

Why Type 2 Diabetes?

The rapid and recent increase in type 2 diabetes in the US provides a compelling phenomenon that links concepts taught in both biology and health classes. Type 2 diabetes builds a bridge between biological concepts such as homeostasis and gene/environment interactions and health concepts such as nutrition, label-literacy and disease prevention. The topic also connects to broader social issues, including environmental influences, health care, personal choice, access to resources, diet and exercise, social justice, and public policy.

“It’s cool to learn how preventable [type 2 diabetes] was. I pretty much thought that if it was in your genes then you were going to get it no matter what, but there are so many ways to prevent it.”
-GSEO student

The GSEO GEMNet Study

Genome Sciences Education Outreach (GSEO) at the University of Washington is conducting an educational program focused on teaching about type 2 diabetes in 9th and 10th grade high school health and general biology courses (the GEMNet study). We worked with teachers to develop and pilot the complementary health and biology units and a pre- and post-test designed to measure student learning.

We are now evaluating how well students learn from each of the health or general biology units, or a combination of both units across 9th and 10th grades. We are looking for health and biology teachers who are interested in incorporating type 2 diabetes lessons into their classes and participating in a research study that measures how well their students understand the type 2 diabetes-related science and health content. We are particularly interested in identifying teams of health and biology teachers from the same school, although individual health or biology teachers are also welcome to participate on their own.

Are you interested in being a study teacher for this project?

Study teachers will first be asked to administer the pre- and post-test to one or more classes of eligible students before teaching any of the GEMNet diabetes lessons. These students serve as baseline controls for the research study. The UW team will then provide discipline-specific professional development to the study teachers at a location near their school. In the semester or school year after the PD workshop, study teachers will be asked to administer the pre-test to their students, teach the entire health or biology unit, and then administer the post-test.

What would I be teaching?

The biology consists of 5 lessons, and the health unit is 5 lessons plus an assessment. Each unit is accompanied by a slide set and requires between 7 and 14 teaching days. Curricular materials can be found here:

<https://tinyurl.com/T2DBiology>

<https://tinyurl.com/T2DHealth>

Study Participant Teacher Benefits

- Teachers who participate in the study will be compensated \$75 per class period for each set of pre- and post-tests returned from eligible students for both the baseline control and intervention students.
- Teachers will receive their students’ pre and post test scores to be used as classroom assessment.
- Teachers will be compensated \$100 for attending a 4-hour professional development (PD) workshop prior to teaching the curriculum. STEM clock hours also will be available for this (PD).

- Teachers who travel more than 50 miles round trip to attend a professional development session will be reimbursed for mileage. Housing costs will also be paid, if needed.
- Study teachers will be considered for future curriculum design sessions and as workshop co-presenters, if interested.

Study Participant Teacher Expectations

- Teachers will review the protocols and procedures of the study. Intervention students will receive all the lessons as written and complete the pre- and post-tests in a 2-3 week time block.
- Teachers will show a consent video to eligible students prior to the pre-test that explains how students opt in or opt out of having their data used for the study.
- Teachers will ensure that students have their district ID numbers available to them on pretest and post-test days.
- Teachers will provide students with on-line access to the pre- and post-test.
- Teachers will make parent informational letters provided by GSEO available for students to take home.

Will this work for my schedule? Here are some options:

For SEMESTER-LONG Classes	
WHAT	WHEN
1) Give the pre-test to students in one or more biology or health classes. 2) Teach as you normally would, but without using any GEMNet lessons. 3) Give the post-test to the same group of students about 2 weeks later.	This Semester
Attend a PROFESSIONAL DEVELOPMENT WORKSHOP (~4 hours)	Jan/Feb or Summer
4) Give the pre-test to a NEW group of students in one or more classes. 5) Teach the GEMNet lessons as written. 6) Give the post-test to the same group of students when finished.	Next Semester
7) Repeat 4 – 6 in subsequent semesters and school years, if desired	

For YEAR-LONG Classes	
WHAT	WHEN
1) Give the pre-test to students in one or more biology or health classes. 2) Teach as you normally would, but without using any GEMNet lessons 3) Give the post-test to the same group of students about 2 weeks later	Any time this school year
Attend a PROFESSIONAL DEVELOPMENT WORKSHOP (various options)	Summer
4) Give the pre-test to a NEW group of students in one or more classes. 5) Teach the GEMNet lessons as written 6) Give the post-test to the same group of students when finished	Next school year
7) Repeat 4 – 6 in subsequent school years, if desired	

Interested in partnering with us?

Please complete an online interest form at: <https://catalyst.uw.edu/webq/survey/jcgriz/364130>.

Feel free to contact Joan Griswold at jcgriz@uw.edu or 206-616-4538 (office) or 425-241-3081 (cell).