

Rich Content. Engagement. Student-Centered Learning.

Introducing Mission HydroSci!

Mission HydroSci (MHS) is a game-based 3D virtual environment. It is designed to teach key concepts and gain knowledge of water systems while building competencies in scientific argumentation to support Next Generation Science Standards.

The Concept of Mission HydroSci

Meeting these new science education goals for middle school students requires rich learning contexts for exploring substantive science ideas through engagement in scientific practices. MHS has incorporated meeting these new science education goals for middle school students through a fun, visually exciting, narrative game. Your students will learn about science and you will learn about teaching with gaming techniques.

- Teach about water systems
- Students develop competencies with scientific argumentation
- MHS meets the What Works Clearinghouse standards
- Students will receive substantial interaction and feedback
- Typical usage is 6 to 8 class periods to play
- Teachers get support for learning to teach with games

For a short video demonstrating aspects of MHS visit, <https://stemforall2020.videohall.com/presentations/1768>

Be part of taking Mission HydroSci to the next level

Currently, The University of Missouri is proposing to the US Department of Education that we enhance MHS so it can scale for use by many teachers. Future enhancements include:

- Making MHS available on Windows, Macs and iPads
- Providing easy registration/access for teachers and classes
- Implementing a training and support system for teachers
- Evaluating teacher acceptance and student achievement

Game Screenshots



Our player has been sent to look for missing supplies and needs to pick which river to float them back to base. Non-Player Character (NPC) Sam is giving the player feedback about choosing the wrong river to float the supply crate back to camp.



Pollution is threatening the teams ability to grow food needed to sustain their base, the player tosses a sensor into the river to begin the process of collecting evidence to find the pollution source.

Be a Participant

The Missouri Research and Education Network (MOREnet) is pleased to support this effort to take MHS to the next level and we are inviting other research and education organization to join us. We are looking for school districts to join Missouri districts in a randomized control trial of this new MHS system. The field test will take place in 2023 and 2024. We are particularly interested in recruiting schools with high needs students.

All aspects of the study will be required to meet the standards of the University of Missouri Institutional Review Board for human subjects protection. Teachers and school technology coordinators will be compensated for their role in the study and information will be provided for parents and students to have informed consent.

This project allows you to be a part of creating an environment that will positively impact students in your state and support student-centered learning.

Moving Forward

Please reach out prior to May 31, 2020, with an email to LaffeyJ@missouri.edu. We'll be in touch quickly regarding a letter of intent to participate. We look forward to including your district in our proposal to the Department of Education.



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