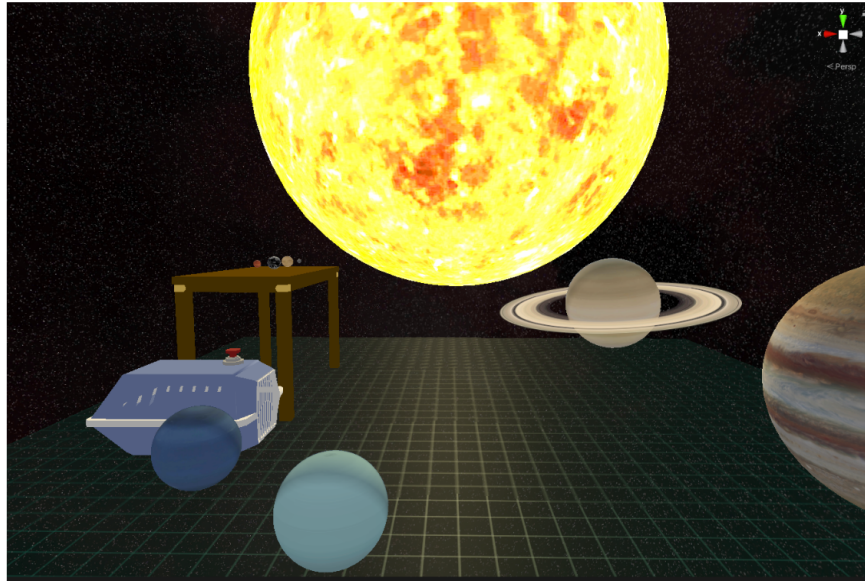# AstroVR

Is VR the solution to difficulties in astronomy education?

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Today's school is drastically different compared to the school of 20 years ago. Ever improving technology has made devices such as ipads a core part of today's teaching environment. We often see that these new devices are introduced without a clear plan for their use and many teachers have a hard time using them effectively for education. With the developments in VR technology over the last years, it's only a matter of time until it becomes part of many schools' technological suite. For VR's to be effectively integrated into the curriculum, software needs to be designed from the ground of for this purpose.

The strength of VR as a teaching tool lies in its ability to display information in three dimensions which makes it very fitting for use in astronomy education where transition between a 2D and 3D perspective is one of the biggest hurdles for young students learning astronomy. AstroVR is a modular teaching tool that is specifically designed to be used as a complement to an existing curriculum and focuses on subjects that are hard to teach using traditional studies such as gravity and relative scale.

The goal for this thesis work was to increase the usability of AstroVR and to improve how effective it was to communicate the concepts it was trying to teach. The core of my approach was to make a more focused product with no superfluous parts where everything had a purpose. Everything that wasn't conducive to the learning experience was cut or heavily reworked regardless of how popular it was. The few additions that were made were all made in order to further align the room with the others in order to make for a cohesive experience. This reduced the extent of the experience and allowed me extra time to focus on polishing what remained. By using this approach I would argue that the project was a success since the resulting product was deemed to have good to very good usability through testing and the introduction of the in-game guide, Botty, allows the product to be used with minimal guidance.