My name is Denise Bumgarner.  I am one of the math instructors at the Greater Altoona Career and Tech Center.  Steve Walk forwarded your e-mail to me with your request for more information.

John Williamson and I have both been working at the GACTC since August 2004.  The GACTC has 28 program areas for which John and I create career specific math lessons.  There was a push in program before we came to the GACTC but it was not as extensive as the current program that John and I administer.

Our day is divided into two sessions with three class periods per session.  I have attached a copy of my schedule to give you an idea of a regular week.  Also attached is a copy of the lessons that I covered for the for the 2013-2014 school year.

Our lessons are a collaborative effort between the primary instructor and the math instructor.  For example, last year the Heating, Ventilation and Air Conditioning class was working on heat loss (using BTUs).  As a class we went to the house that is currently under construction and measured the rooms and the windows/doors so that we could accurately calculate how large of a heating unit the house would need.  When the Digital Printing class is working on paper cutting, John will use a lesson that teaches the students how to get the greatest number of 8 ½ x 11 sheets from a 17 x 22 piece of paper.  Many of the lessons that we do at this time of year are directly related to the NOCTI exam that our students will take in April.  For example, in Cosmetology the students will review ratios and proportions, commission and angles, in Carpentry we will review fractions, the Pythagorean Theorem, costing, area and perimeter calculations.

We finish the year with units designed to help the students with finances.  Both John and I spend time explaining how pay is calculated, how to write a check, some information on credit cards and how to do an invoice that is shop specific.  We also play math Bingo twice a year.  It’s a big hit with the students and an excellent teaching tool.   All of the students take an assessment at the beginning and the end of the year to measure improvement.  This data is submitted to Perkins each year.

I have included a paint calculation unit that I do with the Interior Decorating and Finishing Class.  Part of the NOCTI exam involves costing a job.

Please feel free to contact me for more information at 814.505.1225 or at the above address.

Denise L Bumgarner

GACTC Math Instructor