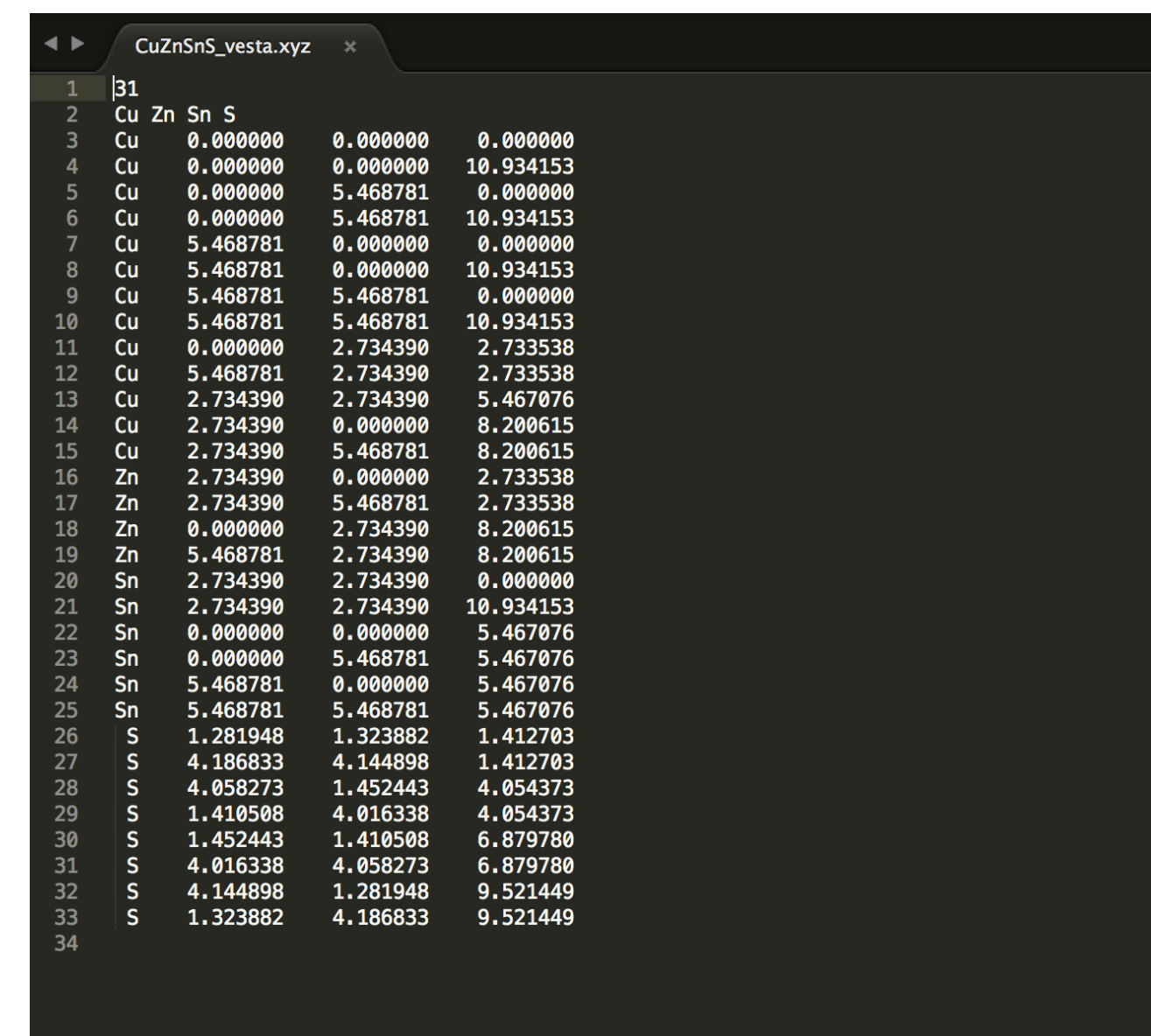


Incorporating Interactive Virtual Reality Technology in an Educational Environment

Project Objective

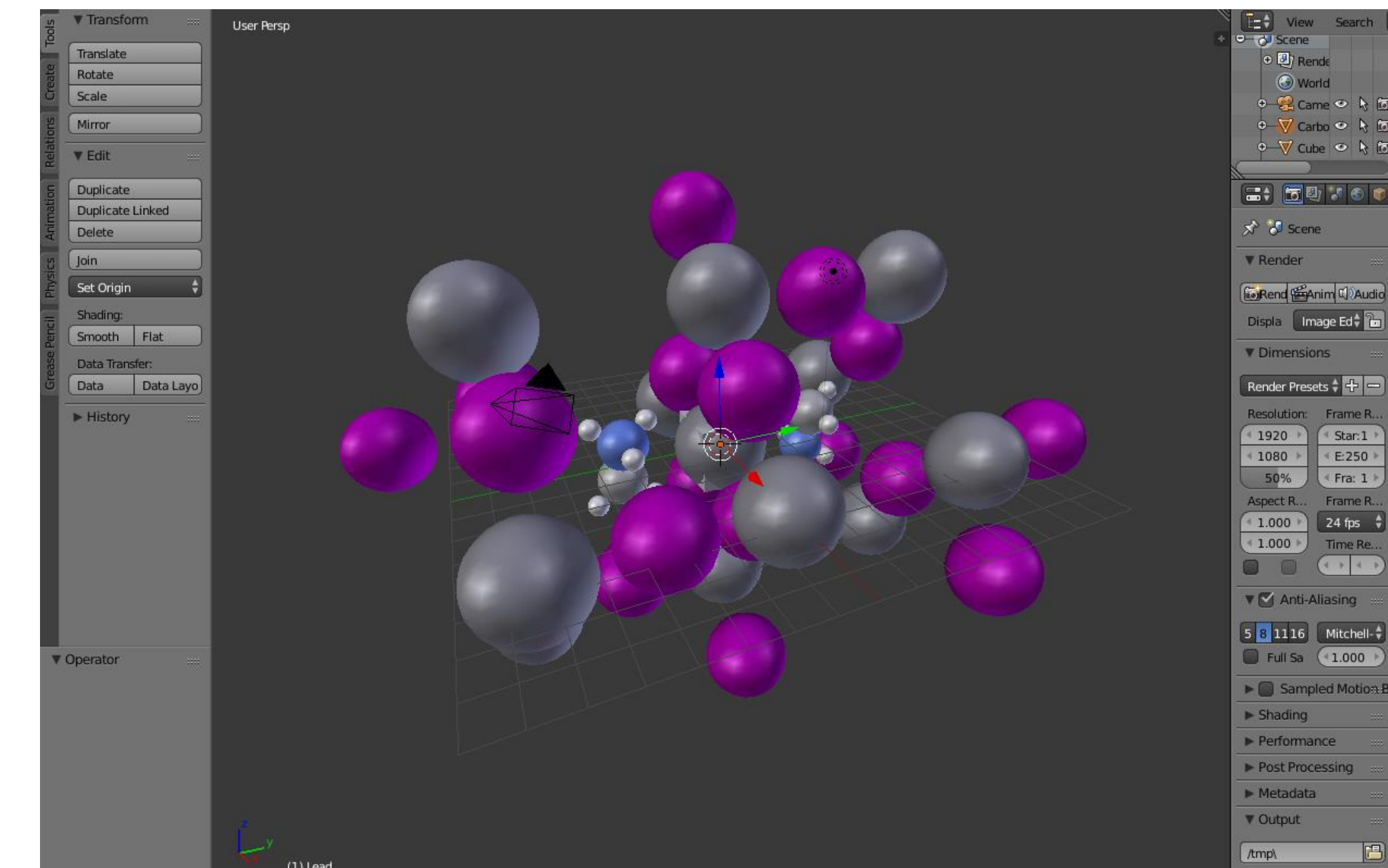
To determine the effectiveness of using interactive virtual reality for learning purposes as opposed to educational virtual reality technology which does not have any user interaction. For this study the focus will be on creating a virtual reality application that can be applied to Materials Science classes at the University of Illinois at Urbana-Champaign. Specifically, this application will create visualizations of complex molecules which can be interactively explored in virtual reality.

Approach



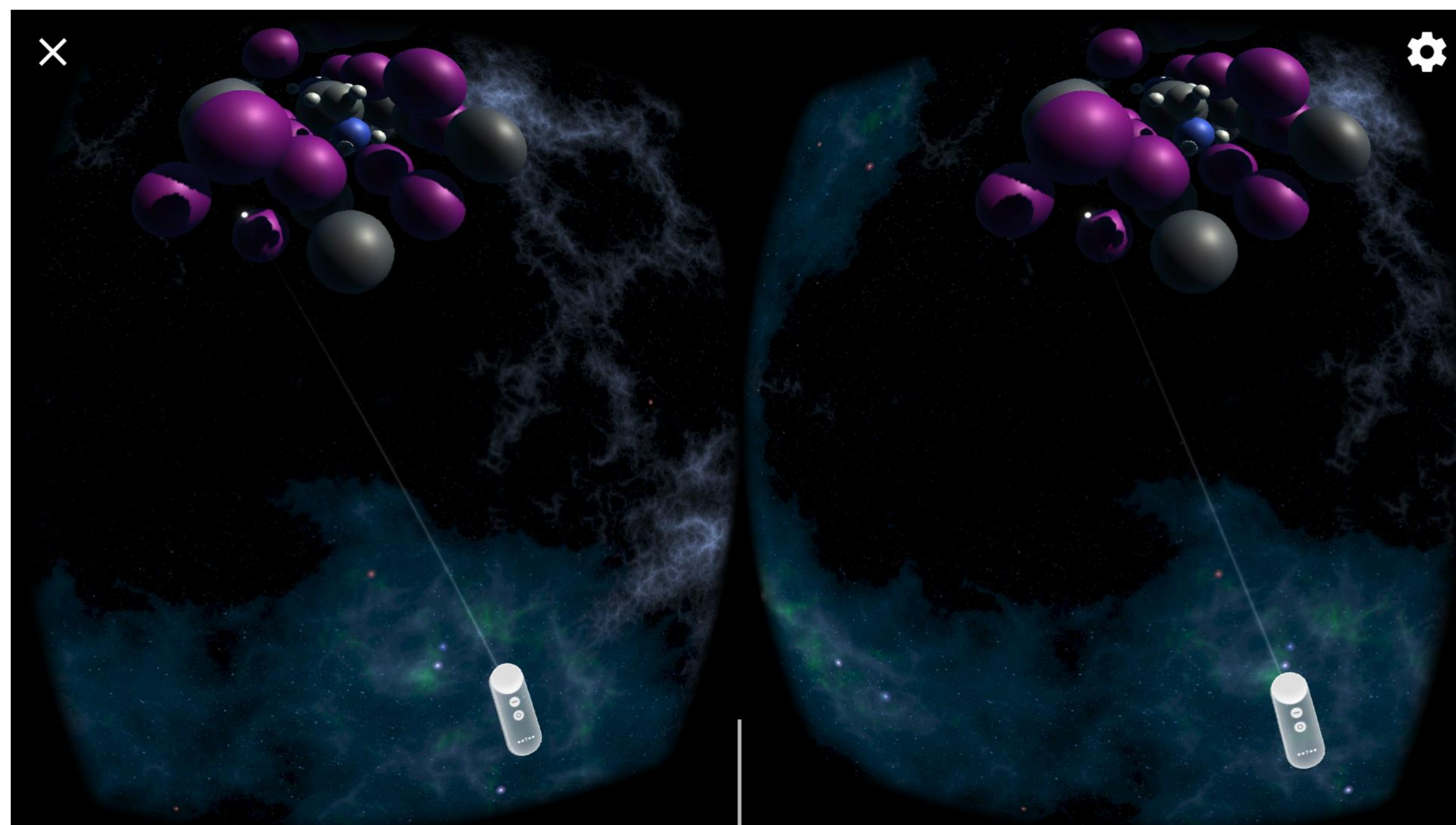
Atom	x	y	z
1	31		
2	Cu	0.000000	0.000000
3	Cu	0.000000	0.000000
4	Cu	0.000000	0.000000
5	Cu	0.000000	0.000000
6	Cu	0.000000	0.000000
7	Cu	0.000000	0.000000
8	Cu	0.000000	0.000000
9	Cu	0.000000	0.000000
10	Cu	0.000000	0.000000
11	Cu	0.000000	0.000000
12	Cu	0.000000	0.000000
13	Cu	0.000000	0.000000
14	Cu	0.000000	0.000000
15	Cu	0.000000	0.000000
16	Cu	0.000000	0.000000
17	Cu	0.000000	0.000000
18	Cu	0.000000	0.000000
19	Cu	0.000000	0.000000
20	Cu	0.000000	0.000000
21	Cu	0.000000	0.000000
22	Cu	0.000000	0.000000
23	Cu	0.000000	0.000000
24	Cu	0.000000	0.000000
25	Cu	0.000000	0.000000
26	Cu	0.000000	0.000000
27	Cu	0.000000	0.000000
28	Cu	0.000000	0.000000
29	Cu	0.000000	0.000000
30	Cu	0.000000	0.000000
31	Cu	0.000000	0.000000
32	Cu	0.000000	0.000000
33	Cu	0.000000	0.000000
34	Cu	0.000000	0.000000

VESTA Format



Blender

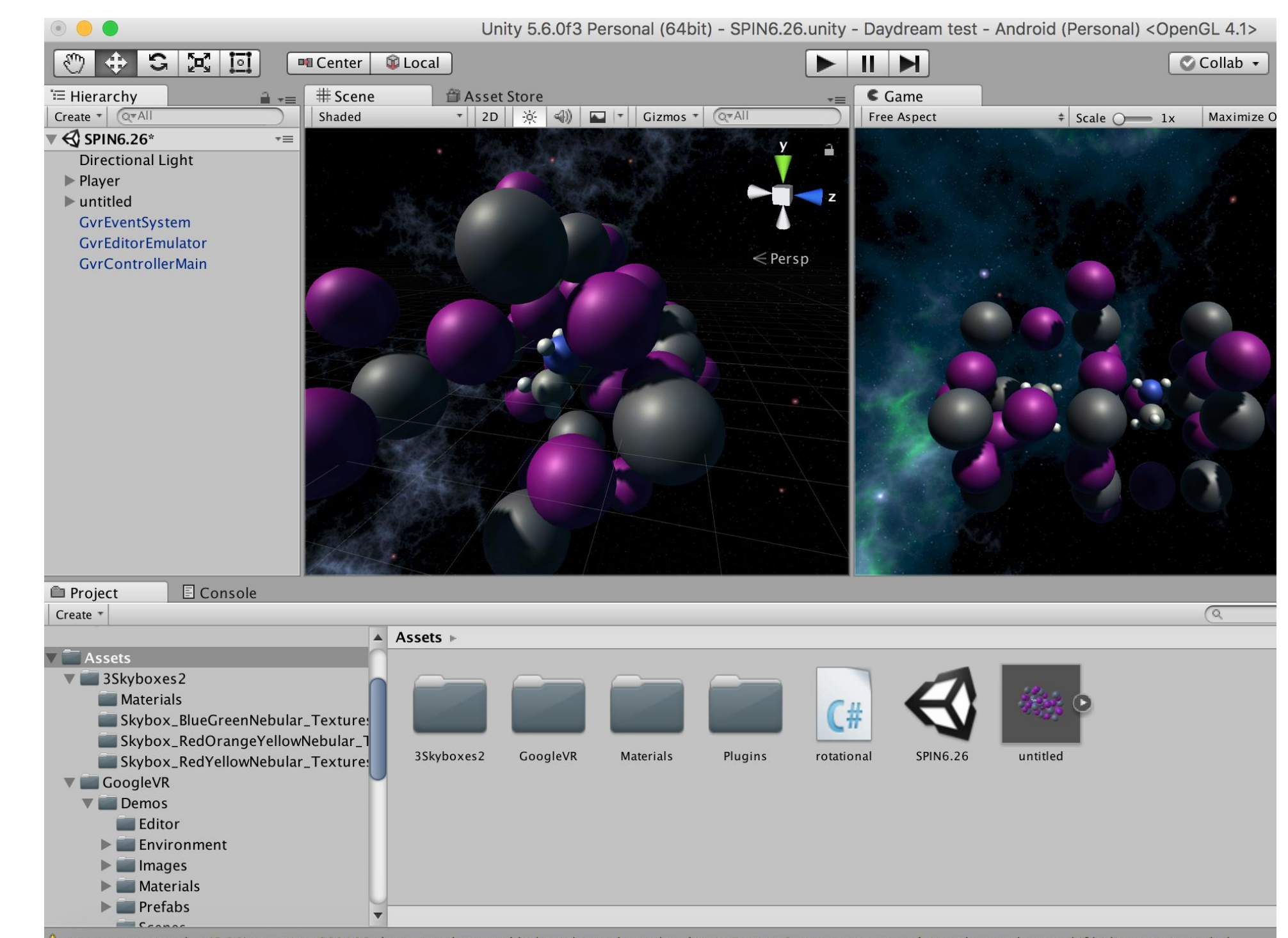
Status



Screenshot of Current Version of our Virtual Reality App

Research Questions

- What is the most effective way to incorporate interactive virtual reality into a classroom given the limitations of today's technology?
- What is an appropriate class size into which virtual reality can be practically incorporated?
- Does the use of virtual reality for educational purposes have a significant impact on the student's understanding of the course material?



Unity