

Regenerative Medicine Minnesota Progress Report

Grant Title: Stem – Based lab (RegenMed in the Classroom)

Grant Number: MRM 2015 312ED 003

Requester: Tami Limberg

Brief Description of Project:

My colleague, Nick Beerman, and I wrote regenerative medicine based curriculum for high school students. This curriculum included research into stem cells using resources like the book *Stem Cells: A Very Short Introduction* by Jonathan Slack and Science Daily Articles among others. Students then engaged in the discussion of regenerative medicine and the ethics surrounding the use of stem cells through graphic organizers, cooperative work, and seminars. Students performed an introductory lab involving the dissection of planaria to enable them to create their own investigations based on regeneration of planaria in a polluted environment. To do this, students brainstormed a list of environmental pollutants that they could use in the lab environment – things like road salt, turbidity, leaf matter, antifreeze, oil, paint, etc, then mixed up the proper concentrations of their solutions and dissected planaria based on procedures that they researched and developed. Once implemented, students worked together to write high level lab reports to report their findings.

Nick Beerman and I then published this curriculum through a website we created called regenmedintheclassroom.org. We also presented this work at the NSTA Regional conference in 2016 and the Regional Regeneration Symposium in 2015 and 2016 winning best poster award in 2015.

Where did this project take place?

This project took place in MN and WI but it has the ability to be used world wide.

People impacted by project and where they are from

This work is geared towards educators of high school students.

What was the outcome of this project?

This curriculum produced high engagement and learning from the students, all students were able to demonstrate proficiency on their lab reports and the content. Students enjoyed all parts of this unit. This unit was also easy to implement – which was a main goal of the project. Teacher time prepping for this lab was low – less than an hour for the labs and less than 10 minutes each day for the daily work. Assessment using google docs was easy and impactful for the students – they did use the feedback to change their drafts and turned in good quality final lab reports.

Please list any of the following that have resulted from your Regenerative Medicine Minnesota grant funding:

No publications at this time – though it is planned for this summer with Randy Daughters.