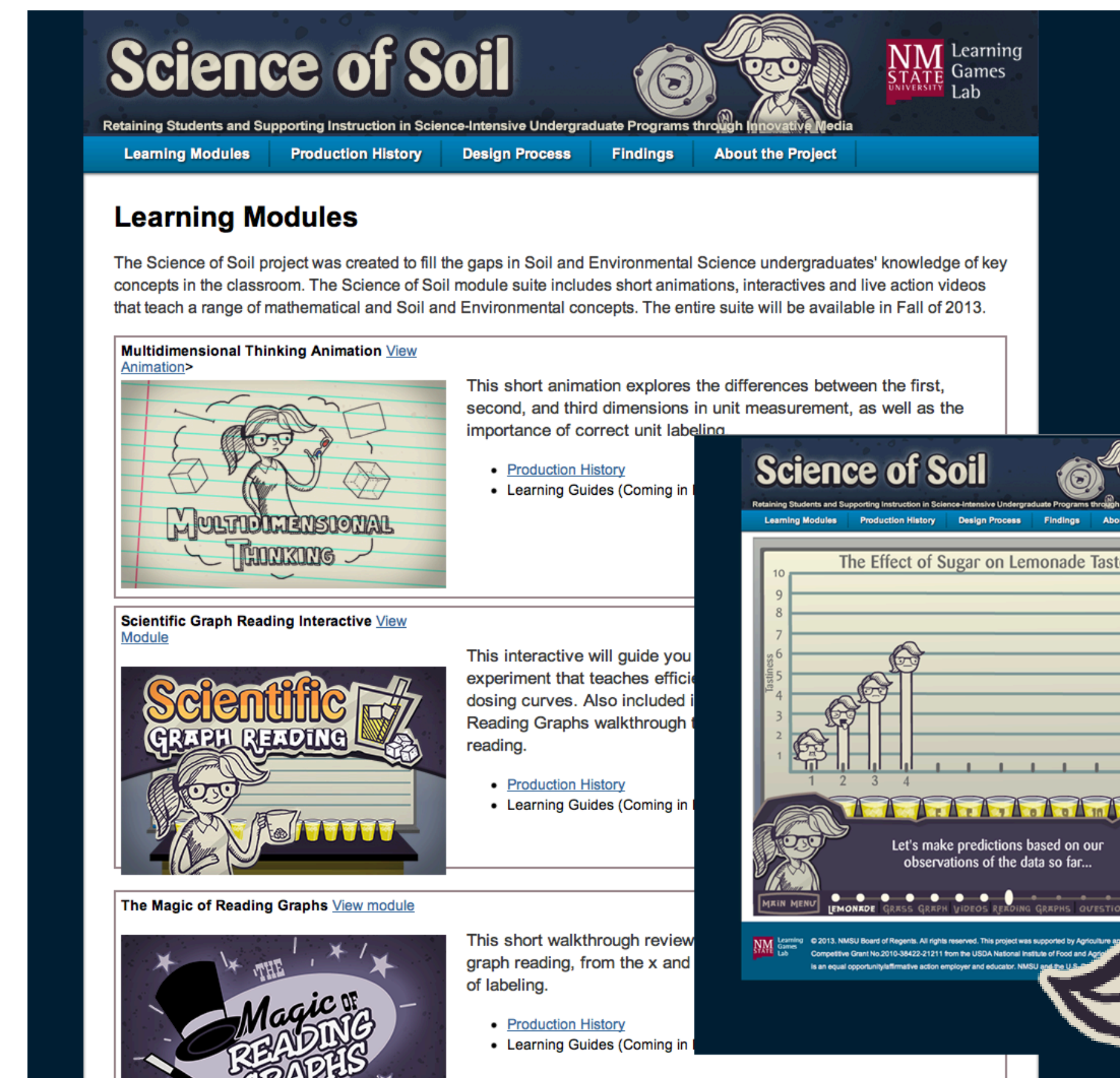


Innovative Media to Support Instruction and Retain Students in Soil and Environmental Sciences



Project Objectives

- Develop **online resources** for undergraduate plant, soil, and environmental sciences education
- Develop educational **animations, games, simulations, and interactive modules** to increase **conceptual understanding** of STEM content
- Increase the **number and quality of graduates** in plant, soil, and environmental science majors



At completion of project, materials will be distributed online for free use at

scienceofsoil.org



Based on lab experience, exemplary teaching, and focus group interviews, the team identified needed outcomes for interactive modules.

Products

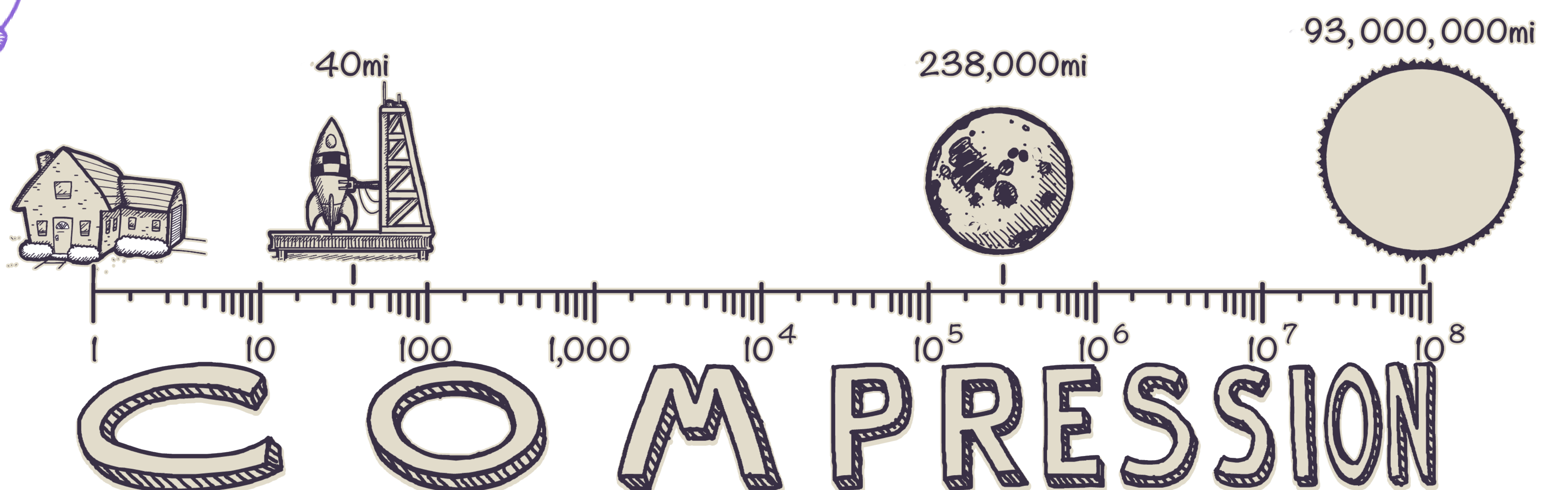
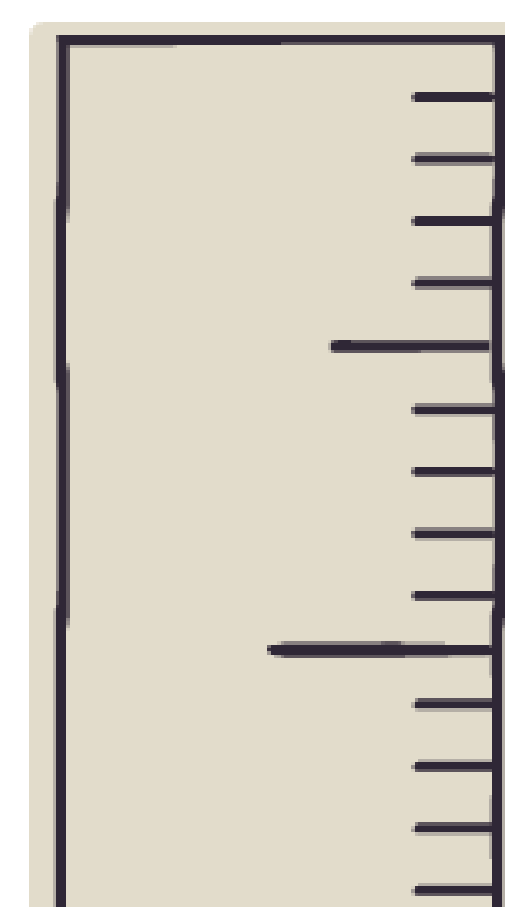
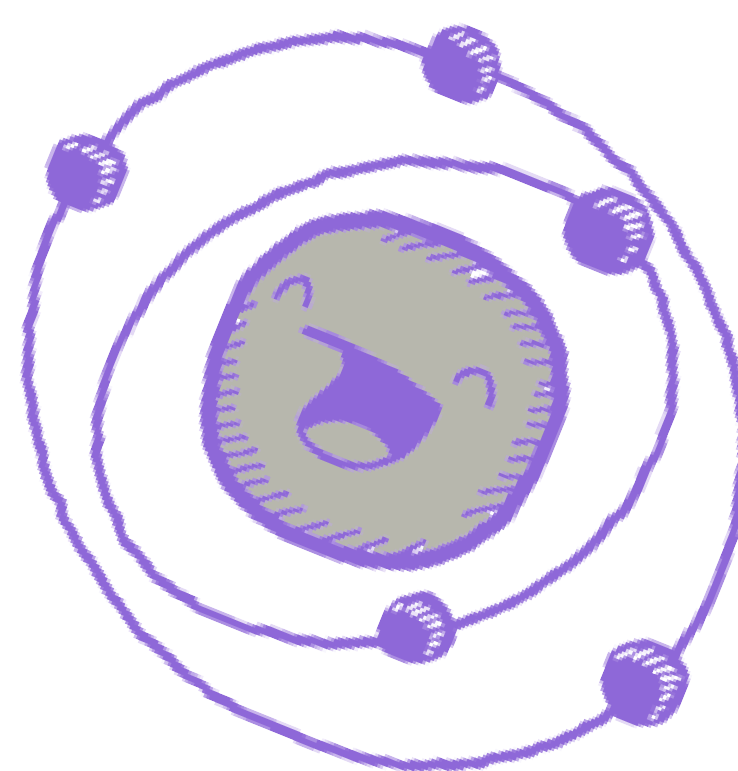
- Based on an intensive design process, **learning modules** will be integrated with instruction in **soil, plant, or environmental science classes** for use by students.
- After using them, students should **know content** better, **feel more confident** in their ability to **apply learned material** to real-world contexts, and be better able to envision themselves in related careers.

Progress to Date

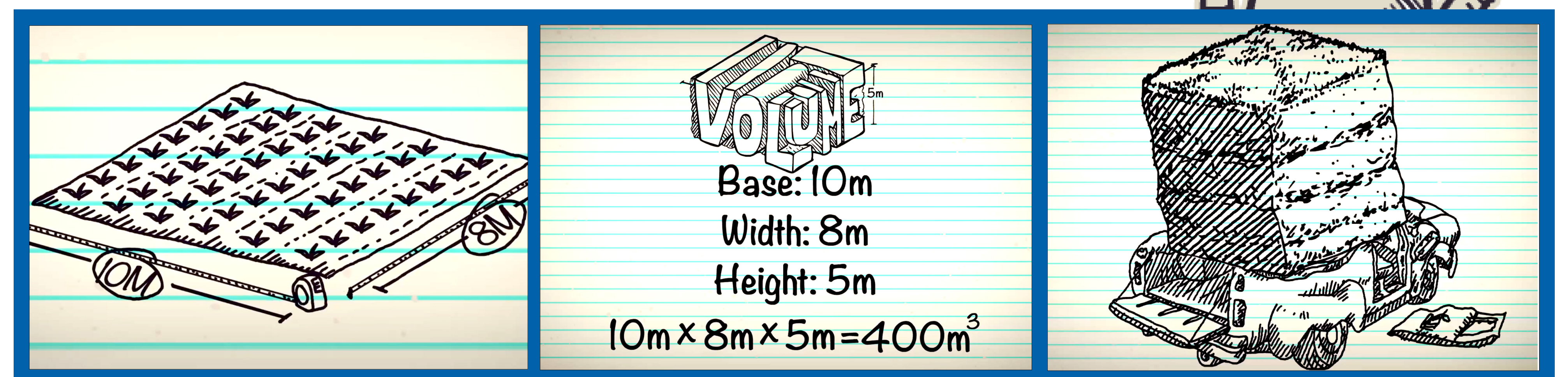
- Focus groups with targeted stakeholders identified key concepts and prerequisite knowledge that students need to grasp in order to succeed in science.
- **Six interactive modules** are under testing.
- Funding and mentoring of underrepresented undergraduate and graduate students is ongoing.
- Videos supporting retention & careers have been developed,

The developed materials address frequently misunderstood concepts specific to soil and environmental sciences. Accessible via browser on Mac or PC. Flash player required.

They will be freely available at **scienceofsoil.org**

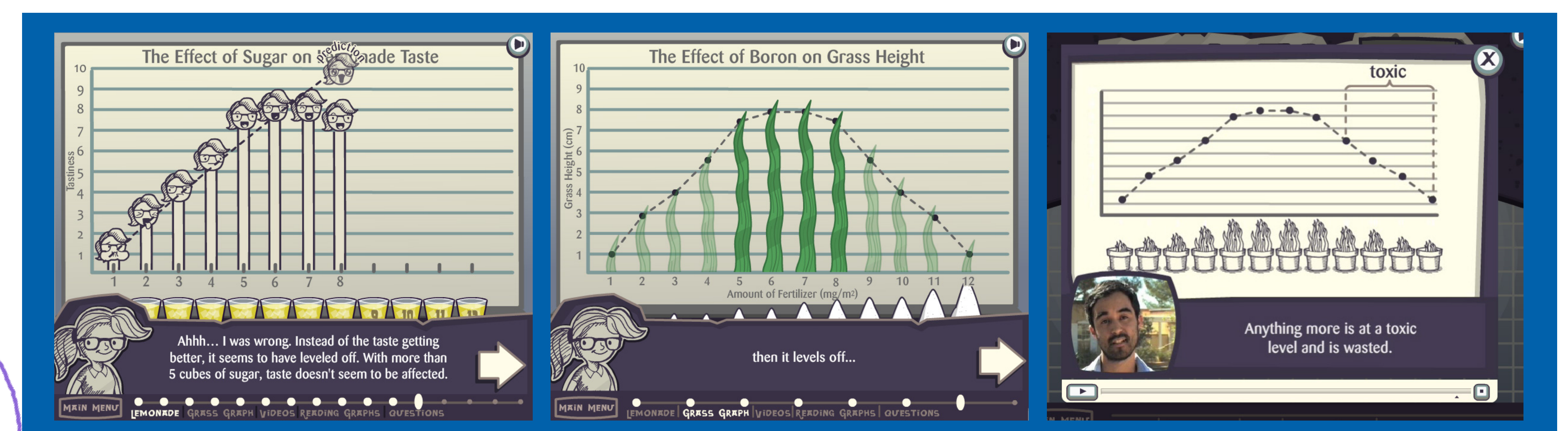


Currently testing prototypes in lab courses



Students' feedback on animations

- Length, style, and approach are well liked.
- Content (graphing and unit conversion) is clear and relevant.
- The casual style makes content seem like a good refresher and helps students with proper vocabulary.
- Students requested additional materials.



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