World of Alchemy is a chemistry-based adventure game that incorporates tangential learning as part of its game design. By exposing players to real-world concepts through normal gameplay this implementation tries to address the issues that educational games encounter in promoting effective learning.

Motivation & Goals

- Motivation and choice are essential for learning.
- Traditional educational games tend to focus on bland memorization and repetition activities.
- Many games promote learning without being educational games. Examples: Civilization, Kerbal Space Program.
- Introducing players to real-world concepts as part of engaging gameplay can promote better learning.

Design Model

- Enjoyable Gameplay
- Player Motivation
- Real-World Concepts
- Primed to Learn
- Tangential Learning

Conclusions

- World of Alchemy game model shows promise as a learning tool. Few players tested worse on the post-game quiz, while many improved.
- Art assets, level design, and scripting required to create long adventure game introduce high development cost.
- Given similar work time frame, a more dedicated puzzle game may be able to achieve the same goals at lower cost.