Inclusivity and Accessibility of Interactive Web Games and Simulations

Interactive games can provide rich learning experiences for students - but for some, these games are not accessible. Designing an educational game which can be enjoyed by a broad spectrum of users can be a challenge.

The Floe Project has been collaborating with content partners to create more inclusive and accessible interactive content. This has resulted in a more accessible version of the PhET simulation John Travoltage, innovations in multi-modal access and descriptions, and sonification of STEM interactives.

The knowledge gained from this collaboration has helped contribute new content to the Floe Inclusive Learning Design Handbook.

Showcase

John Travoltage with multi-modal access

Current Work

Faraday’s Law

PhET Forces and Motion Simulation Design
PhET John Travoltage Simulation Design
PhET Energy Skate Park Simulation
Lumen Learning Analysis of Utility Simulation
PhET Faraday’s Law Simulation

Work Documents

PhET Notes
PhET Tasking
Accessibility Meeting Notes

Inclusive Learning Design Handbook Contributions

Web Games and Simulations on handbook.floeproject.org

Partners

PhET University of Boulder, Colorado
Georgia Tech Sonification Lab
Lumen Learning

Examples

Periodic Table (Sapling Learning)

Media

"PhET Simulations and Auditory Descriptions"
"Making STEM More Accessible with Sonified PhET Simulations"
Making STEM More Accessible with Sonified PhET Simulations
PhET Simulations and Auditory Descriptions

Resources

http://diagramcenter.org/

• PhET Faraday’s Law Simulation - Text descriptions, alerts, and keyboard access
• PhET Faraday’s Law Simulation - PDOM Sketch