**The Teacher Center of Broome County**



**Teacher Study Group Grant Award**

**2014-15**

 **FINAL REPORT DUE BY APRIL 13, 2015**

**DOCUMENT PROCESSES AND OUTCOMES**

**STUDY GROUP TOPIC: \_\_\_\_\_\_\_\_\_SCIENCE LITERACY\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**List of group members: D. SIMPSON, K. FRECH, A. O’REILLY, G. DEANGELO & L. GARBADE**

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**The final report must be word-processed and submitted both in print and through e-mail using this form.Send print copy Teacher Center @ WSKG, BOCES Mail Drop #22 and e-mail file to** **bctc@btboces.org****. This report will be posted on the Teacher Center web page at http://teachercenter.info.**

Describe the initial goal of the group noting any adjustments that had to be made as time passed.

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| Our initial goal was to investigate the types of literacy that the Science curriculum is now requiring using Next Generation Science Standards, Common Core State Standards and the NYS Science Benchmarks. We wanted to see what these items entailed and how we could incorporate them into our teaching methods. We hoped to find ways to bring in current events and real life data to use as lab material; some kind of reading that might be on topic for our different disciplines and age-levels; and justification for taking the time from our teaching of test-needed material to incorporate Science Literacy into our classrooms. |

Describe the ACTION PLAN that the group followed.

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| At each of our meetings we discussed what we had done the previous time, shared what we had read in our purchased books, swapped the books around and tried to find some webinars--or a variety of these. Some meetings were just discussions of what we could possibly do to bring more reading into our classes. With one of these discussions, we came upon the idea of having our 7th graders read ‘My Side of the Mountain’ prior to going to Frost Valley this year. Another time we spend the session compiling and reviewing scientific literature pertaining to the recent measles outbreak, the 1918 influenza pandemic and “Typhoid Mary”.  Books which we used included:* Literacy for Science: Exploring the Intersection of the Next Generation Science Standards and Common Core for ELA Standards: A Workshop Summary
* A Framework for K-12 Science Education: Practices, Crosscutting Concepts, and Core Ideas (by the National Academy of Sciences)
* A Framework for K-12 Science Education: Practices, Concepts, and Core Ideas (by Helen Quinn)
* Essential Questions: Opening Doors to Student Understanding
* Common Core Literacy for Math, Science, and Technical Subjects: Strategies to Deepen Content Knowledge
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Describe how the action plan was implemented.

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| Meetings were started with paperwork, then reviewing what we had done the previous meeting. Next we went over the resource books we had read and discussed their pros and cons and IF we could utilize them within our individual disciplines. We also brainstormed ways to incorporate more reading in addition to the usual textbooks within our courses. We came up with two fiction texts that we will be implementing into our courses through this brainstorming. We ended our meetings by assigning ourselves homework and topics of discussion for the next meeting.  |

Evaluate the impact of the study group effort on teacher/student performance.

How has this study group changed you as a teacher? Do you anticipate that any of your teaching practices will have changed?

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| We have already seen changes in ourselves in that we are more willing to try some new ideas out in our classes. * Our 7th grade Science teachers are having their students read a book  (My Side of the Mountain) prior to the 7th grade class trip and incorporating the plant and animal life from the text into class work and current learning.
* Our 8th grade Science teachers are looking into the same idea with a text.
* Our Biology teachers are going to work on using a book series by Patricia Cornwell that describes the forensic pathology practice of a fictional character, Dr. Kay Scarpetta.
* Our Biology teachers pedagogy has changed, incorporating more engineering projects in the classroom, and blending language arts (i.e., assigned books) to coincide with content in Bio.
* Our Chemistry teacher already uses the book ‘The Disappearing Spoon’ and incorporates the readings into the study of the Periodic Table.
* All of us will be having students make more use of the text to cite answers to lab questions, especially for conclusion purposes.
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What evidence do you expect to see of student achievement improving as a result of your participating in this study group?

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| We expect to see our students show more interest in their course topics and to see their grades improve in the classroom and on standardized tests. They will have more interest in reading and will have greater mastery of critical reading, which can only help them in their future careers. |

What evidence is there that the goals of the study group has/has not been met?

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| The evidence is in our choice of reading books that we have already made--we met the goal of finding science literature that we can use in our classrooms to get our students to read more and on the road to furthering their Science Literacy, as evidenced below:* Concurrent instruction in area of curriculum overlap has been initiated
* Engineering component with regard to way in which an impulse in transported through a neuron is part of the lab on the nervous system.
* *Students made brochures on measles.*
* *Students looked at and reported on periodical articles.*
* *Had 4th grade students use a jigsaw-reading technique to explore 4 different articles on the moon. Groups shared and then presented to class. Non-fiction text was used.*

The initiatives incorporated into the classroom must not be considered ends in themselves.Evaluation of the new processes must be ongoing and continuous.  |

Comment on the value of the study group process? Did it work for you?

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| The opportunity to hear and share how other teachers are incorporating reading more and more was beneficial. Our discussions were very good, sometimes heated and sometimes disbelieving, but we have all grown professionally by embracing some new ideas and theories that we will (and are) incorporating into our current methodologies. Spreading out our meetings over the four month period worked well to maintain momentum while allowing enough time to delve deeply into the topic and digest the material. |

How can we make this study group program better?

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| * Enable online submission of paperwork.
* Increase hourly pay to at least $26 and $30 per hour for regular group members and group facilitator.
* Investigate plausibility of offering summer study groups.
* Investigate expanded sources for materials and increase per person allowance to $60.
* Allow Final Report to use single spacing.
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A final report is due two weeks after the last meeting or by April 13, 2015, whichever date is first. The report must be typed and double-spaced using the provided form. One copy must be submitted in print and the file must be submitted through e-mail to bctc@btboces.org. Return to the Teacher Center (Mail Drop #22), 601 Gates Rd., Vestal, NY