Inclusivity and Accessibility of Interactive Web Games and Simulations

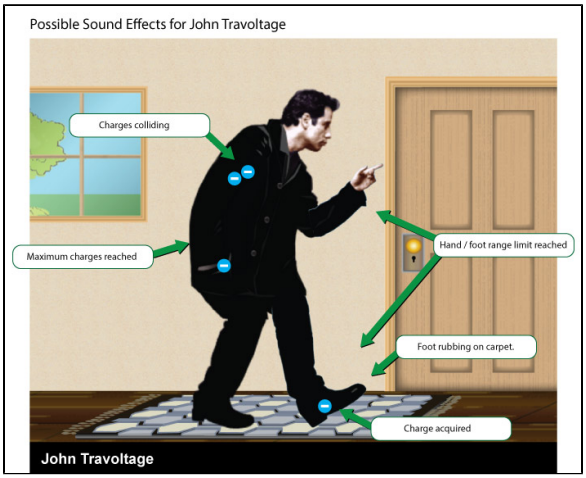
Interactive games can provide rich learning experiences for students - but for some, these games are not accessible. Designing an educational game which can be enjoyed by a broad spectrum of users can be a challenge.

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.

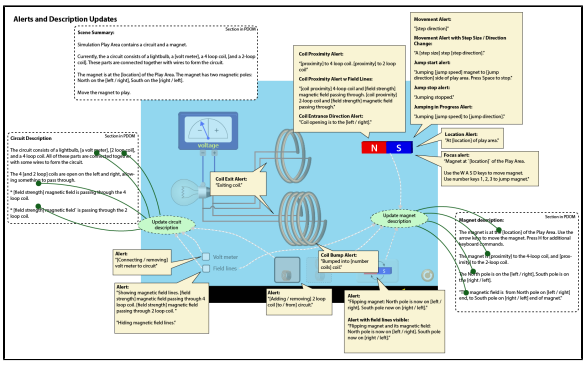
Showcase

John Travoltage with multi-modal access



Current Work

Faraday's Law



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

Designs

- 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/