

Rural Collaborative to Improve Instruction and Expand Student  
STEM Opportunities and 21<sup>st</sup> Century Skills through Literacy  
Design Collaborative (LDC)



MID-YEAR REPORT

Submitted to:  
Northwestern Local Schools

Submitted by:  
THE PAST FOUNDATION



Knowledge Capture Team

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## Rural Collaborative to Improve Instruction and Expand Student STEM Opportunities and 21<sup>st</sup> Century Skills through Literacy Design Collaborative (LDC)

### 2016-2017 MID-YEAR REPORT

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### **Rural Collaborative to Improve Instruction and Expand Student STEM Opportunities and 21<sup>st</sup> Century Skills through Literacy Design Collaborative (LDC)**

#### **MID-YEAR EVALUATION**

**February 15, 2017**

*The Rural Collaborative to Improve Instruction and Expand Student STEM Opportunities and 21<sup>st</sup> Century Skills through Literacy Design Collaborative (Rural LDC Project)* is a project funded by the Ohio Department of Education, Straight A Fund. The project is designed for implementation in five rural districts that comprise the *Rural Collaborative consortia schools*, including Northwestern Local Schools, Mapleton Local Schools, Hillsdale Local School District, Loudonville-Perrysville Exempted Village Schools, and Black River Local Schools. The project duration involves the grant year (2016-17), and five sustaining years (2017-18 through 2021-22). The project is being implemented during the grant year by the Northwestern Local Schools in partnership with Battelle Education (BEd) and High Schools that Work (HSTW). The PAST Foundation Knowledge Capture Program (KC) is evaluating project implementation and project outcomes.

#### **Report Overview (August – December 2016)**

This report provides an overview of project implementation conducted during fall 2016 (August – December 2016) of the grant year of the project. Supporting documentation for this time period is presented in the Appendices of this report.

Implementation activities focused on support for design and completion of the LDC Module 1 by Cohort 1 teachers (n=15). Actions during this period involved six components of the project:

- Monthly Implementation Team Review
- Pre-Project Implementation Cohort 1 Teacher Surveys
- Professional Development for Cohort 1 Teachers
- Classroom coaching and observation
- Submittal and review of LDC Module 1
- Submittal and review of sample student projects

Project formative evaluation activities are presented in *Appendix A: PAST Foundation Project Evaluation Schedule 2016-17*. *Table A: Rural LDC Project Year 1 Evaluation Schedule* (revised 1/5/17) shows evaluation activities in coordination with the major implementation tasks scheduled and conducted by the project partners, and includes revisions for the Spring 2017 schedule following the Evaluation Plan submittal (10/31/16). Evaluation activities were conducted onsite, or virtually via Zoom®, an interactive web-based platform that supports real-time, virtual participation. *Appendix B: Knowledge Capture Project Evaluation Activities, Fall 2016* provides a more detailed description of work led by the KC Evaluation Team in







collaboration with the Project Manager, BEd, and HSTW. This aspect of formative evaluation involves a process for integrating data collection, review, and feedback to inform implementation strategies. In addition to quarterly evaluation meetings, the *KC Chronology* provides additional detail on evaluation meetings organized and conducted as needed in support of key implementation activities during phases of implementation, providing real-time data to inform strategies during planning and review by the Implementation Team.

Table 1: LDC Rural Collaborative  
Knowledge Capture Summary of Formative Evaluation Activities (August – December 2016)

Evaluation Task	Process Conducted by Evaluation Team	Evaluation Product
Observation of LDC Rural Collaborative Implementation Activities	Structured observation of: 1) monthly Implementation Team meetings (n=5) to reflect the process of stakeholders, including communication and input from the District Liaisons related to diverse district priorities during phases of project activities; 2) LDC professional development sessions (9/29-30, 12/9); and, 3) Informational meetings and updates for district administrators and staff related to project planning and coordination to support district priorities (9/7, 12/9).	Bullet point reports providing summary of observation data to provide systematic review of Implementation Team structure and process, and to support Cohort 1 Teacher Professional Development
One-on-One Interviews	Conducted key informant interviews (n=8) with the BEd LDC Coaching Team and the HSTW Coaches to inform the context for formative evaluation to understand coaching priorities for program design, goals for start-up training, ongoing classroom support, and overall implementation strategies; additional analysis of interview data is also intended to inform pre/post teacher survey design.	Narrative analysis of training goals and expectations of LDC Coaches; narrative analysis to identify diverse perspectives and experiences that contribute to building targeted coaching support for Cohort 1 aligned to project goals.
Teacher Surveys	Grant Year: Design and conduct pre/post online surveys for (15) Cohort 1 teachers in 5 consortia schools. Survey data to include classroom instructional practices including teacher perceptions of program impacts related to science and literacy LDC instructional strategies, and views on a range of practices to achieve student engagement in science learning.	Qualitative and quantitative survey analysis submitted with quarterly and annual grant reports.
Data Collection of Project Materials	The KC Team created a Google shared drive for Project Partners to archive materials provided to Cohort 1 Teachers, and support access to information provided in PowerPoint decks, handouts, and other materials created for Cohort 1 teachers and district staff.	Systematic data collection of supporting documentation for project planning and review; archiving materials for project grant reports.
Formative Evaluation Meetings	Quarterly meetings to coordinate modification of project partner implementation schedules; review logistics of evaluation team involvement in project implementation activities; review interim stages of analysis with project partners based on preliminary summary of qualitative and quantitative data to inform implementation strategies; quarterly review of formative data collection and activities; conduct additional Evaluation Team meetings as needed to support key implementation activities.	KC Team conducted (14) 1-2 hr. quarterly, PD debrief, and ad hoc meetings coordinated to support implementation planning; summary meeting notes provided to the Project Partners.







The Evaluation Team held (14) meetings including (1) quarterly Evaluation Team meeting (10/28/16), as well as work in progress meetings including survey review, PD planning and review, and team debrief sessions following Implementation Team meetings and professional development sessions. Evaluation Team Meeting agendas are presented in *Appendix B*.

The following sections focus on activities conducted by the Project Partners to support Cohort 1 Teacher design, completion and review of LDC Science and Literacy Module 1, and review of examples of student projects completed during fall 2016.

### **Summary of Project Implementation Activities, August – December 2016**

The project LDC Implementation Team (LDC-IT) members participate in monthly review of project activities. The monthly meetings are intended to support District Liaisons to provide important and timely feedback from each district to Project Partners, coordinate particular actions across districts, and assess any additional support needed by individual district participants provided by Project Partners. This work has been guided by the Communication Plan (submitted 10/31/16) providing a planned schedule for date and location of regular monthly meetings for District Liaisons to meet with the Project Partners. A list of the LDC-IT members as well as meeting agendas are presented in *Appendix C: LDC Rural Collaborative Implementation Team Activities, Fall 2016*. Additionally, the LDC Project Manager held individual one-on-one meetings with district leaders during fall 2016. A chronology of individual district level meetings held by the Project Manager is included in *Appendix C*.

District administrators participated in a project launch on September 7, 2016. This evening event was designed to introduce project goals and objectives to district staff, Board of Education members, and Cohort 1 Teachers. The LDC-IT team also planned two additional meetings to provide opportunities for the project team to engage district leadership of each of the five districts. District leaders were invited to an early morning session held on 12/9/16 to coincide with the final PD session for Module 1 review, allowing district leaders to view samples of student LDC project work, and poster presentations provided by HSTW (see *Appendix D: LDC Rural Collaborative District Leadership Meeting, 12/9/16*). The LDC Project Posters were designed to show work-in-progress based on photos of classroom work and other documentation produced by HSTW during fall 2016 using information gathered during on-site visits. Project partners were invited to provide LDC project information for the December 9 event to share information with district leaders and invited press to support outreach to community members. These materials and local newspaper accounts of the event are included in *Appendix D*.

A second planned session for district leadership was developed during the fall implementation planning process, scheduled for January 30, 2017 to foster discussion and gain district input on Spring 2017 implementation activities, and review of the plan for Cohort 2 training. In particular, certain districts reported that plans to modify the Implementation Plan for Cohort 2 teacher training dates were already in discussion as of November 2016 reflecting different







district priorities and needs for coordinating activities of LDC district trainers for 2017-18, and to allow for distinctions across districts in best timing for Cohort 2 PD to begin.

### LDC Professional Development

The Rural LDC Project professional development is designed to increase teacher skills in utilizing the LDC Core Tools to support improved quality and practices in science instruction. Project evaluation involves multiple modes of tracking teacher skill development in designing robust LDC modules, implementing modules with students in their classrooms, as well as building collaborative teacher relations within each of the districts and potentially across the five Rural Collaborative districts in sharing best practices. The project evaluation activities, including data collection and other documentation of phases of implementation are described briefly in this section. They include:

- Pre-Implementation Cohort 1 Teacher Surveys
- Onsite Coaching and Classroom Observation
- LDC Assessment of Module 1

#### Pre-Implementation Cohort 1 Teacher Survey (PAST Foundation Evaluation Team)

Cohort 1 Teachers were asked to complete an anonymous survey administered using SurveyMethods®, a web-based platform that is certified for conducting anonymous surveys observing protocols for confidentiality of data collection including protection of a respondent's email ID and IP address. All (15) Cohort 1 Teachers completed the survey conducted on day 2 (September 30) of the 2-day professional development session. Conducting the survey as part of the first LDC professional development session allowed for baseline data at a stage where teachers were provided with basic LDC terminology and introduction to the Core Tools instructional framework. The pre-implementation survey consists of (35) questions (see *Appendix E: 2016 Cohort 1 Teacher Pre-Implementation Survey Questions*). Three question groups were designed to gather information from teachers as follows:

1. Questions 1-6: Profile questions about teaching experience, experience coaching other teachers or conducting professional development, views on collaboration, and other defining aspects of the Cohort 1 teachers.
2. Questions 7-23 (n=17): Classroom practices in science instruction to provide baseline data on teacher experience with problem-oriented projects, student team work/collaboration, research, technical writing, and other related skill sets associated with science learning.
3. Questions 24-35 (n=12): Preliminary understanding of the LDC instructional framework and (4) open-ended questions to gain insight on teacher perceptions about specific challenges with implementing the LDC instructional strategy, perceptions of design thinking and problem-based learning, and anticipated impacts of LDC instruction on student performance. This last set of (12) questions was designed to identify specific







areas for coaches to target in follow-up work with Cohort 1 Teachers both in classroom coaching/observation (HSTW), and in follow-up one-on-one sessions with the BEd coaches.

A supplemental survey was conducted at the second, 1-day professional development session held on 10/14/16. The supplemental survey included a subset of questions from the September 30 survey to focus on PD goals for building teacher LDC skills. The supplemental survey questions are presented in *Appendix E*. The supplemental survey consists of (6) questions including (1) profile question identifying grade band level, and the remainder of the questions provided comparative assessment of teacher responses with September 30 regarding knowledge, understanding, and confidence level in use of the LDC instructional model.

Review of the Draft September 30 Survey Report was conducted by the KC Team at the LDC-IT meeting on 10/5/16 to support discussion and planning for the second PD session scheduled for 10/14/16. The Draft October 14 Supplemental Survey Report was circulated to the Evaluation Team on 10/20/16 for review and comment, and was followed by review at the LDC-IT meeting of 11/21/16. During the 11/21 review, the discussion centered on the comparative set of teacher responses of September 30 and October 14 regarding teacher self-reported LDC skills gained between the September and October training sessions.

The Final Pre-Implementation Survey Report (see *Appendix F: Cohort 1 Teacher Pre-Implementation Survey Report*) presents the September 30 and October 14 responses in a format that shows individual question/response for each date in an integrated view for ease of comparison. Additionally an Infographic Summary of Survey Data is also presented in *Appendix F*. This document is designed to provide districts with an additional informational tool to facilitate dissemination of pre-implementation baseline data.

### Onsite Coaching and Classroom Observation (High Schools That Work, Project Partner)

High Schools that Work conducted onsite coaching with Cohort 1 Rural Collaborative teachers (n=15) across the five districts. Site visits were documented using the "Rural LDC HSTW Coaching Report." The HSTW Coaches conducted 3 site visits with each school district during the period beginning October 5 through December 5, 2016 (see *Appendix G: High Schools That Work Coaching Activities, Fall 2016*).

The HSTW Coaching Report is generated by the Coach during on-site visits to a classroom/school. During on-site visits the coaching reports are intended to document particular coaching work and feedback from teachers including:

- Teacher progress in developing their LDC module and mini-tasks
- Collaboration with other teachers
- Feedback on Battelle training sessions and follow-up support
- Questions, comments/concerns related to LDC module implementation
- Teacher requests for areas of additional support from BEd and/or HSTW Coaches.







The coaching reports also include information about next steps proposed by the coach, detailing specific resources to be sent by the HSTW Coach to teachers, and/or the specific items expected from the teacher by a specific date, and in some cases date, time and location of the next on-site visit. See *Appendix G* for a list of teacher resources made available by HSTW to Cohort 1 Teachers during fall 2016.

Written coaching reports were emailed to the teachers for review and comment. If corrections or additions to the Coaching Report were requested, the reports were updated with additional suggested changes made by a teacher to fully reflect the teacher's coaching experience. The final reports are emailed to the teacher, District Liaison and the Evaluation Team. As a follow-up, the HSTW Coaching Team participates in a team debrief session to share information reflected in the reports to determine individual teacher needs and to establish the specific issues to track within and across districts, or additional teacher feedback to collect on subsequent visits.

A review of issues identified in the coaching reports shows the following areas concerning project implementation over the course of three visits held from 10/5/16 to 12/5/16. Teacher coaching reports reflect both HSTW observation of classroom work with LDC Modules and one-on-one discussion gaining teacher feedback on their experience over the course of the fall 2016 Module 1 implementation process.

- *Project supplies:* 3 of the 5 districts experienced delays in receiving project materials, causing delays initiating LDC projects in their classroom. This included 3 middle school classroom teachers and 3 high school classroom teachers.
- *Time management:* 4 teachers representing 4 districts felt they needed more coaching support to improve managing time to create and implement their LDC modules in their classrooms. Teachers (2 middle school/2 high school) also stated that they would benefit from having substitute time to better focus on working with on-site coaches to complete their module.
- *Skills in use of LDC Core Tools:* HSTW coaches noted that in some cases teachers reported that the process for uploading their module to the LDC Core Tools website was lengthy, involving up to 4-5 hours, while other teachers were able to upload their modules easily. This may reflect differences in teacher basic web skills.
- *Teacher Collaboration:* During fall 2016, (8) teachers in (4) districts (3 middle school/5 high school) reported some type of collaboration with Cohort 1 teachers/District Liaisons within their districts; and, (10) teachers in all (5) districts (5 middle school/5 high school) reported collaboration with non-cohort teachers within their district. Only (3) teachers (1 middle school /2 high school) reported cross-district collaboration with Cohort 1 Teachers/District Liaisons in other Rural Collaborative districts. (See Figure 1: Where Are LDC Teachers Collaborating...)
- *Student Collaboration:* (9) teachers across all (5) districts commented on LDC impact on student collaboration, including (3) middle school and (6) high school teachers.
- *Student Engagement:* (3) middle school classes in (3) districts showed positive student engagement either through observation by the HSTW coach or noted by the teacher. In three districts, (4) teachers (1 middle school /3 high school) stated that they thought their students would encounter challenges with LDC Module work, including writing the required report.

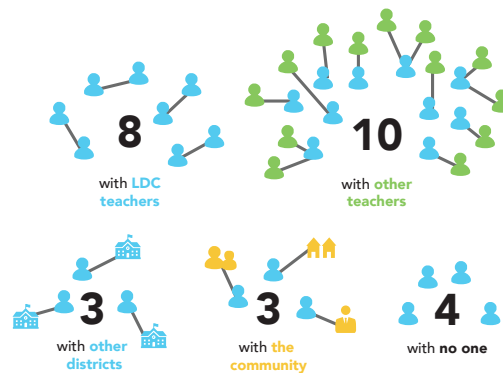






**FIGURE 1:** Self-reported collaboration associated with LDC classroom implementation  
(HSTW Coaching Reports, Fall 2016)

Who are **LDC** teachers collaborating with?



The following section presents details for the assessment process for evaluation of the LDC Module 1 and final student project. The assessment was conducted during the final fall PD session held on 12/9/16.

### LDC Assessment of Module 1 (Battelle Education, Project Partner)

Battelle Education conducted 4 days of professional development to guide and support Cohort 1 planning, design, and classroom implementation of the first LDC Module that was completed by December 2016 (see *Appendix H: The Battelle Education LDC Professional Development Calendar for 2016-17*). The calendar plan provides details for PD sessions including instruction to teachers in design and use of LDC Core Tools, and the LDC student rubric.

Battelle Education coaches held (11) planning sessions to support LDC professional development design and coordination of work between PD sessions over the period 8/31/16 to 12/22/16 (see *Appendix H, Battelle Education Fall Coach Planning Sessions*). Beginning 11/21/16, the LDC coaches began preparation for peer review of Module 1. The team organized a Module 1 evaluation approach following the LDC Curriculum Alignment Rubric (see *Appendix H*).

Review of the Battelle Education Professional Development was conducted through observation, survey data, "Exit Slip Activity" teacher feedback (see *Appendix I*), feedback from HSTW coaching reports, and from review of materials posted to Google with specific documents and sample work completed by Cohort 1 Teachers. Additionally Battelle Education







submitted an overview of work entitled, "Science and Literacy Rural Collaborative Professional Development: Summary of Module 1 Implementation and Proposed LDC Training Modifications, January 2017" (see *Appendix J: Professional Development Summary, Fall 2016*). This narrative summary provides information requested by the evaluator to inform the Project Partners on progress and modifications made to the professional development design, including resources provided to teachers, and changes made in response to particular needs that emerged during the course of PD during fall 2016. Following the September 29-30, 2016 LDC training launch, BEd coaches reviewed the pre-implementation survey responses. The coaches identified three main issues:

Table 2: Cohort 1 Survey Responses (Pre-Implementation Survey 9/30/16)	
1	Teachers want to see examples of the student end product.
2	Time was a number one concern, with only 33% of teachers stated they were " <i>confident</i> " they would find time to revise/complete their LDC module.
3	A little over 50% of teachers indicated they were only " <i>somewhat confident</i> " in developing a quality instructional plan at the conclusion of the first two training days (9/29-30)

(See Appendix J: Battelle Education Science and Literacy Rural Collaborative PD.)

The Battelle Education coaching team used the feedback from Cohort 1 Teachers to modify the follow-up PD scheduled two weeks after the first session, held on 10/14/16. Key changes required reorganizing the daylong PD session to address specific support needed for teachers, including:

- A 90-minute session to review the Student Design Report conducted by a Battelle Engineer who also described the context for how the design reports are used in the industry.
- The Battelle Engineer also conducted an afternoon session focused on the RFP component of the module, and a LDC coach reviewed the "technical reading of an RFP." The latter was designed to inform teachers about how an RFP is structured, as well as to experience the review in terms of student skills essential to completing this task.
- Increased the amount of time that teachers had to work on their modules with support from both Battelle and HSTW LDC coaches.

On 12/9/16, teachers attended the 4<sup>th</sup> PD LDC session, "Evaluate and Improve." Teachers were asked to complete their Module 1 upload to the LDC Core Tools website in advance of this session, and to bring samples of student project work for evaluation by the Battelle Education PD Team. The pattern for completing Module 1 noted by both Battelle Education and HSTW LDC coaches reflected little work uploaded during October and November, making it difficult for the Battelle Education coaches to review work-in-progress. In particular, embedded on-site coaching by HSTW documented classroom implementation for Cohort 1 Teachers, noting that while the module had been completed and teachers were working with their students to







complete their LDC projects, some teachers found it difficult or too timely to upload the module to the LDC Core Tools website for review.

However, of the modules that were uploaded by 11/21/16, the BEd coaches noted three different categories of module completion. Table 3 shows the range based on the general category, "Good-to-Go" (see Appendix J, *Battelle Education LDC Curriculum Alignment Rubric*.)

Table 3: Module 1 Review by Battelle Education LDC Coaches (11/21/16)	
1	<i>Modules where the task and instruction were both "Good to Go" or close to meeting all criteria. Some things were missing, but overall the module was deemed to be on track.</i>
2	<i>Modules where the tasks were largely "Good to Go," but did not include sufficient detail <u>instructionally</u> that would allow for replication and classroom use by another teacher. Additionally, the module was viewed to have sufficient planning completed, supporting the assumption that the teacher would fully complete the module.</i>
3	<i>Modules with very little work completed</i> - this last group reflected both teachers who were struggling to complete the module as well as teachers who had not uploaded completed work. Coaches questioned if teachers were documenting planning outside of the Core Tools website, or whether they were not documenting their module planning for digital sharing (e.g., on paper only).

(See Appendix J: Battelle Education Science and Literacy Rural Collaborative PD.)

Additional review of the Core Tools analytics created by the BEd team also provides insight into the pattern of module development completed by Cohort 1 Teachers. Data tracking included four main aspects of teachers' use of the Core Tool website and existing resources.

Table 4: Core Tool Analytics (Battelle Education, LDC Core Tools)	
1	<i>Modules authored</i> = Any new module, or one copied and modified in any way by the teacher. Note: If the module has one single element changed, it is factored into this report.
2	<i>Mini-tasks authored</i> = Any new mini-task, or one copied and modified in any way by the teacher. If the mini-task has one changed element it is factored into this report.
3	<i>Modules with comments</i> = Number of modules authored which include one or more comments.
4	<i>Mini-tasks with Comments</i> = Number of stand-alone mini-tasks authored which include one or more comments. Note: if a mini-task lives within a module and a coach has left a comment, it is included as a "module with comment" not as a mini-task with comment.

(See Appendix J: Battelle Education Science and Literacy Rural Collaborative PD.)

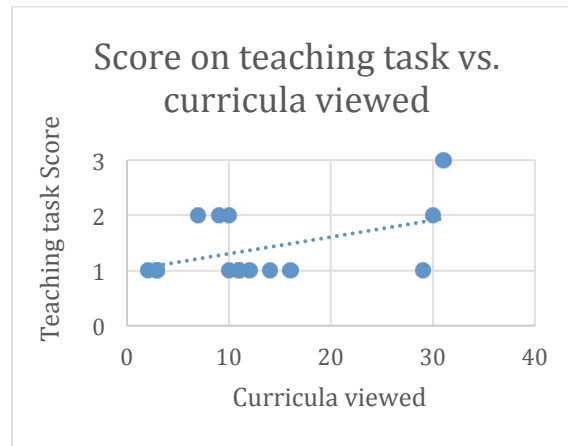






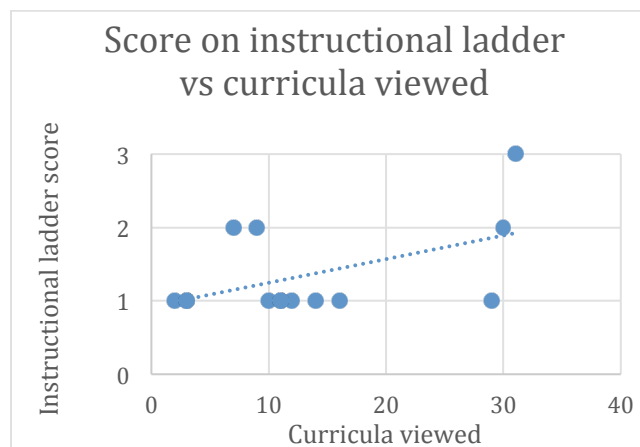
Based on the data and trends of teachers patterns of access and review of Core Tools resources, the Battelle Education team noted that teachers who invested time in exploring existing modules and mini-tasks were more likely to score higher in the quality and completeness of their Module 1 design. The following figures show the relationship between the number of LDC curricula reviewed by teachers and the score attained on their Module 1.

FIGURE 2



(See Appendix J: Battelle Education Science and Literacy Rural Collaborative PD.)

FIGURE 3



(See Appendix J: Battelle Education Science and Literacy Rural Collaborative PD.)

The conclusion reached by the BEd coaches based on this data suggests that teachers who build from existing modules and mini-tasks benefit in the quality and completeness of a module adapted to their content and grade level. This particular insight will inform training for Cohort 2 teachers, as well as production/selection of additional resources for teachers to review,







including sample student work and scoring. The BEd summary document (*Appendix J*) presents a proposed set of materials to develop, and actions that will be explored during spring and summer 2017 in preparation for the 2017-18 expanded implementation of Cohort 2 Teachers (proposed for 49 teachers across the five Rural Collaborative consortia schools, grades 5-12).

The December 9<sup>th</sup> session also required that teachers provide student projects for review by the LDC coaching team. Before working with their own student work, teachers in each of the three grade bands were given samples of student work to review (selected from the Metro pilot student work), which they individually scored, using the LDC Student Rubric. Grade band groups worked with their BEd coaches to collectively review their evaluations of the sample student work to help establish baseline-scoring criteria. Teachers were then assigned to work in groups of two to three to assess additional examples of student work.

Battelle Education requested that teachers bring 6-8 samples of final student work. Teachers formed grade-band groups for peer review of student work. Grades 6-8 collaborated with colleagues and a LDC coach to score student work against the *Argumentation Task Design Rubric - Grades 6-8*. Grades 9-10, and 11-12 also formed grade band teams for review of student work. The samples of student work with scored rubrics are in the process of being collected and uploaded to the *LDC Core Tools* web platform for future reference.







### APPENDIX: MID-YEAR REPORT

#### Rural Collaborative to Improve Instruction and Expand Student STEM Opportunities and 21<sup>st</sup> Century Skills through Literacy Design Collaborative LDC

##### Appendix A:

Table A: Rural LDC Project Evaluation Schedule 2016-17

##### Appendix B:

Table B: Rural LDC Project Chronology of PAST Evaluation Team Activities, Fall 2016

Evaluation Team Meeting Agendas

Evaluation Team Meeting Agenda 09.16.16

Evaluation Team Meeting Agenda 10.05.16

Evaluation Team Meeting Agenda 10.20.16

Evaluation Team Meeting Agenda 10.28.16

##### Appendix C:

LDC Rural Collaborative Implementation Team Activities, Fall 2016

Implementation Team Contact Information

Implementation Team Meeting Agenda 10.31.16

Implementation Team Meeting Agenda 11.21.16

Implementation Team Meeting Agenda 12.19.16

Chronology of District Administrator Meetings, Fall 2016

Rural LDC Straight A Grant Kick-off Event 09.07.16

Rural LDC Implementation Team Memo 11.29.16

Rural LDC Breakfast Social Invitation 12.09.16

##### Appendix D:

LDC Rural Collaborative District Leadership Meeting, 12.09.16

*"Collaborating for Results"* (December 16, 2016)

*"Northwestern Collaborates with Four Rural Schools to Improve Science Literacy"* (December 16, 2016)

PAST Foundation Project Information Sheet (handout)

LDC Project Presentation Posters by District, December 9, 2016 (HSTW)

##### Appendix E:

2016 Cohort 1 Teacher Pre-Implementation Survey Questions, September 30, 2016

Teacher Follow-up Survey Questions, October 14, 2016







## Knowledge Capture

### Appendix F:

2016 Rural LDC Combined Pre-Implementation (9.30.16) and Supplemental Teacher Survey  
(10.14.16) Report  
Infographic Summary of Survey Data

### Appendix G:

Sample Coaching Report Form  
High Schools That Work Chronology of Coaching Activities, Fall 2016  
High Schools That Work Teacher Resources (Posted to the Implementation Team Google Drive  
Folder), Sept. – Dec. 2016

### Appendix H:

Battelle Education LDC Professional Development Calendar for 2016-17  
Battelle Education Fall Coach Planning Sessions, Fall 2016

### Appendix I:

Rural LDC Professional Development Activities, Fall 2016  
Rural LDC Professional Development Agenda 9.29.16-9.30.16  
Rural LDC Professional Development Agenda 10.14.16  
Rural LDC Professional Development Agenda 12.09.16  
Project Participant Exercise: Identify Skill Sets, Challenges, and Successes, 9.07.16  
Content Clarifier for Cohort 1 Teachers, 9.07.16  
Rural LDC Professional Development Exit Slip Activity 09.29.16  
Rural LDC Professional Development Exit Slip Activity 12.09.16

### Appendix J:

Professional Development Summary, Fall 2016  
Battelle Education LDC Curriculum Alignment Rubric







## Appendix A:

### Table A: Rural LDC Project Evaluation Schedule 2016-17







# Knowledge Capture

Projected Date(s)	Task	Description	Location	Knowledge Capture Team	Implementation Team
<b>TABLE A: Rural LDC Project YEAR 1 Evaluation Schedule 2016-2017 [1.5.17]</b> (BLACK TEXT: Schedule based on Rural LDC Implementation Work Plan; DATES, TIME, AND LOCATION are subject to revision; BLUE TEXT: PAST Evaluation)					
August 29, 2016	Implementation Team Planning Meeting	Observation: Preliminary project planning session	Northwestern	Maria Cohen, Kayla Galloway ONSITE	Project Implementation Team
August 29, 2016	Evaluation Team Meeting	Review evaluation timeline; survey work plan	VIRTUAL	Monica Hunter	Scott Smith, Kelly Evans
August 31-September 13, 2016	Key Informant Interviews: LDC coaches (8)	Explore preliminary goals for year 1 teacher cohort (pre/post implementation survey)	VIRTUAL	Monica Hunter, Maria Cohen, Kayla Galloway	Battelle Ed and HSTW LDC coaches (8)
September 7, 2016	Project Launch	All participants - 5 districts orientation	Northwestern	Maria Cohen ONSITE	All participants including teachers
September 16, 2016	Evaluation Planning Meeting	Review Pre-Year 1 Implementation Survey Design	VIRTUAL	Monica Hunter, Maria Cohen	Scott Smith, Diana Rogers
September 20, 2016	Implementation Team Planning Meeting	Observation : Preliminary project planning session; Review Pre-Year 1 Implementation Survey Design and logistics	Mapleton	Maria Cohen, Kayla Galloway ONSITE	Project Implementation Team
September 21, 2016	Evaluation Planning Meeting	Review Pre-Year 1 Implementation Survey Design	VIRTUAL	Monica Hunter, Maria Cohen	Scott Smith, Kelly Evans, Diana Rogers
September 29-30, 2016	Professional Development	Observation: teacher PD session: "Brainstorm and Build"	Northwestern	Monica Hunter, Maria Cohen ONSITE	Project Implementation Team and Project Cohort 1 teachers (n=15)
	Teacher Pre-Year 1 Implementation Survey	Conduct survey with teachers on final day of 2-day training session (n=15)			
October 5, 2016	Evaluation Planning Meeting	Preliminary review survey; Review DRAFT project evaluation plan with lead Straight A Team prior to submittal (DUE 10/31/16)	VIRTUAL	Monica Hunter, Maria Cohen, Kayla Galloway	Scott Smith, Kelly Evans, Diana Rogers
October 14, 2016	Teacher Survey	PD #3 Follow-up survey.	Online	Maria Cohen	Cohort 1 Teachers (n=14)
	PD Debrief Session	Participate in review of the PD session	VIRTUAL	Maria Cohen, Monica Hunter	Project Implementation Team
October 20, 2016	Evaluation Planning Mtg.	Review ODE Evaluation Plan components	VIRTUAL	Monica Hunter, Maria Cohen	Scott Smith, Kelly Evans, Diana Rogers







Projected Date(s)	Task	Description	Location	Knowledge Capture Team	Implementation Team
<b>TABLE A: Rural LDC Project YEAR 1 Evaluation Timeline 2016-2017 (cont.)</b> <b>(BLACK TEXT:</b> Schedule based on Rural LDC Implementation Work Plan; <b>DATES, TIME, AND LOCATION</b> are subject to revision; <b>BLUE TEXT:</b> PAST Evaluation)					
October 26, 2016	Evaluation Planning Mtg.	Review Final Logic Model, Communication Plan, initial review baseline student data	VIRTUAL	Monica Hunter, Maria Cohen	Scott Smith
October 28, 2016	Quarterly Evaluation Meeting	Review analysis of the pre-implementation teacher survey (quarterly report)	VIRTUAL	Monica Hunter, Maria Cohen, Kayla Galloway	Scott Smith, Kelly Evans, Diana Rogers
October 31, 2016	Implementation Team Planning Meeting	Observation: Project planning session	Hillsdale	Maria Cohen, Kayla Galloway VIRTUAL	Project Implementation Team
	Project Quarterly Report and Final Evaluation Plan	Submit digital report	Digital Submittal	Monica Hunter	Submit to Scott Smith
November 21, 2016	Implementation Team Meeting	Project implementation review and planning	Loudonville-Perrysville	Monica Hunter, Maria Cohen ONSITE	Project Implementation Team
December 5, 2016	Evaluation Team	Review mid-term survey schedule; marketing packet for Dec 9; Nov 21 Bullet Point Report			
December 9, 2016	Administrator Meeting; Professional Development	Observation: Teacher PD session: "Evaluate and Improve Design"; Debrief	Northwestern	Maria Cohen, Kayla Galloway ONSITE	All project participants; administrators all districts
December 19, 2016	Implementation Team Meeting	DLs reporting on work-in-progress for each district; comments on 12/9 PD; timeline for module 1 deliverables; plan for IT 2017 meetings to better accommodate DLs	Virtual	Monica Hunter, Maria Cohen VIRTUAL	Project Implementation Team
	Evaluation Team	Review 12/9 PD Evaluation Bullet Point Report; plan for half-day meeting re district implementation for 2017-18 grant year; student impact data	VIRTUAL		
January 23, 2017	Quarterly Evaluation Meeting	Review evaluation and analysis of the fall implementation process for Mid-Year Report; submit all documentation to MSH for MYR	VIRTUAL	Monica Hunter, Maria Cohen, Kayla Galloway	Scott Smith, Kelly Evans, Diana Rogers







Projected Date(s)	Task	Description	Location	Knowledge Capture Team	Implementation Team
<p><b>TABLE A: Rural LDC Project YEAR 1 Evaluation Timeline 2016-2017 (cont.)</b>  <b>(BLACK TEXT:</b> Schedule based on Rural LDC Implementation Work Plan; DATES, TIME, AND LOCATION are subject to revision; <b>BLUE TEXT:</b> PAST Evaluation)</p>					
February 15, 2017	Project Mid-Year Report	Evaluation Report, digital submission	—	Monica Hunter	Submit to Scott Smith
January 30, 2017*	Implementation Team Meeting /District staff Year 2 Planning Session	Project implementation review and planning 2-part mtg: 1) District staff review 2016-17 schedule; 2) IT Meeting	Northwestern MS and Virtual*	Monica Hunter, Maria Cohen	Project Implementation Team
February 21, 2017	Evaluation Team Meeting	Review Mid-Year Final Draft, Survey Summary Infograph Report; Review Student Performance Data Tracking Plan	Northwestern	Monica Hunter	Scott Smith, Diana Rogers
February 27, 2017	Implementation Team Meeting	Team meeting; Rural Collaborative Tour of PAST Innovation Lab and Metro HS	PAST Foundation (Columbus)	Monica Hunter, Maria Cohen, Kayla Galloway ONSITE	Project Implementation Team
March 15, 2017	Quarterly Evaluation Meeting/	Review evaluation and analysis including March PD (quarterly report); review Post-Year 1 Survey Design	VIRTUAL	Monica Hunter, Maria Cohen, Kayla Galloway VIRTUAL	Scott Smith, Kelly Evans, Diana Rogers
March 17, 2017	Project Quarterly Report	Evaluation Report, digital submission	—	Monica Hunter	Submit to Scott Smith
March 24, 2017*	Professional Development	Teacher PD session: "Evaluate and Improve"	Northwestern MS and Virtual*	Monica Hunter, Maria Cohen VIRTUAL	All project participants
March 27, 2017*	Implementation Team Meeting	Project implementation review and planning	Northwestern MS and Virtual*	Maria Cohen, Kayla Galloway VIRTUAL	Project Implementation Team
April 24, 2017*	Implementation Team Meeting	Project implementation review and planning	Northwestern MS and Virtual*	Maria Cohen, Kayla Galloway VIRTUAL	Project Implementation Team
May 3, 2017*	Project Showcase	HSTW to coordinate	TBD	TBD	All project participants







Projected Date(s)	Task	Description	Location	Knowledge Capture Team	Implementation Team
<p><b>TABLE A: Rural LDC Project YEAR 1 Evaluation Timeline 2016-2017 (cont.)</b></p> <p>(<b>BLACK TEXT:</b> Schedule based on Rural LDC Implementation Work Plan; DATES, TIME, AND LOCATION are subject to revision; <b>BLUE TEXT:</b> PAST Evaluation)</p>					
May 22, 2017	Implementation Team Meeting	Project implementation review and planning	Northwestern MS and Virtual*	TBD	Project Implementation Team
	Quarterly Evaluation Meeting	Review evaluation of spring implementation process;		Monica Hunter, Maria Cohen, Kayla Galloway , TBD	Scott Smith, Kelly Evans, Diana Rogers
May 2017 (TBD)	Professional Development	Cohort 2 Training initiated	Loudonville-Perrysville	TBD	TBD
May 31, 2017	Project Quarterly Report	Evaluation Report, digital submission	—	Monica Hunter	Submit to Scott Smith
June TBD, 2017*	Professional Development	Observation : teacher PD session: "Scale UP/Share Solution" Module 2	Battelle Education	Monica Hunter, Maria Cohen, Kayla Galloway ONSITE	All project participants
	Teacher Post-Year 1 Implementation Survey	Conduct post year 1 implementation survey with teachers during 3-day session (n=15)			
July 31, 2017	Year 1 Evaluation Report	Digital Submittal to Project Manager	—	Monica Hunter	Submit to Scott Smith







## Appendix B:

### Table B: Rural LDC Project Chronology of PAST Evaluation Team Activities, Fall 2016

#### Evaluation Team Meeting Agendas

Evaluation Team Meeting Agenda 09.16.16

Evaluation Team Meeting Agenda 10.05.16

Evaluation Team Meeting Agenda 10.20.16

Evaluation Team Meeting Agenda 10.28.16







**Table B: Rural LDC Chronology of PAST Evaluation Team Activities  
July 22, 2016 to December 31, 2016**

KC Staff	Date	Event	Product	Participants
MH	7/22/16	Preliminary Project Review	Notes	Project Manager, BEd STEM Relationship Manager
MH/MGC/KG	8/29/16	Implementation Team Meeting	BP*	Project Director, Project Manager, Project Treasurer, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator, (5) District Liaisons
MH	8/29/16	Implementation Team Meeting Debrief	Notes	Project Manager, BEd STEM Relationship Manager
MH/MGC	9/1/16	Key Informant Interview	Notes	BEd LDC Coach
MH/MGC	9/1/16	Key Informant Interview	Notes	BEd LDC Coach
MH/KG	9/6/16	Key Informant Interview	Notes	HSTW LDC Coach
MH/MGC	9/7/16	Key Informant Interview	Notes	HSTW LDC Coach
MGC	9/7/16	Straight A Fund Kickoff Event	BP*	Project participants and stakeholders
MH/KG	9/9/16	Key Informant Interview	Notes	BEd LDC Coach
MH/KG	9/9/16	Key Informant Interview	Notes	HSTW LDC Coach
MH/KG	9/9/16	Key Informant Interview	Notes	HSTW LDC Coach
MH/KG	9/13/16	Key Informant Interview	Notes	HSTW LDC Coach
MH/MGC	9/16/16	Evaluation Team Meeting	Notes	Project Manager, HSTW NE Ohio Regional Coordinator
MH/MGC/KG	9/20/16	Implementation Team Meeting	BP*	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator, (5) District Liaisons
MH/MGC	9/21/16	Evaluation Team Meeting	Notes	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator

\*Bullet Point Report







**Table B: Rural LDC Chronology of PAST Evaluation Team Activities  
July 22, 2016 to December 31, 2016**

KC Staff	Date	Event	Product	Participants
MH/MGC/KG	9/29/16	Professional Development Observation	BP*	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, BEd Engineer, (4) HSTW LDC Coaches, (5) District Liaisons, (15) Teachers
MH/MGC/KG	9/29/16	Professional Development Debrief	BP*	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, BEd Engineer, (4) HSTW LDC Coaches
MGC/KG	9/30/16	Professional Development Observation	Notes	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, (2) BEd LDC Coaches, BEd Engineer, (4) HSTW LDC Coaches, (5) District Liaisons, (15) Teachers
MGC/KG	9/30/16	Survey Administration	Survey Report	(15) Teachers
MGC/KG	9/30/16	Professional Development Debrief	BP*	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, (2) BEd LDC Coaches, HSTW NE Ohio Regional Coordinator
MH	9/30/16	Straight A Onboarding Meeting	Notes	Project Director, Project Manager
MH/MGC/KG	10/5/16	Evaluation Team Meeting	Notes	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator
MH/MGC	10/14/16	Professional Development Debrief	BP*	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, (2) BEd LDC Coaches, HSTW NE Ohio Regional Coordinator
MH/MGC	10/14/16	Survey Administration	Survey Report	(14) Teachers

\*Bullet Point Report







**Table B: Rural LDC Chronology of PAST Evaluation Team Activities  
July 22, 2016 to December 31, 2016**

KC Staff	Date	Event	Product	Participants
MH/MGC	10/14/16	Survey Debrief	Notes	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, (2) BEd LDC Coaches, HSTW NE Ohio Regional Coordinator
MH/MGC/KG	10/20/16	Evaluation Team Meeting	Notes	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator
MH/MGC	10/26/16	Communication Plan Review	Notes	Project Manager
MH/MGC/KG	10/28/16	Quarterly Evaluation Team Meeting	Evaluation Plan	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator
MH/MGC/KG	10/31/16	Submit Final Evaluation Plan	Evaluation Plan	Scott Smith
MH/MGC	11/21/16	Implementation Team Meeting	BP*	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator, (5) District Liaisons
MH/KG	12/5/16	Evaluation Team Meeting	Notes	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator
MGC/KG	12/9/16	Breakfast Social	PR Materials and Notes	District Administrators from all five districts and project participants
MGC/KG	12/9/16	Professional Development Observation	BP*	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, (2) BEd LDC Coaches, Battelle Engineer, Battelle Principal Research Specialist, (5) HSTW LDC Coaches, (5) District Liaisons, (13) Teachers

\*Bullet Point Report







**Table B: Rural LDC Chronology of PAST Evaluation Team Activities**  
July 22, 2016 to December 31, 2016

KC Staff	Date	Event	Product	Participants
MGC/KG	12/9/16	Professional Development Debrief	BP*	Project Manager, BEd STEM Relationship Manager, BEd Lead Facilitator and LDC Coach, HSTW NE Ohio Regional Coordinator
MH/MGC/KG	12/19/16	Implementation Team Meeting	BP*	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator, (4) District Liaisons
MH/MGC/KG	12/19/16	Evaluation Team Meeting	BP*	Project Manager, BEd STEM Relationship Manager, HSTW NE Ohio Regional Coordinator

\*Bullet Point Report







**Agenda**  
**LDC Rural Collaborative**  
**Cohort 1 Teacher Pre-Implementation Survey**  
**Sept 16, 2016**

Noon - 1p: Review Survey Questions (Scott, Diana, Maria and Monica)

1P: Discuss logistics for survey administration during the September PD (Scott, Maria, and Monica)







## **AGENDA** **PAST Foundation/ KNOWLEDGE CAPTURE**

### **Review Pre-Implementation Teacher Survey Draft Report** **Virtual Session – 10/5/16, 1-3p**

1. Introduction to the report – The document we will review today is produced as an export of SurveyMethods with limited features of data presentation. The final report version will be reformatted to incorporate different types of graphic displays, and will include thematic analysis of open-ended responses.
  - a. Comments or questions on “informed consent”?
2. Section 1: Profile (Qs 2-6)
3. Section 2: Instructional Practices (Qs 7-23)
4. Section 3: Post Professional Development (Qs 24-35)
5. **Proposed dates for discussion of the Evaluation Report due to ODE October 31.**  
We are currently scheduled to review the PAST Evaluation Plan on 10/28, 1-3p. I would like to add another date, **Tuesday Oct 18**, to discuss the following:
  - a. Identify quantitative baseline data to be reported by districts associated with project outcomes - We reviewed different types of data at the ODE Straight A meeting on 9/30 – based on what we learned we will need to incorporate a section of the Evaluation Plan that describes this data and timeline for reporting
  - b. Data sets or documentation of implementation to be reported by Battelle Education and timeline
  - c. Data sets or documentation of implementation to be reported by HWTW and timeline
6. Other items as needed for discussion by the Evaluation Team







**Agenda**  
**LDC Rural Collaborative**  
**Quarterly Evaluation Team Meeting**  
**Oct. 20, 2016**

## **EVALUATION PLAN REVIEW**

### **1. Logic Model: objectives/inputs/evaluation/outcomes (Scott)**

### **2. Data Collection: Baseline (grant year) and ongoing (Y1-Y5)**

- Scott/Northwestern Local - please include your questions about the specific tests listed in the project proposal (ACT, Aspire)
- Kelly/Battelle Ed
- Diana/HSTW
- Monica/Evaluation data — segue to Agenda Item #3

### **3. Evaluation Plan Content - (see attached document, “Elements of an Evaluation Plan,” Straight A)**

- Outline: Research Questions, identified metrics, methodologies employed, and reporting
- Tables and Figures
- Appendix - sample data reporting forms (identified in #2 above), project communication plan (Scott/Monica), other?

### **4. Timetable for ODE reporting: Annually**

### **5. Timetable and purpose for internal quarterly reporting to the Project Evaluation Team**

### **6. Other Items/questions about the Evaluation Plan content or format.**







**Agenda**  
**LDC Rural Collaborative**  
**Quarterly Evaluation Team Meeting**  
**Oct. 28, 2016**

1. Review pre-implementation survey analysis and report (Sept 2016 and Oct 2016)
2. Review Final Evaluation Plan for submittal to ODE
3. Review Agenda for the Implementation Team Meeting, 10/31/16
  - a. District Liaison Roles, Communication, On-site Implementation
  - b. BEd and HSTW suggested LDC Project School Administrator Talking Points
  - c. Virtual logistics for PAST Eval Team for 10/31
4. Other Items







## Appendix C:

### LDC Rural Collaborative Implementation Team Activities, Fall 2016

Implementation Team Contact Information  
Implementation Team Meeting Agenda 10.31.16  
Implementation Team Meeting Agenda 11.21.16  
Implementation Team Meeting Agenda 12.19.16  
Chronology of District Administrator Meetings  
Rural LDC Straight A Grant Kick-off Event 09.07.16  
Rural LDC Implementation Team Memo 11.29.16  
Rural LDC Breakfast Social Invitation 12.09.16







## Rural LDC Collaborative

### Participant Contact Information



	Black River	Hillsdale	Loudonville-Perrysville	Mapleton	Northwestern
<b>Superintendent</b>	<b>Chris Clark</b> <a href="mailto:cclark@blackriver.k12.oh.us">cclark@blackriver.k12.oh.us</a>	<b>Steve Dickerson</b> <a href="mailto:hill_dickerson@tccsa.net">hill_dickerson@tccsa.net</a>	<b>John Miller</b> <a href="mailto:lopr_jmiller@tccsa.net">lopr_jmiller@tccsa.net</a>	<b>Rodney Hopton</b> <a href="mailto:mapl_rhopton@tccsa.net">mapl_rhopton@tccsa.net</a>	<b>Jeff Layton</b> <a href="mailto:nrws_layton@tccsa.net">nrws_layton@tccsa.net</a>
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## Meeting Agenda and Notes

**MEETING** Implementation Team  
**FACILITATOR** Scott Smith  
**LOCATION** Hillsdale High School Library  
**DATE** October 31, 2016  
**TIME** 10:00

### ATTENDEES

#### Northwestern

Jeff Layton, Superintendent  
 Lesa Forbes, Treasurer  
 Scott Smith, Curriculum Director  
 Jacki Zody, District Liaison

#### Battelle Education

Kelly Gaier Evans, STEM Relationship Manager

#### Black River

Jill Beiser, District Liaison

#### High Schools That Work

Diana Rogers, NE Ohio Regional Coordinator

#### Hillsdale

Jennifer Stump

#### The PAST Foundation

Dr. Monica Hunter, Director of Research  
 Maria Green Cohen, Assistant Director of Research  
 Kayla Galloway,

#### Loudonville-Perrysville

Catherine Puster

#### Mapleton

Lisa Bowersock

Time (Mins)	Agenda Topic	Notes
10:00-10:05 (5)	<b>Welcome</b>	
10:05-10:20 (15)	<b>LDC Professional Development</b> <i>Battelle Education</i>	
10:20-10:35 (15)	<b>LDC Coaching</b> <i>High Schools That Work</i>	
10:35-10:55 (15)	<b>Project Evaluation</b> <i>The PAST Foundation</i>	
10:55-11:25 (30)	<b>Project Communications</b> <i>Scott Smith</i>	District Liaison + - Δ District Administration Meetings Teacher Contracts & Stipends Budget
11:25-11:55 (30)	<b>Districts</b> <i>Black River</i> <i>Hillsdale</i> <i>Loudonville-Perrysville</i> <i>Mapleton</i> <i>Northwestern</i>	
11:55-12:00	<b>Closing Comments &amp; Adjourn</b>	

### NEXT MEETINGS

November 21, 2016      10:00-12:00      Loudonville-Perrysville







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## Meeting Agenda and Notes

**MEETING** Implementation Team  
**FACILITATOR** Scott Smith  
**LOCATION** Loudonville-Perrysville High School—Building 1 Room 118  
**DATE** November 21, 2016  
**TIME** 10:00

### ATTENDEES

#### Northwestern

Scott Smith, Curriculum Director  
Jacki Zody, District Liaison

#### Black River

Jill Beiser, District Liaison

#### Hillsdale

Jennifer Stump

#### Loudonville-Perrysville

Catherine Puster

#### Mapleton

Lisa Bowersock

#### Battelle Education

Kelly Gaier Evans, STEM Relationship Manager

#### High Schools That Work

Diana Rogers, NE Ohio Regional Coordinator

#### The PAST Foundation

Dr. Monica Hunter, Director of Research  
Maria Green Cohen, Assistant Director of Research  
Kayla Galloway, Research Assistant

Time (Mins)	Agenda Topic	Notes
10:00-10:05 (5)	<b>Welcome &amp; Introductions</b>	
10:05-10:20 (15)	<b>LDC Professional Development</b> <i>Battelle Education</i>	
10:20-10:35 (15)	<b>LDC Coaching</b> <i>High Schools That Work</i>	
10:35-11:00 (15)	<b>Project Evaluation</b> <i>The PAST Foundation</i>	







11:00-11:25 (25)	<b>Project Communications</b> <i>Scott Smith</i>	<p>Implementation Team Meeting Dates/Time Revisions</p> <p>District Administrator Meetings</p> <p>Teacher Contracts &amp; Stipends</p> <p>PLTW Grant Application—December 15</p> <p>Teacher Questions:</p> <ol style="list-style-type: none"> <li>1. Will funding be available for next year implementation?</li> <li>2. Will funding support the teacher-trainers and new science teachers with stipends and supplies?</li> <li>3. When developing a second module, do teachers need to focus on the same course and students?</li> <li>4. When developing a second module, could teachers use the same module and modified slightly for a new course and set of students?</li> <li>5. Would Battelle consider assisting Northwestern in planning their train the trainer session in early May so that new teachers are trained in May instead of August? Perhaps go to Battelle in Columbus for training?</li> <li>6. When will the PBL PD be scheduled? When will a second year implementation calendar be available?</li> </ol> <p>Budget</p>
11:25-11:55 (30)	<b>Districts</b> <i>Black River</i>  <i>Hillsdale</i>  <i>Loudonville-Perrysville</i>  <i>Mapleton</i>  <i>Northwestern</i>	
11:55-12:00	<b>Closing Comments &amp; Adjourn</b>	

NEXT MEETING

December 19, 2016

10:00-12:00

Black River







## Meeting Agenda and Notes

**MEETING** Implementation Team  
**FACILITATOR** Scott Smith  
**LOCATION** Black River BREC—Modular Room 6  
**DATE** December 19, 2016  
**TIME** 10:00

### ATTENDEES

#### Northwestern

Scott Smith, Curriculum Director  
 Jacki Zody, District Liaison

#### Black River

Jill Beiser, District Liaison

#### Hillsdale

Jennifer Stump

#### Loudonville-Perrysville

Catherine Puster

#### Mapleton

Lisa Bowersock

#### Battelle Education

Kelly Gaier Evans, STEM Relationship Manager

#### High Schools That Work

Diana Rogers, NE Ohio Regional Coordinator

#### The PAST Foundation

Dr. Monica Hunter, Director of Research  
 Maria Green Cohen, Assistant Director of Research  
 Kayla Galloway, Research Assistant

Time (Mins)	Agenda Topic	Notes
10:00-10:05 (5)	<b>Welcome &amp; Introductions</b>	
10:05-10:30 (25)	<b>Districts</b> Black River  Hillsdale  Loudonville-Perrysville  Mapleton  Northwestern	
10:30-10:50 (20)	<b>LDC Professional Development</b> <i>Battelle Education</i>  CoreTools Collection Demo 1 <sup>st</sup> Module Update 2 <sup>nd</sup> Module Progress ½ Day Scale Up Session	
10:50-11:20 (20)	<b>LDC Coaching</b> <i>High Schools That Work</i>	







11:20-11:40 (20)	<b>Project Evaluation</b> <i>The PAST Foundation</i>	
11:40-12:00 (20)	<b>Project Communications</b> <i>Scott Smith</i>  Implementation Team Meeting Dates/Time Revisions  Inclement Weather & Meetings  District Initiative Inventory Student Impact  February IT Meeting  Budget	
12:00-12:05	<b>Closing Comments &amp; Adjourn</b>	

NEXT MEETING  
January 30, 2017

\_\_\_\_\_ Northwestern **Middle** School Library







### Rural LDC Administrator Meetings

Scott Smith, Rural LDC project manager, met with administrators (superintendent, treasurer, HS principal, MS principal, assistant principals, curriculum directors, district liaisons) from each of the five collaborating districts to discuss the Rural LDC project as a result of the October 28, 2017 teacher survey where 80% of the teachers stated it was very important for administrators to understand the LDC instructional strategies that they will be implementing in their classrooms this year. During these meetings, the project manager was able to share information regarding the Literacy Design Collaborative model, classroom observations, teacher expectations and workload, professional development, teacher and district liaison stipends, invoicing procedures, and potential project and budget revisions. These meetings also allowed the districts to ask questions about the project and to provide feedback on the progress of the grant project in their specific district.

October 31, 2016	Hillsdale
November 3, 2016	Mapleton
November 7, 2016	Loudonville-Perrysville
November 7, 2016	Black River
December 2, 2016	Northwestern







# RURAL LITERACY DESIGN Collaborative

## Meeting & Social

**WHEN**  
**September 7**  
**4pm-6pm**

**WHERE**  
**Jake's of Wooster**

6655 E. Lincoln Way  
Wooster, OH 44691

*NON-ALCOHOLIC BEVERAGES AND APPETIZERS  
WILL BE PROVIDED. ATTENDEES MAY ORDER  
FROM THE MENU.*

## WHO

Board of Education Member  
Superintendent  
Treasurer  
HS Principal  
MS Principal  
Assistant Principal(s)  
District Liaison(s)  
Participating Teachers  
Battelle Education  
High Schools That Work  
The PAST Foundation

# RURAL Collaborative

**Black River**  
**Hillsdale**  
**Loudonville-Perrysville**  
**Mapleton**  
**Northwestern**

## RSVP

No Later Than August 31<sup>st</sup>  
to Scott Smith

[nrws\\_ssmith@tccsa.net](mailto:nrws_ssmith@tccsa.net)







## Implementation Team Memo

November 29, 2016

First, I hope you all had a great Thanksgiving. The purpose of this memo is to share some project communications since our last Implementation Team meeting.

### Breakfast Social

Please invite your superintendent, treasurer, principals and teachers to the Rural LDC Breakfast Social on December 9<sup>th</sup> from 6:45-7:45am in the Northwestern High School library. This event is an opportunity for administrators, district liaisons, teachers, trainers, coaches, evaluators and other project participants to socialize, network and celebrate the time, commitment and effort of the participating teachers on implementing their first LDC module. Please RSVP to me ASAP, but no later than December 5<sup>th</sup>. A reporter from the Wooster Daily Record/Ashland Times-Gazette will attend this breakfast to do a story on the Rural LDC project. This is a great opportunity for your administrators and teachers to get positive PR for your district.

### District Liaison and Teacher Stipends

Please work with your treasurer to ensure that the first installment of the stipend is paid on or around December 15<sup>th</sup>. It is expected that teachers have fully created their first module in CoreTools before the stipend will be reimbursed to the district. To keep things consistent, District Liaisons should **take home \$2,000** and each teacher should **take home \$1,500**. The roughly 18% for benefits should be paid by the grant and not by the DL/teachers. Salaries should be a 100 code and Benefits are a 200 code when the invoice is sent to Northwestern for reimbursement.

### PLTW Grant Application

If you would like to collaborate with other districts to complete your PLTW grant application(s), we will meet in the Mapleton Elementary School technology lab on December 13 at 3:15.

### Initiative Inventory

Along with the student assessment data collected throughout this Rural LDC project, The PAST Foundation would like to document your district's initiatives. Please send me your district's recent initiatives by December 16<sup>th</sup>. Below is what I created for Northwestern as an example:

- |                  |  |
|------------------|--|
| <b>2016-2017</b> | Rural Literacy Design Collaborative; Blended Learning; Universal Design for Learning (pilot); added PLTW Computer Science pathway; PD specific to Lesson Delivery, Assessments, Differentiation, and Executive Function Skills |
| <b>2015-2016</b> | Illinois Mathematics and Science Academy's Problem Based Learning model PD; added SREB Clean Energy Technologies pathway; PLTW Launch; Hybrid Learning Institute (pilot)   |
| <b>2014-2015</b> | Math Design Collaborative; Literacy Design Collaborative; MAX Teaching with Reading and Writing; PLTW Launch (pilot); realignment of curriculum maps; next generation assessment PD  |

### Next Implementation Team Meeting

We will have our next Implementation Team meeting on December 19<sup>th</sup> at Black River from 10:00-12:00. It was suggested at our October 31<sup>st</sup> meeting that we should consider moving the January, March, April and May meetings to after school at Northwestern. Dates and times for these meetings will need to be finalized at the December 19<sup>th</sup> meeting. The February 27<sup>th</sup> meeting is still scheduled 10:00-2:00 at The PAST Foundation/Metro Early College High School.







# RURAL LITERACY DESIGN COLLABORATIVE

## Breakfast Social

### WHEN

**December 9  
6:45-7:45 am**

### WHERE

**Northwestern  
High School** Library

7473 N. Elyria Road  
West Salem, OH 44287

### WHO

Superintendent  
Treasurer  
HS Principal  
MS Principal  
Assistant Principal(s)  
District Liaison  
Participating Teachers

## RURAL Collaborative

**Black River**

**Hillsdale**

**Loudonville-Perrysville**

**Mapleton**

**Northwestern**

### RSVP

No Later Than December  
5<sup>th</sup> to Scott Smith

[nrws\\_ssmith@tccsa.net](mailto:nrws_ssmith@tccsa.net)







## Appendix D: LDC Rural Collaborative District Leadership Meeting, 12.09.16

*"Collaborating for Results"* (December 16, 2016)

*"Northwestern Collaborates with Four Rural Schools to Improve  
Science Literacy"* (December 16, 2016)

PAST Foundation Project Information Sheet (handout)

LDC Project Presentation Posters by District, December 9, 2016  
(HSTW)







## Collaborating for results



T-G photo/Tom E. Puskar

Teachers from Mapleton, Black River, Loudonville, Hillsdale and Northwestern school districts met at Northwestern High School Friday, Dec. 9 to talk about the state grant to STEM projects.

### Districts review first semester results from Straight A grant project

By KRISTI SCHWEITZER  
T-G Staff Writer

With a semester into the five-year Straight A grant consortium, teachers and administrators from five area districts got together Friday, Dec. 9 at Northwestern High School to discuss results and collaborate for the following semester.

In an effort to improve state testing scores and overall academic performance, Northwestern, Black River, Mapleton, Loudonville-Perrysville and Hillsdale school districts partnered in a rural literacy design collaborative to incorporate literacy skills into STEM classes.

Working with engineers of Battelle Education, classroom observers from High Schools That Work and Making Middle Grades Work, three science teachers from each district collaborated to design teaching modules that focused on solving real-world problems.

"It's more of a problem-based learning," Northwestern curriculum director Scott Smith said. "The students are given a problem that they need to solve and they become engineers and they try to walk through (them)."

The two- to six-week-long modules started with a fictitious request for pro-

posal from students.

In Sonya Infantino's sixth-grade class at Black River Middle School, students built a water filtration device to clean water for a fictitious community.

After researching components of the dirty water sample and what was needed to filter it, they purchased supplies from the "Infantino store" and built and tested out the filters. Once it was successful, they presented it to a made-up company in the hopes of getting hired.

"They loved building the prototype and their enthusiasm even grew as they see the water actually being filtered and they can see

that it's clean," Infantino said.

Like all modules, the project involved a lot of writing, including scientific reports and logs of their findings and then proposals to the company.

At Mapleton, Joe Ortiz's sixth-grade class worked to design successful soil for growing plants. His class researched rocks and minerals, organic material and how the soil holds moisture before mixing ingredients together.

"It was very dirty and the kids liked it," Ortiz said. "It involved worms, rotting plant material, so my room

See Page A8 | Grant







## Grant

From Page A1

did not smell very good for about four weeks or so while that was decomposing.”

In Loudonville-Perrysville, seventh-grade teacher Kori Aubel’s class designed a homemade cleaning product.

Using nontoxic ingredients, students created a product that kills bacteria. They cultured and grew bacteria from surfaces they intended to clean and then sprayed their cleaner to check if the product killed the bacteria.

As they worked, Aubel noticed improvements in their writing.

“They had to write these design reports, pretty much through step by step why they chose the ingredients they chose. (And) supported by evidence, why it is that you thought that ingredient was safe,” Aubel said.

At Hillsdale High School, Mike William’s junior and senior anatomy class made variations of energy bars. Looking at market energy bars, the students tried to

design a new variation that could compete with the market bar at a lower cost.

“Each group kind of approached a different task. There was a vegan option, there was a dual pack option and there was a group that focused just on energy bars,” Williams said.

Students were employees of a fictitious company called Falcon Fuel and then branched off into new competing companies.

“They came up with their own energy bars based on the research they had done on market energy bars and we’re trying to create some sort of new variation then come up with a cost for the bar and market it that way,” Williams said.

Meeting together in October, the 15 teachers, making up Cohort One, brainstormed ideas for their first of two modules of the school year with help from Battelle. They also received feedback from teachers in Metro Early College High School in Columbus who have completed the first year of their own Straight A grant.

In the classroom, High

Schools That Work and Making Middle Grades Work observed and offered suggestions, and The Past Foundation shadowed for research purposes.

After the 2016-17 school year, the teachers of Cohort One will train the remaining science teachers of Cohort Two during the second year. The remaining three years will be used to strengthen modules and curriculum in the program and to train any new science teachers who come to the districts.

After each module is complete, teachers can add their lessons to the free database at [CoreTools.LDC.org](http://CoreTools.LDC.org).

The Straight A grant generated \$44,000 to each district in the form of support and networking with Battelle, High Schools That Work and Making Middle Grades Work, and \$51,500 for the districts to use in the five-year grant period and beyond.

After the five-year period, districts can choose to expand the literacy learning into other subjects of their choosing.







# Northwestern collaborates with four rural schools to improve science literacy

Northwestern working with four other rural schools on project

By EMILY MORGAN Staff Writer Published: December 16, 2016 4:00 AM



1 of 2 Photos | Teachers from Mapleton, Black River, Loudonville, Hillsdale and Northwestern meet at Northwestern High School on Friday, Dec. 9 to talk about the state grant to STEM projects. (T-G photo/Tom E. Puskar)







**NORTHWESTERN SCHOOL DISTRICT** -- The Rural Literacy Design Collaborative is giving Northwestern science teachers the opportunity to collaborate with teachers from four other rural school districts to improve the quality and practices of their science instruction.

Northwestern Local Schools partnered with Battelle Education and High Schools that Work to collaborate with four other rural school districts on the Rural LDC Project, a Straight A grant project that will run between 2016 and 2022.

The other school districts include Mapleton Local Schools, Hillsdale Local School District, Loudonville-Perrysville Exempted Village Schools and Black River Local Schools.

In September, Battelle Education began training 15 teachers from the five districts in the Literacy Design Collaborative core tools. Battelle along with High Schools that Work tracked teacher development in designing a rigorous project, called an LDC learning modules.

Teachers then implemented the project with students in their classrooms and also built relationships with teachers in the other districts to share the best practices to increase student science literacy.

Between their first and second meetings, teachers looked at their curriculum for the first half of the year and identified a unit that they weren't excited to teach or wanted to beef up, according to Northwestern middle school's Julie Hagans.

The seventh-grade science teacher chose the water cycle, which is introduced to students as the hydrologic cycle and builds on information they learned in fifth grade. A small portion of the unit discusses the human impact on the water cycle and Hagans decided to focus her project that aspect.

"It's a little more relatable for kids to understand the human impact so I simulated an oil spill for them," she said. "We talked about how the oil spill can affect not only water but land too. We discovered how ocean currents travel and how they don't stay in one place.

"The kids actually designed a boom that gets pulled behind a boat to help contain the spill and clean the spill up. We had fake oil with Kool-Aid and cooking oil, and they actually built it."

Because of small class sizes, these teachers are the only ones in their buildings teaching each course so the opportunity to collaborate with another teacher isn't always available. The Rural LDC Project gave these teachers at least a couple other teachers to speak with about how they approach their class.







"We just don't have time to get together during the normal school year. So this has provided a terrific vehicle for collaboration with peers that are teaching what you're teaching. And the ideas in this room have been incredible," said Jacki Zody, who designed her LDC module for her Accelerated Chemistry class at the high school.

Zody's students didn't create a physical project, but wrote an in-depth research paper examining the identity of unknown elements. The paper worked toward achieving one of the collaborative's main goals, for students to develop improved reasoning, research and technical writing skills.

"They managed their time well. They were responsible and they practiced safe lab procedures the entire time. They were respectful about handling unknown elements. Of course, we didn't give them anything horrible but they were mindful of that," Zody said. "They're very innovative and creative and they're excellent thinkers.

Teachers will reevaluate and redesign their LDC modules each year. Diana Rogers, the Northeast Ohio Regional Coach for High Schools that Work, hopes the projects can be used in a national database for teachers across the country to access for free.

Teachers have also told Rogers that their students retain the information better from the hands-on learning projects and achieve higher grades on their tests and quizzes.

"They're still performing better when they do something deeper and they know it a little deeper. Our goal is the science scores in all these schools go up and through this activity, the students really know these standards and do well on their assessments," the HSTW regional coach said.

Reporter Emily Morgan can be reached at 330-287-1632 or [emorgan@the-daily-record.com](mailto:emorgan@the-daily-record.com).







***The Rural Collaborative  
to Improve Instruction and Expand  
Student STEM Opportunities and  
21<sup>st</sup> Century Skills through  
Literacy Design Collaborative  
(Rural LDC Project).***



***The Rural LDC Project is funded by the Ohio Department of Education, Straight A Fund.***

The project is designed for implementation in five rural districts that comprise the *Rural Collaborative consortia schools*, including Northwestern Local Schools, Mapleton Local Schools, Hillsdale Local School District, Loudonville-Perrysville Exempted Village Schools, and Black River Local Schools. Beginning in 2016 and continuing through 2022, this project is being implemented by the Northwestern Local Schools in partnership with Battelle Education and High Schools that Work. The PAST Foundation Knowledge Capture Program (KC) will conduct the evaluation of project implementation and project outcomes.

The *Rural LDC Project* professional development is designed to increase teacher skills in utilizing the Literacy Design Collaboration Core Tools to support improved quality and practices in science instruction. The project intends to track teacher skill development in designing robust LDC learning modules, implementing modules with students

in their classrooms, as well as building collaborative teacher relations within each of the five Rural Collaborative Districts, and potentially across the five districts in sharing best practices to increase student science literacy.



(Photo provided by High Schools That Work, 2016)

Students enrolled in the five Rural Collaborative middle and high schools will be increasingly exposed to science instruction that is designed to build STEM skills and practices that include gains in higher order thinking skills – problem-solving, independent thinking, analysis, collaboration and creativity – and develop improved reasoning, research and technical writing skills, all of which are essential to preparation for success in college and career.



(Photo provided by High Schools That Work, 2016)







# Knowledge Capture



THE  
**PAST**  
FOUNDATION



*Internal and External Evaluation  
Supports and Authenticates  
Innovative Education Programs*

## Who Will Monitor & Measure Your Program's Success?

PAST Foundation KC Program is a leader in providing evaluation services to schools and districts across Ohio. The PAST KC Team conducts internal and external evaluation, monitoring program implementation in real time to support project success in meeting desired outcomes.

Our evaluation methodology includes structured observations, interviews, focus group dialogues, questionnaires, and online surveys designed to identify benchmarks to assess project outcomes. We report out through engaging presentations that communicate meaningful understanding of program gains, and provide recommended actions to enhance implementation design.

## PAST Foundation Evaluation Services: Guaranteeing Fidelity & Transparency

Our Knowledge Capture program includes systematic analysis of transformative processes supporting successful K-12 STEM education initiatives. We have over 15 years of experience working with schools throughout Ohio. The KC Team has conducted program evaluation of 5 Straight A Grant Projects since 2013, including *SOIL*, *Growing SOIL*, *FAST Forward*, *Math Matters*, and the *Rural LDC Project*.

### Internal Evaluation



### External Evaluation

Email us at [info@pastinnovationlab.org](mailto:info@pastinnovationlab.org)

Learn more at: [pastinnovationlab.org/evaluation](http://pastinnovationlab.org/evaluation)







Black River, Hillsdale, Loudonville-Perrysville,  
Mapleton, Northwestern

# Science & Literacy

December 9, 2016

Northwestern High School

Battelle Education



THE  
PAST FOUNDATION







## It all began...

- 12 weeks ago with a Straight A Grant
- 15 teachers and 5 liaisons from 5 rural school districts
- trained by Battelle Education in the Literacy Design Collaborative (LDC) approach to teaching science and literacy --- working like a scientist
- supported by High Schools That Work (HSTW) and the PAST Foundation
- completed LDC modules that are featured here today!!!



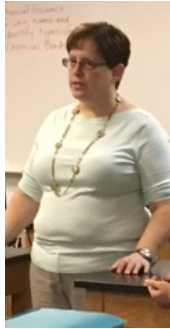




# THANKS TEACHERS!!!



**Tony**



**Leanna**



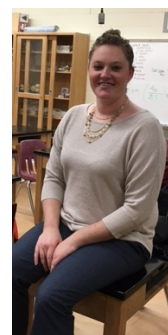
**Joe**



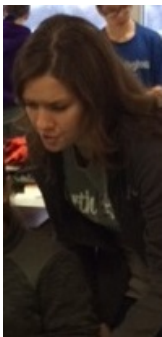
**Trevor**



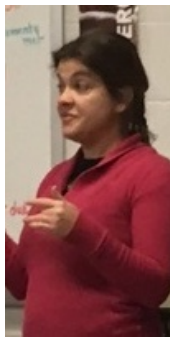
**Jim**



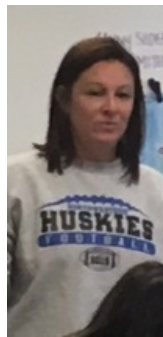
**Kori**



**Julie**



**Amanda**



**Kelly**

Also...

Michele, Sonya, Clayton, Trevor,  
Lindsay, Mike, and Kendra







**Black River**

Michele Yocum, 5<sup>th</sup> Grade Science

## LDC Module: There's No Place Like Home

*How can we most effectively create an aquatic ecosystem that sustains 5 out of 15 species for a period of 30 days?*

After reading an RFP from a local pet store, your challenge is to design a prototype that can be purchased for \$20.00 and sustain life for a minimum of 30 days, conducting background research on ecosystems, and designing and testing a habitat, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of the RFP. Support your response with evidence from your research.







# Michele Yocum, 5<sup>th</sup> Grade Science

[illegible]

**RURAL**  
**LITERACY DESIGN**  
**COLLABORATIVE**





**Black River**

Sonya Infantino, Middle School Science

## LDC Module: Water, Water Everywhere

*Can you build a water filtration device that separates out the pollutants for the least amount of money?*

After reading the RFP, conducting background research on the components within the water mixture, and designing and testing a filtration device, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of RFP. Support your response with evidence from your research. Include (charts, tables, illustrations, and/or stylistic devices) to help convey your message to your readers. Identify any gaps or unanswered questions.







Black River, Hillsdale, Loudonville-Perrysville,  
Mapleton, Northwestern

# Science & Literacy

December 9, 2016

Northwestern High School

Battelle Education



THE  
PAST FOUNDATION

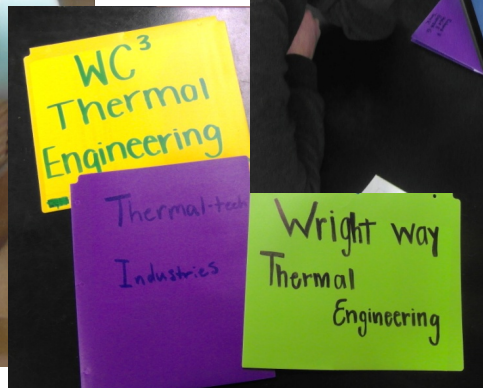






Black River Clayton VanDoren, High School Science

## LDC Module: The Balto Challenge: Heat Transfer & Thermal Insulation







Hillsdale

Trevor Cline, Middle School Science

## LDC Module: Erosion/Deposition

After reading an RFP, conducting background research on erosion and deposition, and designing and testing three-dimensional dams, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of RFP.

Support your response with evidence from your research.

- Include illustrations/stylistic devices to help convey your message to your readers. Identify any gaps or unanswered questions.







Hillsdale

Trevor Cline, Middle School Science

## LDC Module: Erosion/Deposition







Hillsdale

Michael Williams, High School Science

## LDC Module: Falcon Fuel Energy Bars

*Effectively design and create a low cost, low calorie, nutritious energy bar for either pre or post-activity and compare the effectiveness, nutritional value, and taste preference to a selected market energy bars. Then create and record a 30 second radio ad to promote your product.*

After reading RFP, conducting background research on human nutrition needs and homeostasis, and designing and testing energy bar variation, write a proposal in which you describe your design and argue its effectiveness in meeting the requirements of RFP. Support your response with evidence from your research. Include charts, tables, illustrations, and/or stylistic devices to help convey your message to your readers. Identify any gaps or unanswered questions.



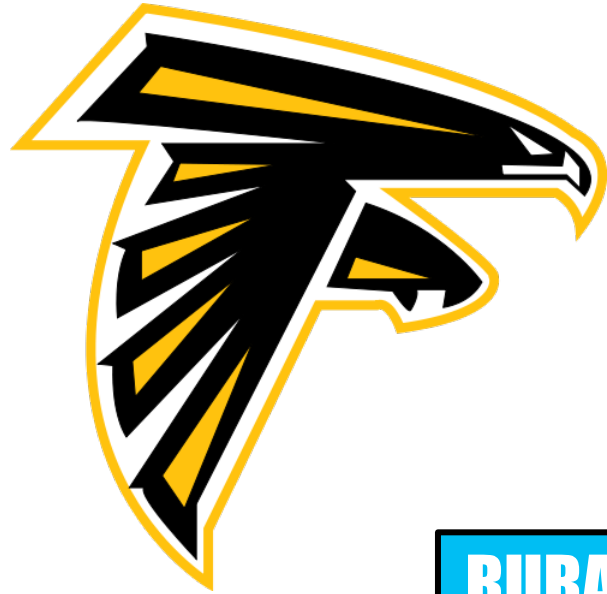




Hillsdale

Michael Williams, High School Science

## LDC Module: Falcon Fuel Energy Bars







**Hillsdale**

Lindsay Bowen, High School Ag Science

### LDC Module: Food Science

*How can we most effectively develop a new food prototype?*

After reading the RFP, conducting background research on food product development, and designing and testing your prototype, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of RFP. Support your response with evidence from your research. Include tables, illustrations and data to help convey your message to your readers. Identify any gaps or unanswered questions.







Hillsdale

Lindsay Bowen, High School Ag Science

## LDC Module: Food Science







Loudonville

Kori Aubel, Middle School Science

## LDC Module: Battle of the Bacteria Blasters

*How can we create a safe, effective, and cheap homemade surface cleaner?*

After reading the RFP, conducting background research on “How bacteria pass on their traits”, “How disinfectants work, and effects of harmful chemicals in cleaners”, and designing and testing cleaner made with different concentrations of different safe cleaning solutions, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of RFP. Support your response with evidence from your research.



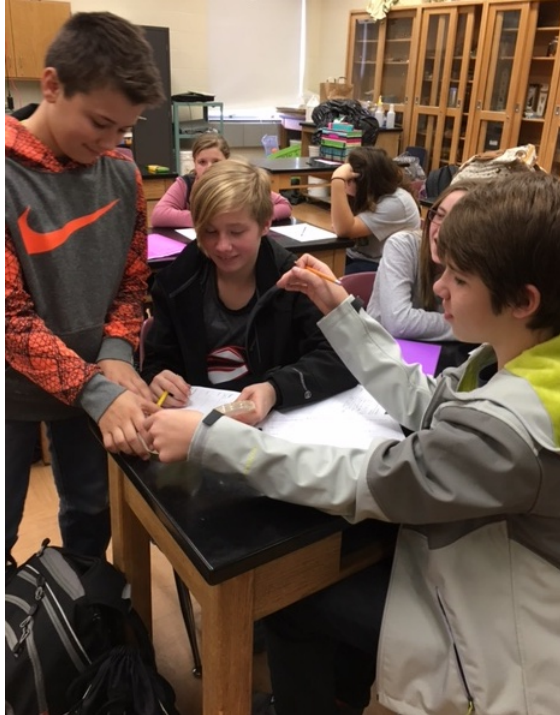




Loudonville

Kori Aubel, Middle School Science

## LDC Module: Battle of the Bacteria Blasters







**Loudonville**

**Jim Conley, High School Science**

### **LDC Module: Kombucha Design Project**

What ingredient combinations can students produce to make a fermented tea drink that is marketable and profitable through the processes of cellular metabolism?

After reading the RFP, conducting background research on fermentation, cell respiration, and ecology of microbes, and designing and testing fermented tea/various formulas, write a proposal in which you describe your design and argue its effectiveness in meeting the requirements of RFP. Support your response with evidence from your research. Include charts, tables, illustrations, and/or stylistic devices to help convey your message to your readers. Identify any gaps or unanswered questions.







Loudonville

Jim Conley, High School Science

## LDC Module: Kombucha Design Project







**Loudonville** Kendra Carnegie, High School Ag Science

## **LDC Module: Creating a Bovine Reproductive Tract**

*How can students design a 3D female reproductive tract manipulative to enhance the OSU Extension Learning Lab Kit for Beef?*

After reading RFP, conducting background research on the reproductive track of beef, and designing and testing a 3D beef female reproductive tract manipulative, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of the RFP. Support your response with evidence from your research. Include charts, tables, and illustrations to help convey your message to your readers. Identify any gaps or unanswered questions.

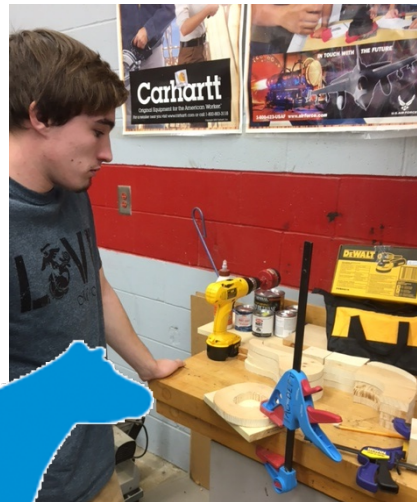






Loudonville Kendra Carnegie, High School Ag Science

## LDC Module: Creating a Bovine Reproductive Tract







Mapleton

Joe Ortiz, Middle School Science

## LDC Module: Unlocking Soil Secrets

*What combinations of local organic and geological material can create the most successful soil for the purpose of growing plants?*

After reading design requirements, conducting background research on rock & mineral uses and composition, the rock cycle, and soil composition and uses, and designing and testing soil creation and plant growth from that soil, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of design requirements. Support your response with evidence from your research. Include charts of soil composition and tables of plant growth to help convey your message to your readers. Identify any gaps or unanswered questions.







Mapleton

Joe Ortiz, Middle School Science

## LDC Module: Unlocking Soil Secrets







Mapleton

Tony Bunt, High School Science

## LDC Module: Germ Masters Agar Solutions

*What are the optimum environmental and nutritional conditions to grow bacteria quickly and affordably?*

After reading a Request For Proposal (RFP) in which a pharmaceutical company is seeking an affordable, efficient protocol for culturing bacteria and a unique nutrient agar in which to grow the bacteria, conducting background research on prokaryotic cell reproduction, bacteria growth mediums, microbial metabolism, and environmental effects on bacteria growth, and designing and testing a series of bacteria growth protocols, write a protocol for growing bacteria cultures and develop a unique agar recipe in which you describe your design and argue its effectiveness in meeting the requirements of the RFP. Support your response with evidence from your research. Include research and results gathered in the process of developing a growth protocol to help convey your message to your readers. Identify any gaps or unanswered questions.



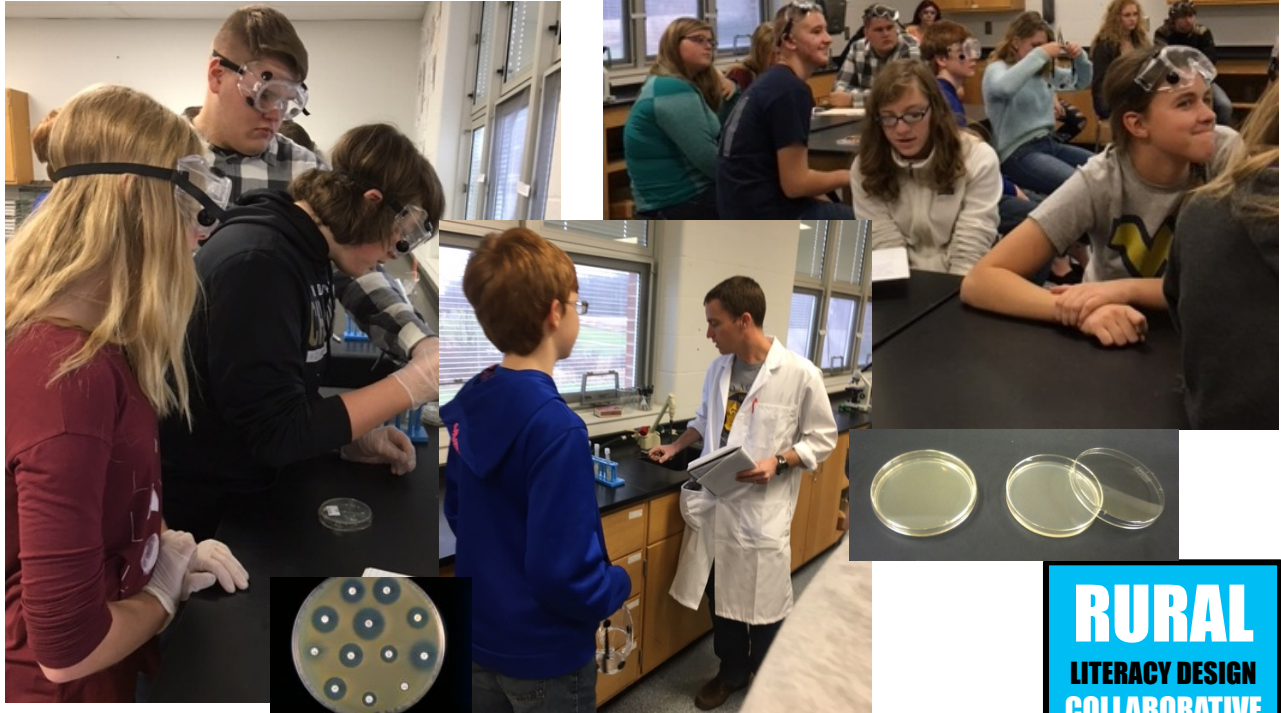




Mapleton

Tony Bunt, High School Science

## LDC Module: Germ Masters Agar Solutions



**RURAL**  
LITERACY DESIGN  
COLLABORATIVE







**Mapleton**

Leanna Colosimo, High School Science

### LDC Module: Dig This

*How can a shovel be designed so that it would decrease the amount of force and work necessary to move dirt, mulch, straw/hay, and other agricultural debris?*

After reading the RFP, conducting background research on forces, work, power, shovel design (handle and blade), types of materials, human factors, cost and levers, and designing and testing a shovel, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of the RFP. Support your response with evidence from your research. Include charts, tables, illustrations, and any other relevant diagrams to help convey your message to your readers. Identify any gaps or unanswered questions.



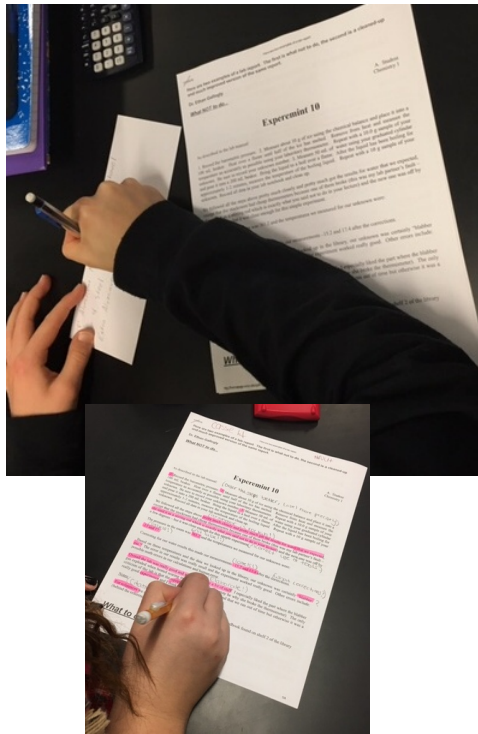




Mapleton

Leanna Colosimo, High School Science

## LDC Module: Dig This







Northwestern

Julie Hagans, Middle School Science

## LDC Module: Crude Oil Catastrophe

*How can one create an effective and efficient product to remove oil from a bird after a catastrophic spill?*

After reading the RFP, conducting background research on oil spills, environmentally safe cleansers, oil removal, and designing and testing your oil spill clean up kit, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of the RFP. Support your response with evidence from your research. Include charts, tables, illustrations, and notes to help convey your message to your readers. Identify any gaps or unanswered questions. Include bibliography, citations, references, endnotes.







Northwestern

Julie Hagans, Middle School Science

## LDC Module: Crude Oil Catastrophe







**Northwestern** Amanda Michalak, High School Science

## LDC Module: Shipping Apples

*How can a student design a shipping container to ship six Pink Lady apples without bruising or decay across the country?*

After reading the RFP, conducting background research on decay of apples, reaction chambers, closed systems and packaging of products, and designing and testing a shipping container that will allow for transport of six Pink Lady apples without bruising and decay, write a design report in which you describe your design and argue its effectiveness in meeting the requirements of the RFP. Support your response with evidence from your research. Include data, tables, illustrations, and/or stylistic devices to help convey your message to your readers. Identify any gaps or unanswered questions.

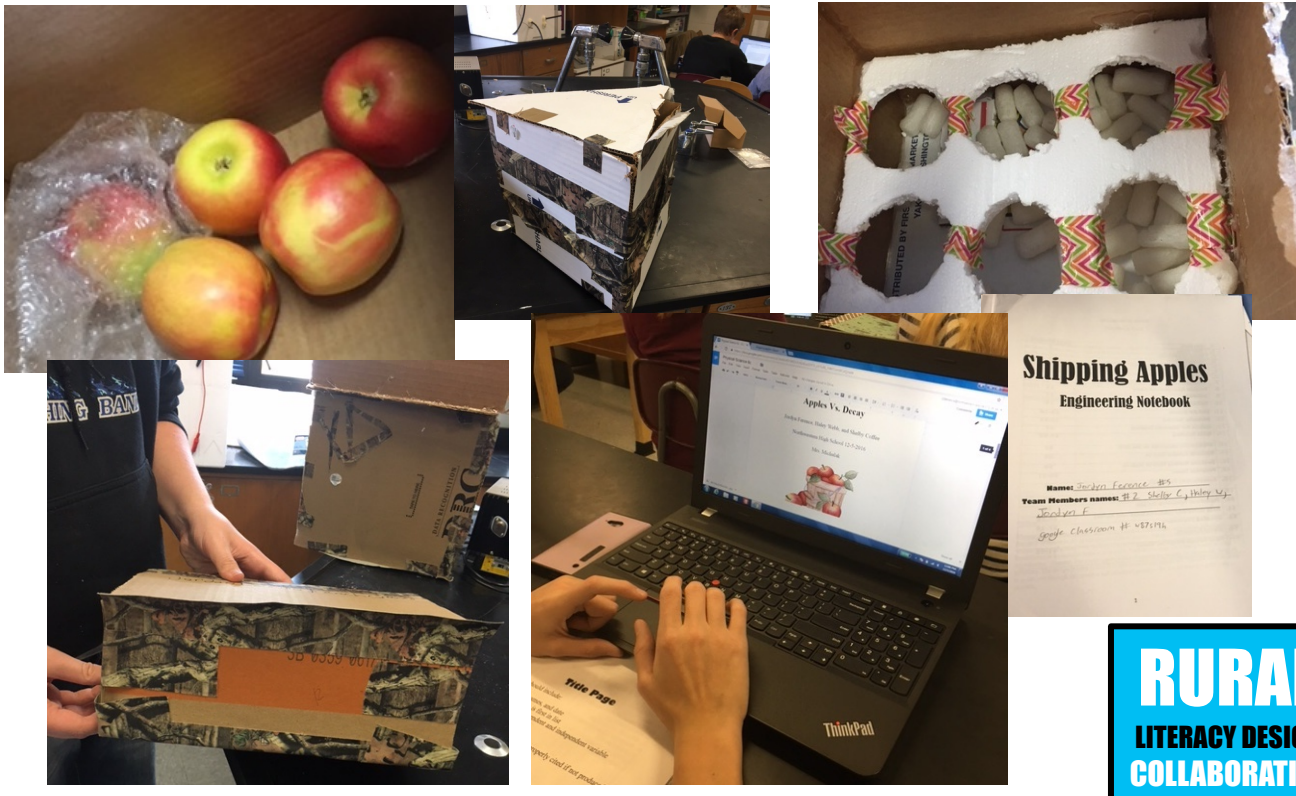






Northwestern Amanda Michalak, High School Science

## LDC Module: Shipping Apples







**Northwestern** Kelly Woodruff, High School Science

### LDC Module: Calorimeter

After reading the RFP, conducting background research on chemistry of life and calorimeter design, and designing and testing a calorimeter, write design proposal in which you describe your design and argue its effectiveness in meeting the requirements of RFP. Support your response with evidence from your research. Include tables, graphs, and illustrations to help convey your message to your readers. Identify any gaps or unanswered questions.

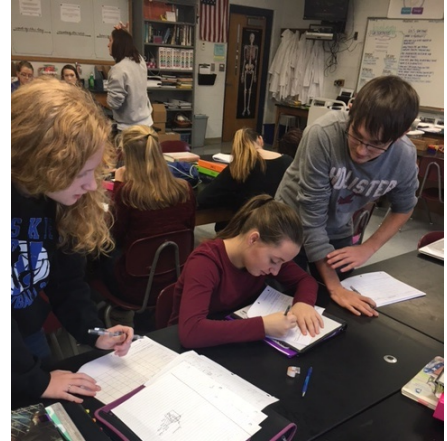
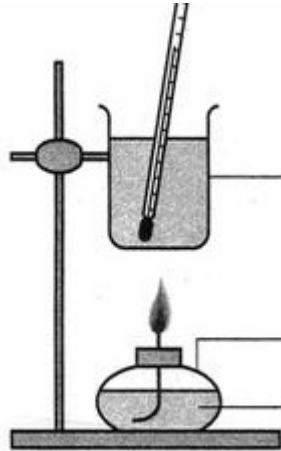






Northwestern Kelly Woodruff, High School Science

## LDC Module: Calorimeter







## FOR MORE INFORMATION

Scott Smith, Project Manager  
Northwestern Local Schools  
nrws\_ssmith@tccsa.nwr







## Appendix E:

2016 Teacher Survey Questions, September 30, 2016  
Teacher Follow-up Survey Questions, October 14,  
2016







## Rural LDC Collaborative Teacher Pre-Implementation Survey

- \* 1. **This is an anonymous survey. The PAST Foundation will use this survey data to assess your views on the LDC instructional model and will also help inform professional development and ongoing support provided by LDC Coaches. Completing this survey will give you the opportunity to share your views anonymously.**

**Your participation in this research is voluntary. By checking the response below that states you agree to participate in this survey, you confirm that you have read and understand the consent forms provided to you.**

☐ I agree to participate in this anonymous survey

2. **I currently teach (please check all that apply):**

☐ Grades 5-8

☐ Grades 9-12

3. **In your teaching career, which content areas have you taught? (Please choose all that apply.)**

☐ Science

☐ Math

☐ English

☐ Social Studies

☐ Arts

☐ Physical Education

☐ Career Tech

☐ Special Education/Intervention

☐ Gifted and Talented

☐ If other, please describe briefly

4. **In your experience, how important is collaboration and sharing best practices with other teachers?**

☐ Very important

☐ Somewhat important

☐ Not important

☐ I haven't had the opportunity to work collaboratively with other teachers

☐ If other, please describe briefly

5. **In your teaching career, have you had experience in coaching other teachers or leading professional development sessions?**

☐ Yes ☐ No







6. **How did you become involved as a participant in the Rural Collaborative LDC Project?**

- ☐ I was selected by my principal
- ☐ I was selected by a district level administrator
- ☐ I volunteered
- ☐ If other, please describe briefly

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7. **I have required my students to write in-depth explanations about a class project or activity.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

8. **I have required my students to use computers or technology to complete an assignment or project.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

9. **I have assigned reading to my students in addition to the class textbook.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

10. **I have required my students to compare and contrast information from one text to another.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

11. **I have required my students to produce writing assignments that make them defend their thinking with support and evidence from what they are reading.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

12. **I have required my students to orally defend their conclusions from an investigation or project before their peers.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

13. **I have required my students to use data collected during investigations or projects to justify and defend their conclusions.**







- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

14. **I have required my students to complete assignments using the vocabulary associated with the subject area being taught.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

15. **I have required my students to develop and analyze tables, charts and graphs in schoolwork.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

16. **I have required my students to work on open-ended problems for which there is no immediately obvious method of solution.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

17. **I have required my students to work on an extended, major project that lasts one week or more.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Once or twice a month

18. **I have required my students to work in cooperative groups to deepen understanding of content.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly

19. **I have required my students to work in groups to complete a written product as a component of a project.**

- ☐ Not at all
- ☐ Once a year
- ☐ Once or twice a semester
- ☐ Monthly
- ☐ Weekly







20. **I have required my students to take a test that is predominantly essay questions.**
- ☐ Not at all
  - ☐ Once a year
  - ☐ Once or twice a semester
  - ☐ Monthly
  - ☐ Weekly
21. **I have required my students to read science related materials (besides textbooks) and show their understanding through writing.**
- ☐ Not at all
  - ☐ Once a year
  - ☐ Once or twice a semester
  - ☐ Monthly
  - ☐ Weekly
22. **I have required my students to complete a writing assignment that addresses an authentic (real-life) problem in the community or work setting.**
- ☐ Not at all
  - ☐ Once a year
  - ☐ Once or twice a semester
  - ☐ Monthly
  - ☐ Weekly
23. **I have required my students to use science equipment to perform lab activities and use the information (data) collected to complete written assignments in science class.**
- ☐ Not at all
  - ☐ Once a year
  - ☐ Once or twice a semester
  - ☐ Monthly
  - ☐ Weekly







24. **How important is it that your administrators understand the LDC instructional strategies that you will be implementing in your classroom this year?**

- ☐ Very important
- ☐ Somewhat important
- ☐ Not important
- ☐ I don't know yet
- ☐ If other, please describe briefly

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25. **How important is it for parents to know about/understand the LDC model for science literacy and learning?**

- ☐ Very important
- ☐ Somewhat important
- ☐ Not important
- ☐ I don't know yet
- ☐ If other, please describe briefly

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26. **What do you anticipate to be your biggest challenge(s) with implementing your LDC module with your students?**

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27. **How important is it to have access to LDC coaches during implementation of LDC modules in your classroom?**

- ☐ Very important
- ☐ Somewhat important
- ☐ Not important
- ☐ I don't know yet
- ☐ If other, please describe briefly

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28. **How well prepared are you to implement your LDC module in your classroom? (Please choose all that apply.)**

- ☐ I think I am very well prepared and will begin implementing LDC in my classroom immediately
- ☐ I think I will benefit from one more face-to-face session with an LDC coach (Follow up in two weeks)
- ☐ I would like to have one-on-one onsite classroom support from an LDC coach
- ☐ I would like to have virtual access to an LDC coach to participate in a brainstorm session and explore strategies for implementing my LDC module
- ☐ I would like to be able to communicate with an LDC coach as needed

29. **How would you rate your first LDC module?**

- ☐ I think the science and literacy assignment (teaching task) is well designed and I have a quality instructional plan which I can immediately implement with my students







- ☐ I think the science and literacy assignment (teaching task) is well designed and my instructional plan is pretty close. It will allow me to begin implementation immediately with my students, but I expect to modify the module as I go
- ☐ I think I need to work on both my science and literacy assignment (teaching task) and my instructional plan before I can begin implementation with my students
- ☐ I will need to rethink my entire module and develop new ideas for both my science and literacy assignment (teaching task) and my instructional plan

30. **How confident are you about the following aspects of implementing your LDC module?**

	Very confident	Confident	Somewhat confident	Not confident	I don't know
Find time to revise/complete my LDC module	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Find time during classroom instruction with students to implement the LDC module	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Find time to work with LDC coaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

31. **How confident are you in your understanding and ability to implement the following components of the LDC instructional model?**

	Very confident	Confident	Somewhat confident	Not confident	I don't know
Construct an authentic science and literacy assignment [teaching task]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify a focus set of science standards to drive the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify a focus set of common core literacy standards to drive the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select complex and content rich text(s) that align to a specific set of student learning goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select a student work product that is relevant to the student learning goals of the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop a quality instructional plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Backward-design a sequence of skills from the assignment aligned to student learning goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop instruction that allows students to demonstrate the skills needed to meet the expectations of the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>







Develop instruction that allows for ongoing checks (scoring guide) for understanding student skill development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Navigate LDC Coretools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaborate with other LDC project teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. Briefly describe "Design Thinking" and particular benefits for student learning.

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33. Briefly describe PBL and potential impacts on student learning.

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34. Briefly describe any anticipated impacts on student performance using LDC components in your classroom.

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35. What are the *top THREE skills* you would like your students to develop in your class to prepare them for the future? Please remember to choose *ONLY THREE* of the following options.

- ☐ Problem solving
- ☐ Critical thinking
- ☐ Collaboration
- ☐ Understanding the scientific process
- ☐ Perseverance
- ☐ Following directions/listening
- ☐ Conducting research
- ☐ Finding resources/valid data to support project design
- ☐ Communication
- ☐ Presenting research/project to their peers or other audience
- ☐ Organization/project management
- ☐ Preparing students for college and career
- ☐ If other, please describe briefly

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**PAST**  
**InnovationLab**  
*access through education*

## Rural LDC Collaborative Teacher Pre-Implementation Follow-up Survey

- \* 1. **This is an anonymous survey. The PAST Foundation will use this survey data to assess your views on the LDC instructional model and will also help inform professional development and ongoing support provided by LDC Coaches. Completing this survey will give you the opportunity to share your views anonymously.**

**Your participation in this research is voluntary. By checking the response below that states you agree to participate in this survey, you confirm that you have read and understand the consent forms provided to you.**

☐ I agree to participate in this anonymous survey

2. **I currently teach (please check all that apply):**

☐ Grades 5-8

☐ Grades 9-12







**3. How well prepared are you to implement your LDC module in your classroom? (Please choose all that apply.)**

- ☐ I think I am very well prepared and will begin implementing LDC in my classroom immediately
- ☐ I think I will benefit from one more face-to-face session with an LDC coach (Follow up in two weeks)
- ☐ I would like to have one-on-one onsite classroom support from an LDC coach
- ☐ I would like to have virtual access to an LDC coach to participate in a brainstorm session and explore strategies for implementing my LDC module
- ☐ I would like to be able to communicate with an LDC coach as needed

**4. How would you rate your first LDC module?**

- ☐ I think the science and literacy assignment (teaching task) is well designed and I have a quality instructional plan which I can immediately implement with my students
- ☐ I think the science and literacy assignment (teaching task) is well designed and my instructional plan is pretty close. It will allow me to begin implementation immediately with my students, but I expect to modify the module as I go
- ☐ I think I need to work on both my science and literacy assignment (teaching task) and my instructional plan before I can begin implementation with my students
- ☐ I will need to rethink my entire module and develop new ideas for both my science and literacy assignment (teaching task) and my instructional plan

**5. How confident are you about the following aspects of implementing your LDC module?**

	Very confident	Confident	Somewhat confident	Not confident	I don't know
Find time to revise/complete my LDC module	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Find time during classroom instruction with students to implement the LDC module	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Find time to work with LDC coaches	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**6. How confident are you in your understanding and ability to implement the following components of the LDC instructional model?**

	Very confident	Confident	Somewhat confident	Not confident	I don't know
Construct an authentic science and literacy assignment [teaching task]	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify a focus set of science standards to drive the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Identify a focus set of common core literacy standards to drive the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select complex and content rich text(s) that align to a specific set of student learning goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Select a student work product that					







is relevant to the student learning goals of the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop a quality instructional plan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Backward-design a sequence of skills from the assignment aligned to student learning goals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop instruction that allows students to demonstrate the skills needed to meet the expectations of the assignment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Develop instruction that allows for ongoing checks (scoring guide) for understanding student skill development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Navigate LDC Coretools	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Collaborate with other LDC project teachers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>







Appendix F:  
2016 Rural LDC Combined Pre-Implementation  
(9.30.16) and Supplemental Teacher Survey  
(10.14.16) Report  
Infographic Summary of Survey Data







### **Rural LDC Teacher Pre-Implementation Survey Report Combined Survey Responses for September 30, 2016 and October 14, 2016**

This document is the final report of survey responses for the Rural LDC 2016 Teacher Pre-Implementation Survey. Project districts include: Northwestern Local Schools, Mapleton Local Schools, Hillsdale Local School District, Loudonville-Perrysville Exempted Village Schools, and Black River Local Schools.

The report presents bar charts for survey responses for Qs 1-25, Qs 27-31, and 35. Open-ended responses for Qs 26, 32, 33, and 34 are presented in thematic tables.

#### **SURVEY PROTOCOL**

The Rural LDC 2016 Teacher Pre-Implementation Survey was administered on Friday, September 30<sup>th</sup> during the second day of a two-day LDC professional development session. The survey was completed by a total number of (15) teachers. The survey was administered via a secure web-based platform (SurveyMethods®) designed for conducting a confidential and anonymous survey.

#### **SUMMARY OF SURVEY QUESTIONS FOR SEPTEMBER 30:**

Qs 2-3 are profile questions.

Qs 4-5 are questions regarding teachers' experiences in their careers. Teachers were asked about collaboration and sharing best practices with other teachers. Teachers were also asked about experience with coaching other teachers or leading professional development sessions.

Q6 asked teachers how they became involved as a participant in the Rural LDC project.

Qs 7-23 are questions regarding teachers' past instructional practices related to requiring students to conduct research and complete written components of class assignments.

Qs 24-25 asked teachers how important is it for administrators and parents to know about and understand the LDC instructional strategies and model.







Qs 26-28 are questions regarding implementation of the LDC module. Q26 asked teachers to identify the biggest challenge(s) they anticipate with implementation of the LDC module with their students. Q27 provides feedback from teachers about importance of access to LDC coaches during implementation of LDC modules in their classroom. Q28 asked teachers to self-evaluate how well prepared they are to implement their LDC module in their classroom.

Qs 29-31 asked teachers to self-evaluate their LDC module and implementation strategy. Q29 asked teachers how would they rate their first LDC module. Q30 asked teachers to rate their confidence level with specific aspects of implementing their LDC module, and Q31 asked teachers to self-evaluate their understanding and ability to implement components of the LDC instructional model. Teachers selected from a drop-down menu of skills associated with the LDC instructional model.

Qs 32-34 are open-ended questions asking teachers to describe specific aspects of the LDC module and impacts on student learning and performance. Q32 asked teachers to briefly describe "Design Thinking" and particular benefits for student learning, and Q33 asked teachers to briefly describe PBL and potential impacts on student learning. Q34 asked teachers to briefly describe anticipated impacts on student performance using LDC modules in their classroom.

Q35 asked teachers to identify the top four skills they think are most important for students to prepare for the future.

### **FOLLOW-UP SURVEY, OCTOBER 14:**

The following sub-set of questions from the September 30<sup>th</sup> survey were included in a follow-up survey conducted on October 14, 2017 and are presented in a side-by-side comparative view in this report.

Q3 (Q28): How well prepared are you to implement your LDC module in your classroom?

Q4 (Q29): How would you rate your first LDC module?

Q5 (Q30): How confident are you about the following aspects of implementing your LDC module?

- Find time to revise/complete my LDC module
- Find time during classroom instruction with students to implement the LDC module
- Find time to work with LDC coaches







Q6 (Q31): How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

- Construct an authentic science and literacy assignment (teaching task)
- Identify a focus set of science standards to drive the assignment
- Identify a focus set of common core literacy standards to drive the assignment
- Select complex and content rich text(s) that align to a specific set of student learning goals
- Select student work product that is relevant to the student learning goals of the assignment
- Develop a quality instructional plan
- Backward design a sequence of skills from the assignment aligned to student learning goals
- Develop instruction that allows students to demonstrate the skills needed to meet the expectations of the assignment
- Develop instruction that allows for ongoing checks (scoring guide) for understanding student skill development
- Navigate LDC Core Tools
- Collaborate with other LDC project teachers

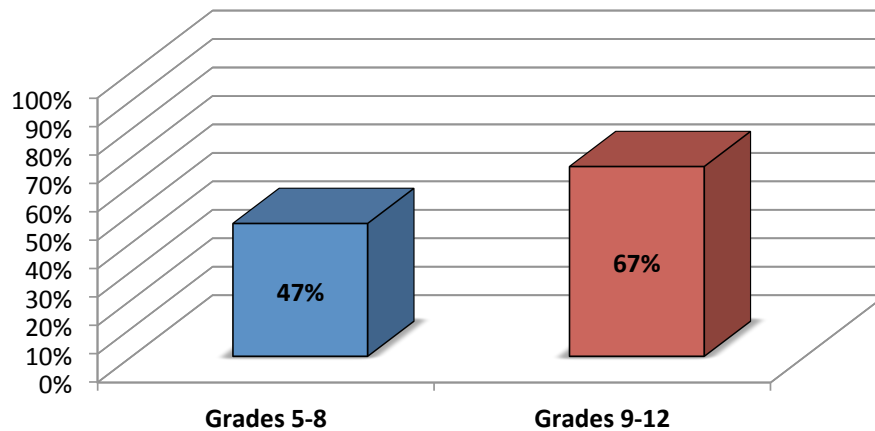




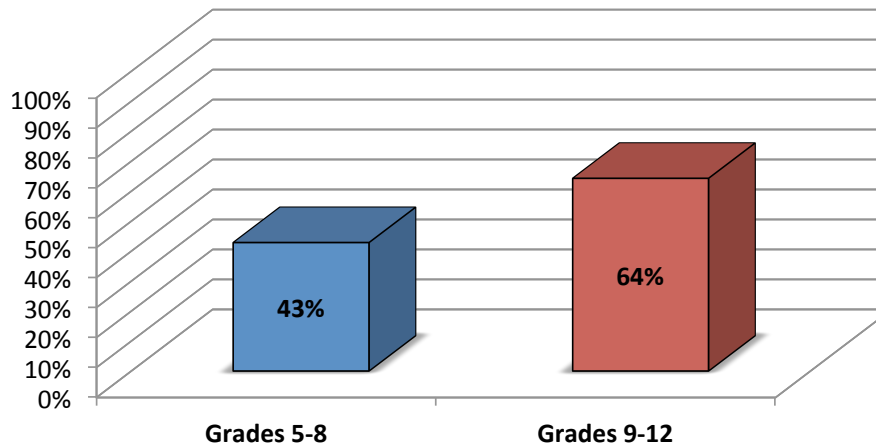


Q2: I currently teach (please check all that apply):

Data collected on September 30, 2016 (n=15)



Data collected on October 14, 2016 (n=14)



*Note: Respondents were given the option of selecting more than one grade-level band.*

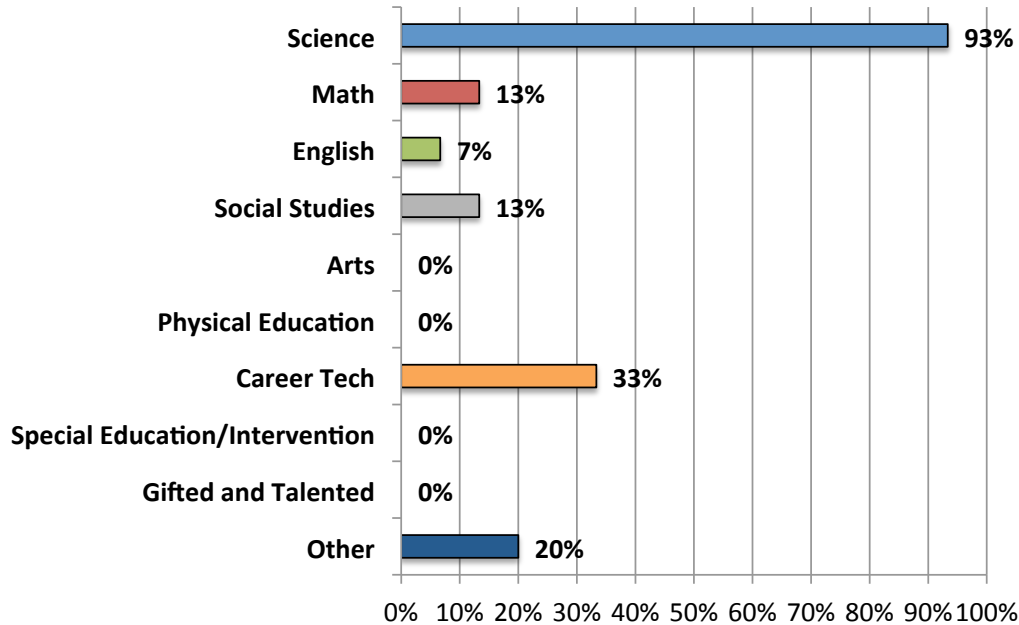






Q3: In your teaching career, which content areas have you taught? (Please choose all that apply.)

(n=15)



Note: Respondents were given the option of selecting multiple content areas if applicable, as well as the option of an "if other" response, which is reflected in the **Other** category.

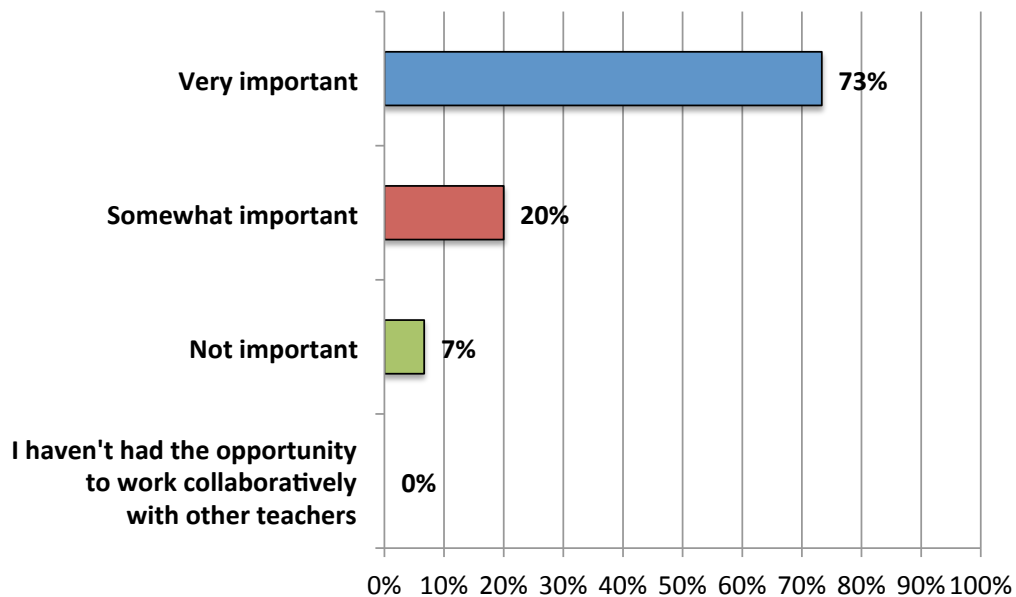






Q4: In your experience, how important is collaboration and sharing best practices with other teachers?

(n=15)

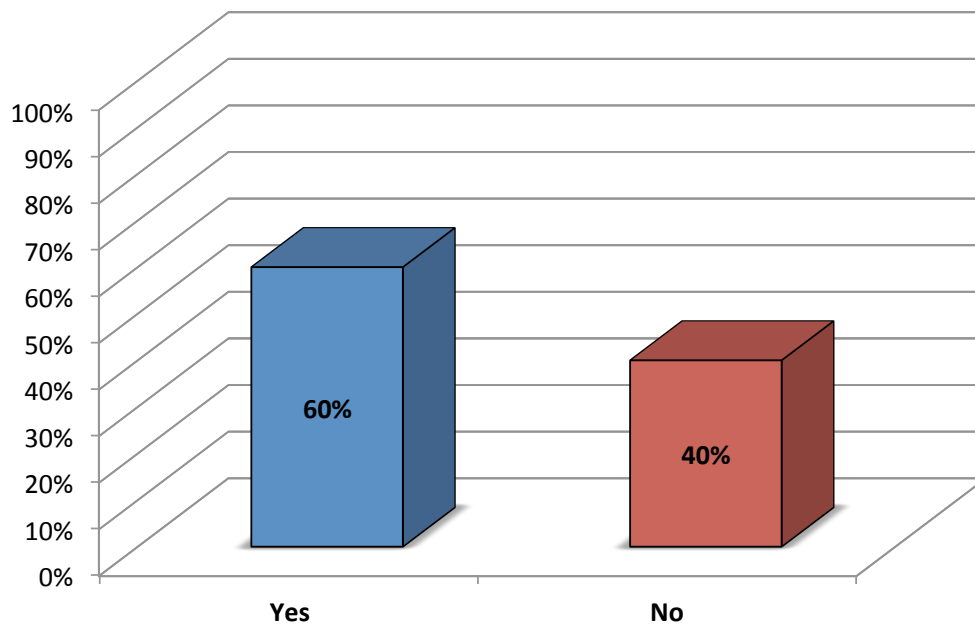






**Q5: In your teaching career, have you had experience in coaching other teachers or leading professional development sessions?**

(n=15)

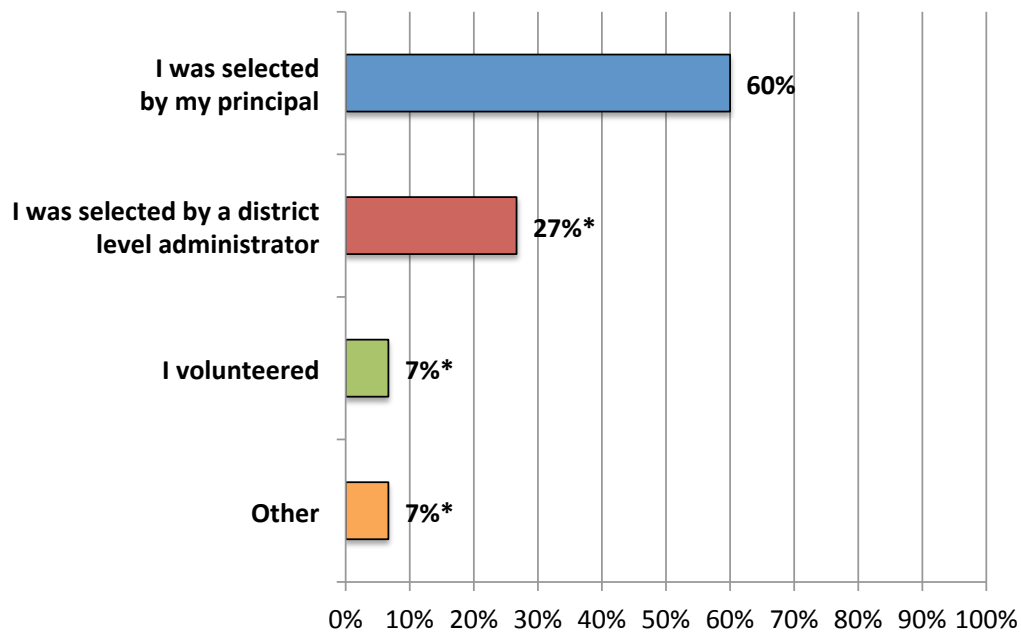






### Q6: How did you become involved as a participant in the Rural Collaborative LDC Project?

(n=15)



*\*All data is rounded to the nearest percentage point.*

*Note: Respondents were given the option of an "if other" response, which is reflected in the **Other** category.*

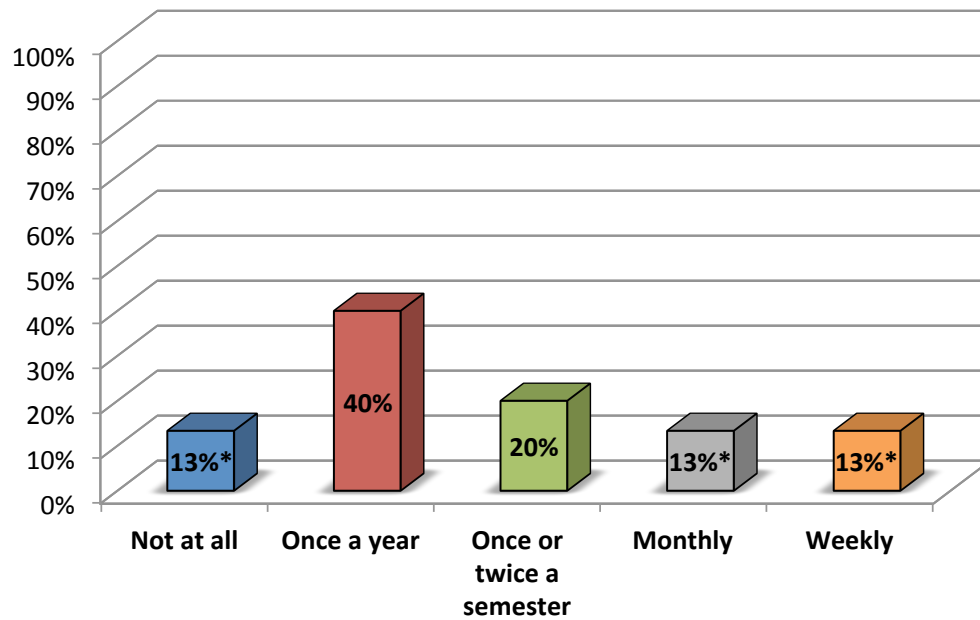






Q7: I have required my students to write in-depth explanations about a class project or activity.

(n=15)



*\*All data is rounded to the nearest percentage point.*

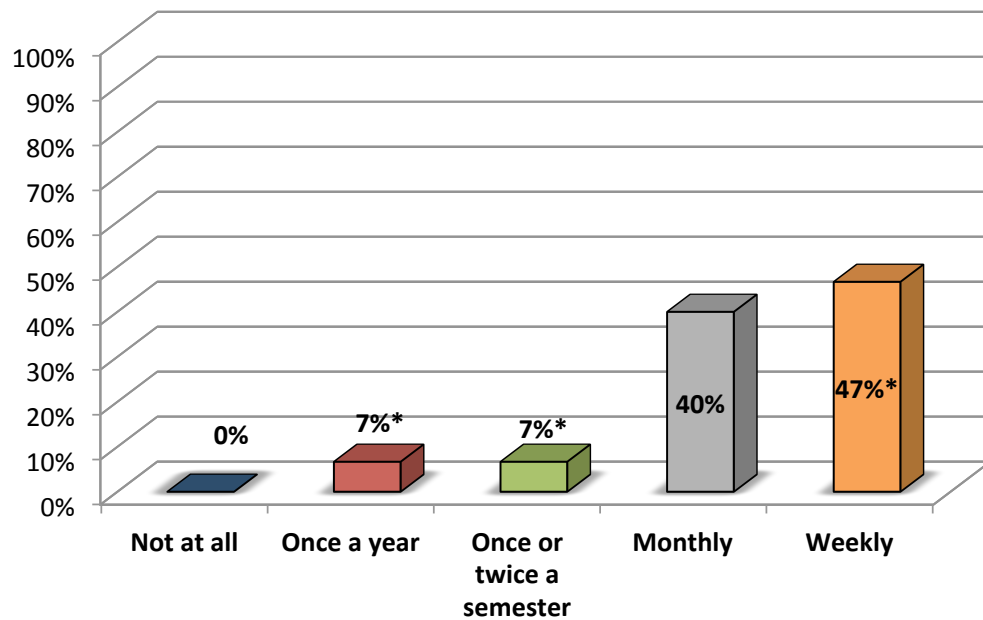






Q8: I have required my students to use computer or technology to complete an assignment or project.

(n=15)



*\*All data is rounded to the nearest percentage point.*

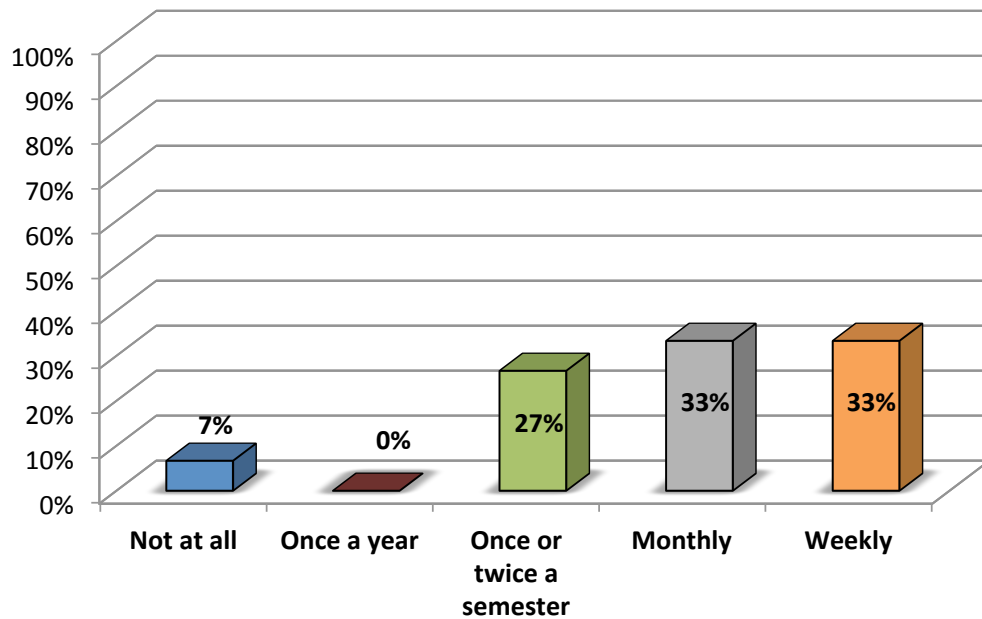






Q9: I have assigned reading to my students in addition to the class textbook.

(n=15)

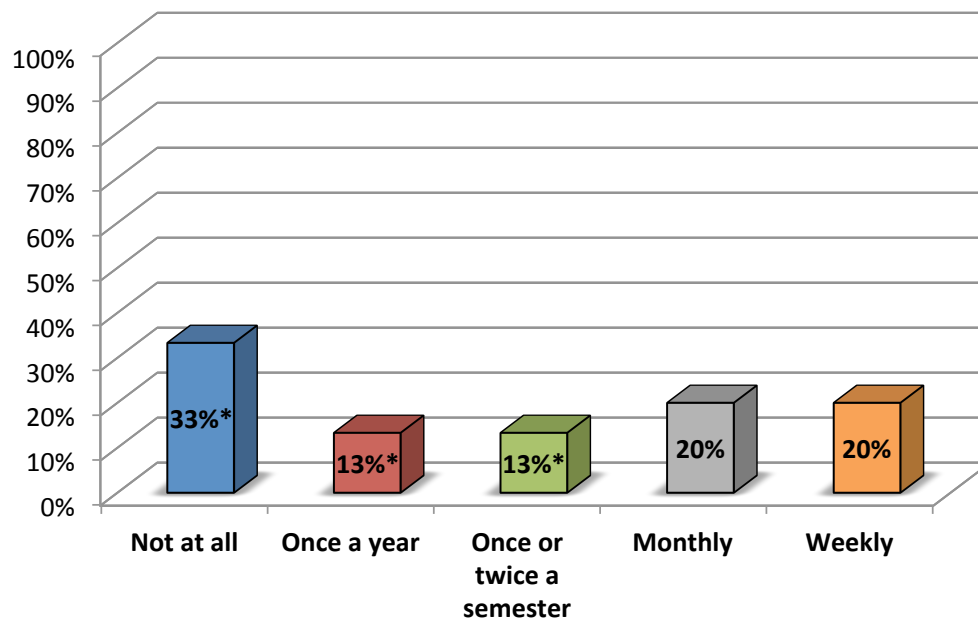






Q10: I have required my students to compare and contrast information from one text to another.

(n=15)



*\*All data is rounded up to the nearest percentage point.*

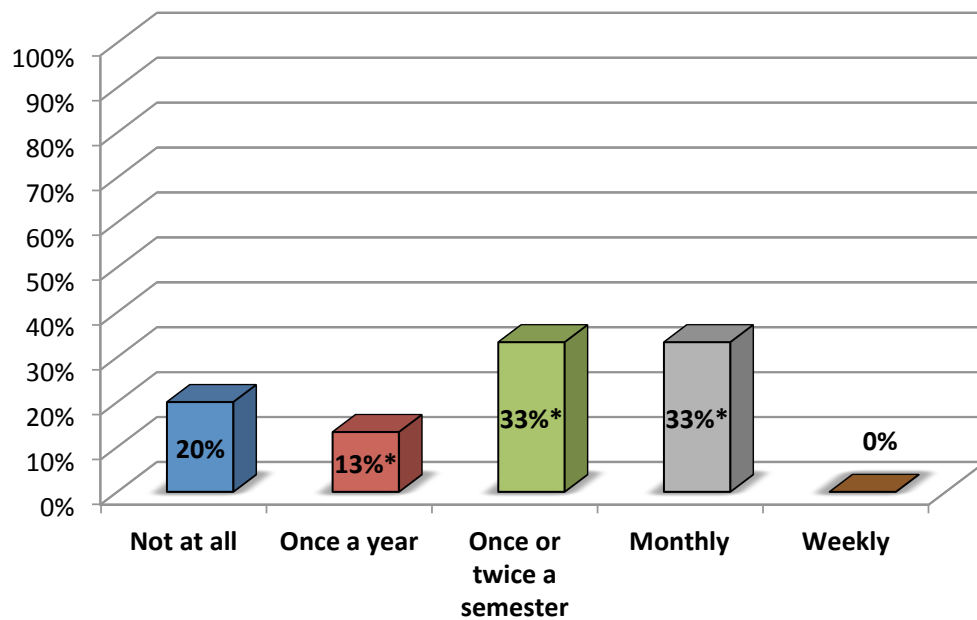






Q11: I have required my students to produce writing assignments that make them defend their thinking with support and evidence from what they are reading.

(n=15)



*\*All data is rounded up to the nearest percentage point.*

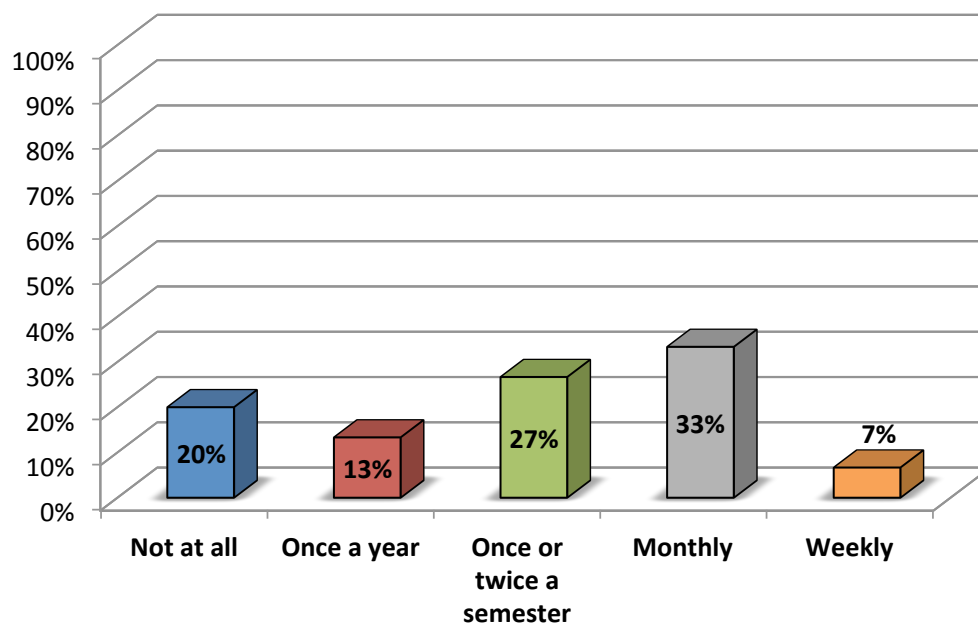






Q12: I have required my students to orally defend their conclusions from an investigation or project before their peers.

(n=15)

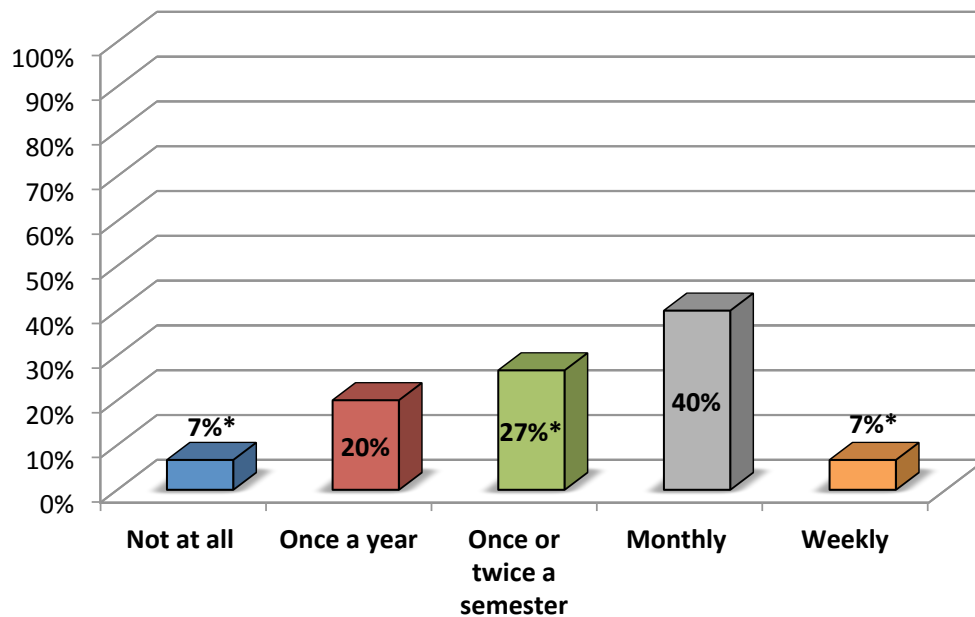






Q13: I have required my students to use data collected during investigations or projects to justify and defend their conclusions.

(n=15)



*\*All data is rounded to the nearest percentage point.*

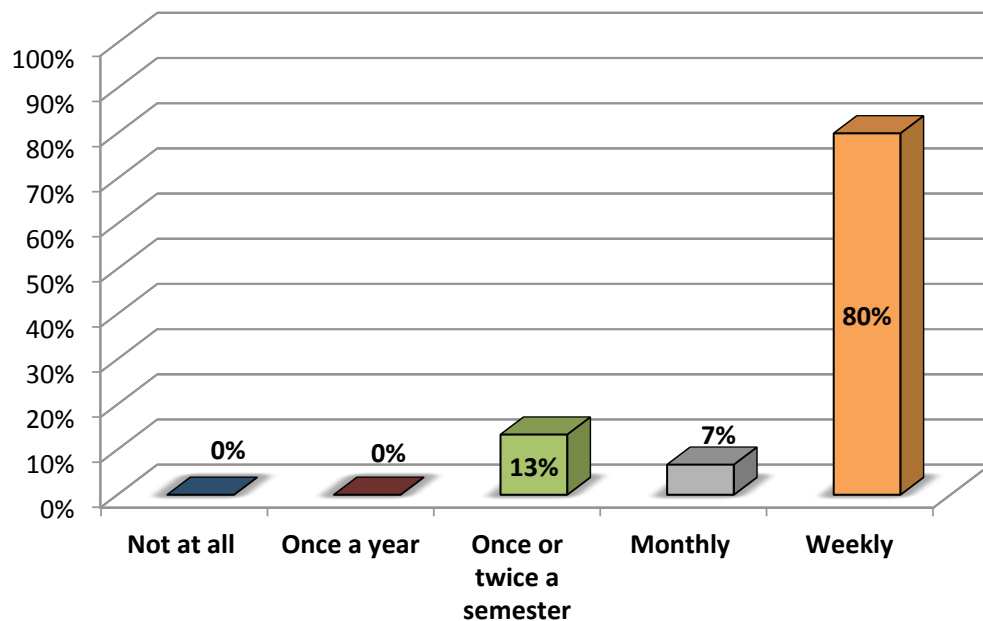






Q14: I have required my students to complete assignments using the vocabulary associated with the subject area being taught.

(n=15)

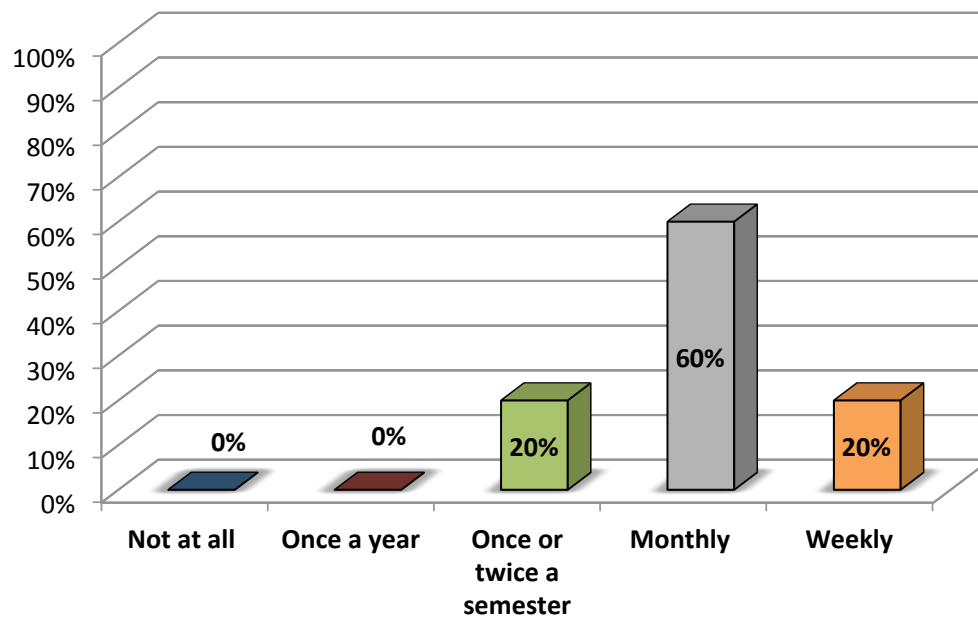






Q15: I have required my students to develop and analyze tables, charts and graphs in schoolwork.

(n=15)

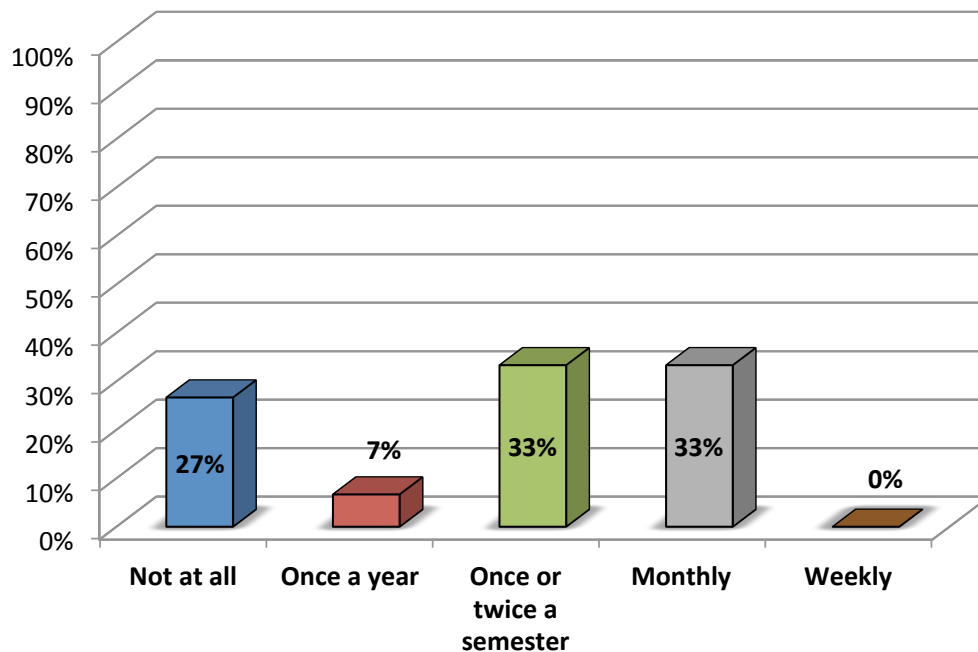






Q16: I have required my students to work on open-ended problems for which there is no immediately obvious method of solution.

(n=15)

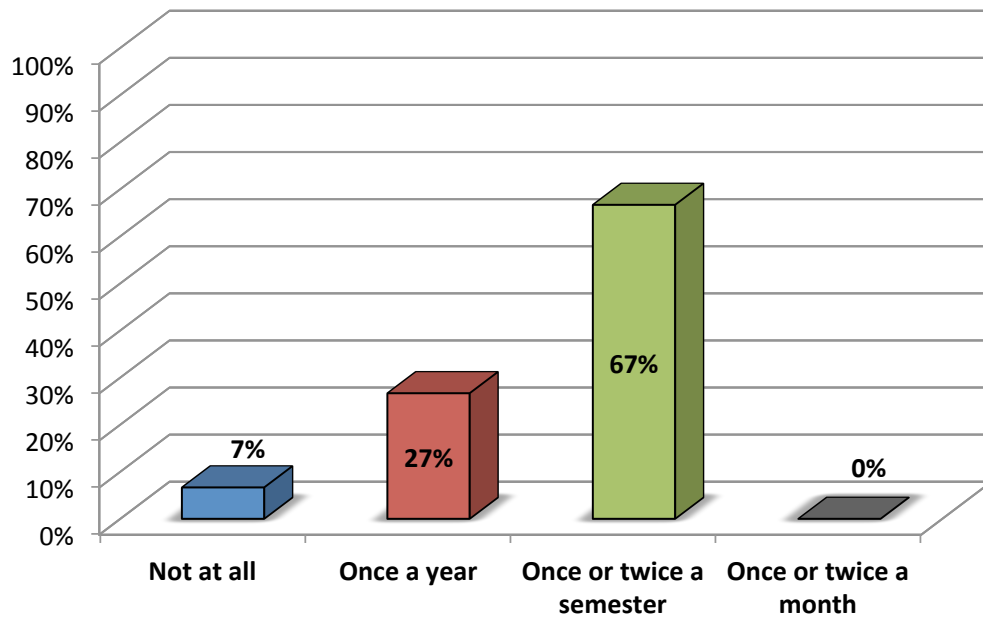






Q17: I have required my students to work on an extended, major project that lasts one week or more.

(n=15)

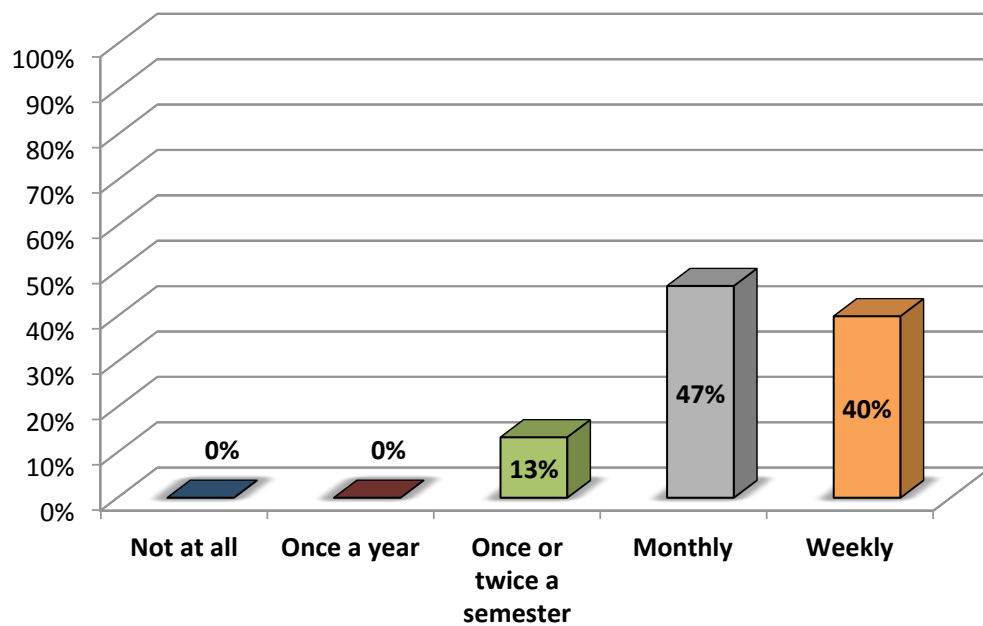






Q18: I have required my students to work in cooperative groups to deepen understanding of content.

(n=15)

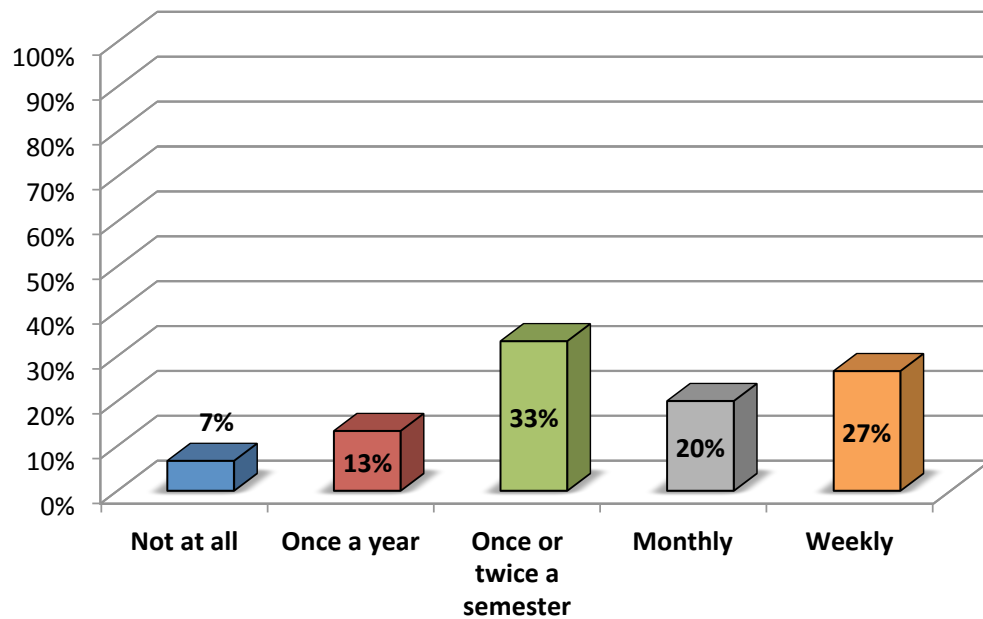






Q19: I have required my students to work in groups to complete a written product as a component of a project.

(n=15)

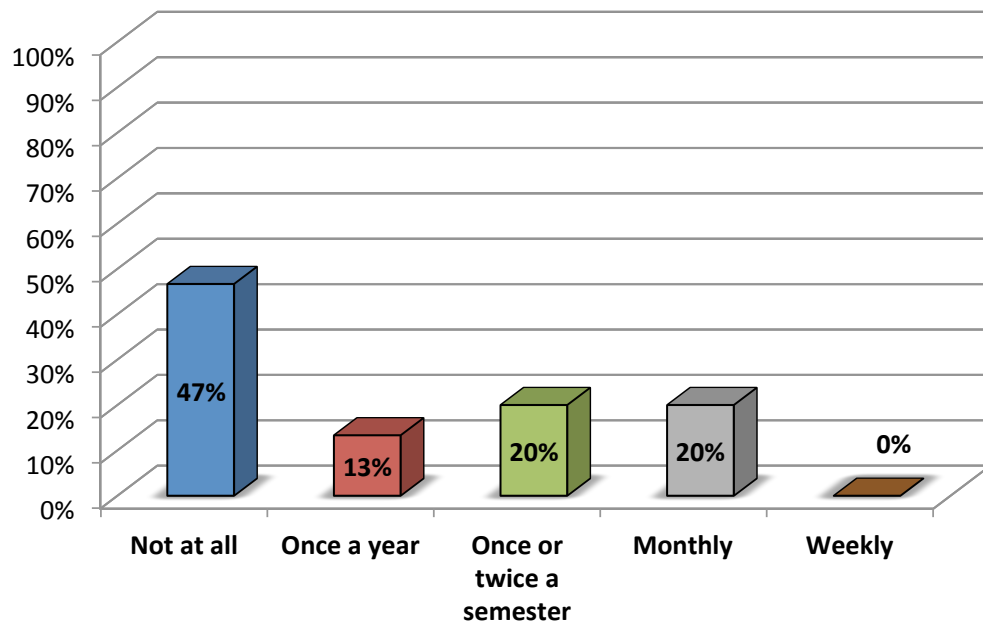






Q20: I have required my students to take a test that is predominantly essay questions.

(n=15)

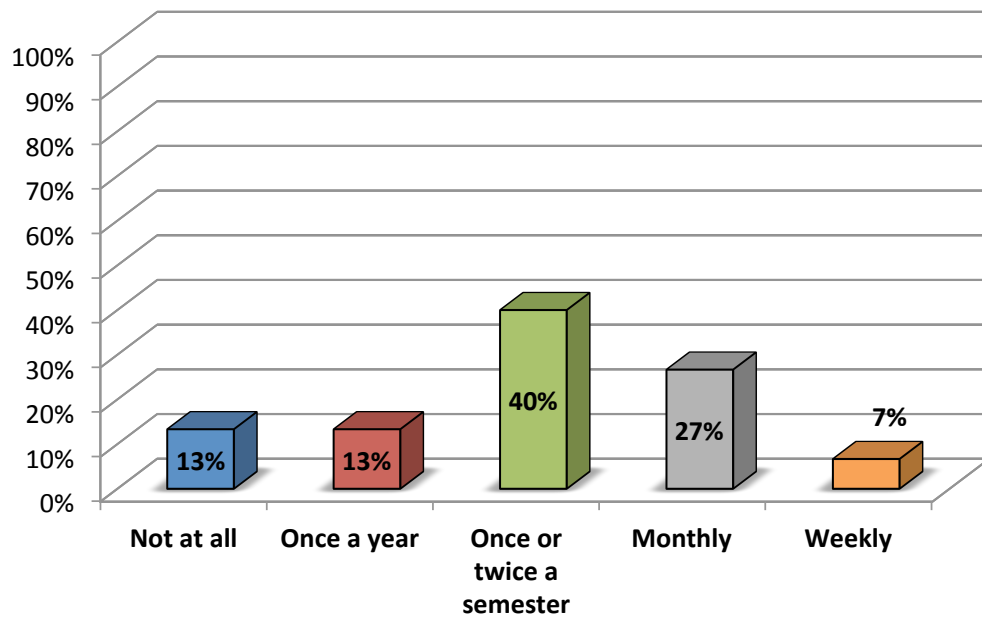






Q21: I have required my students to read science related materials (besides textbooks) and show their understanding through writing.

(n=15)

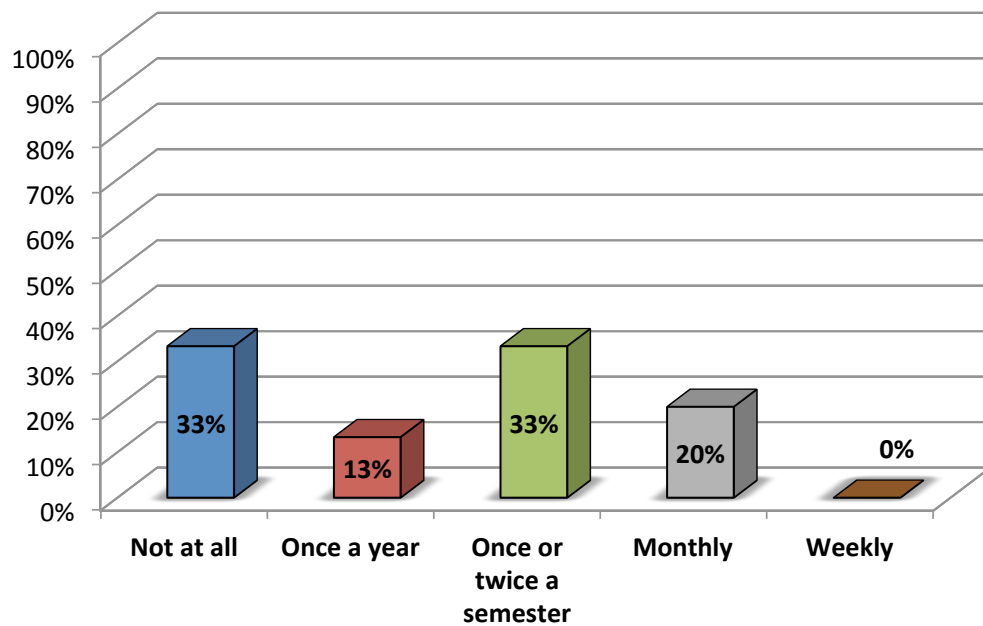






Q22: I have required my students to complete a writing assignment that addresses an authentic (real-life) problem in the community or work setting.

(n=15)

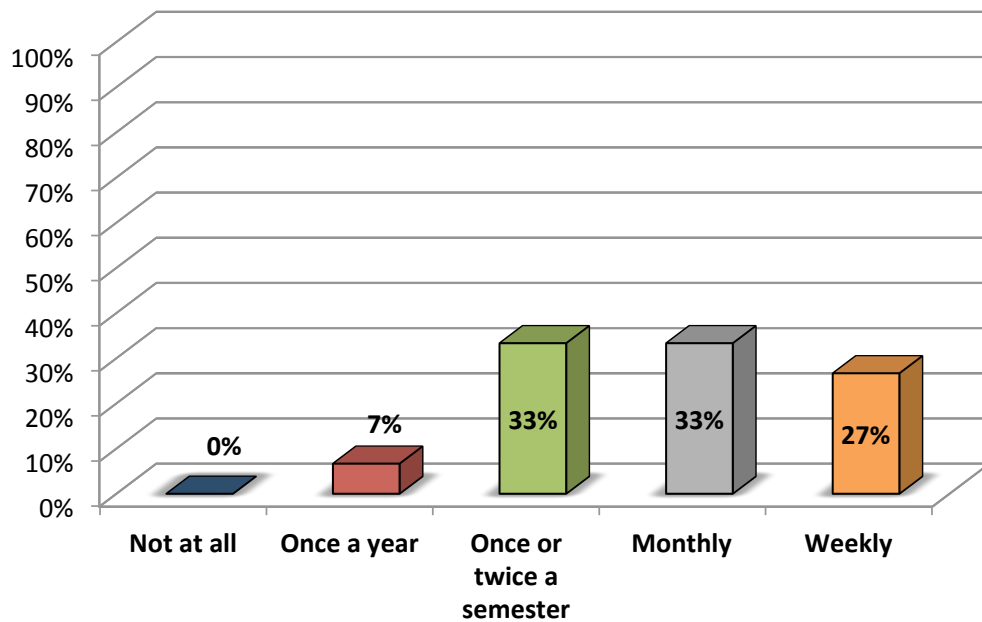






Q23: I have required my students to use science equipment to perform lab activities and use the information (data) collected to complete written assignments in science class.

(n=15)

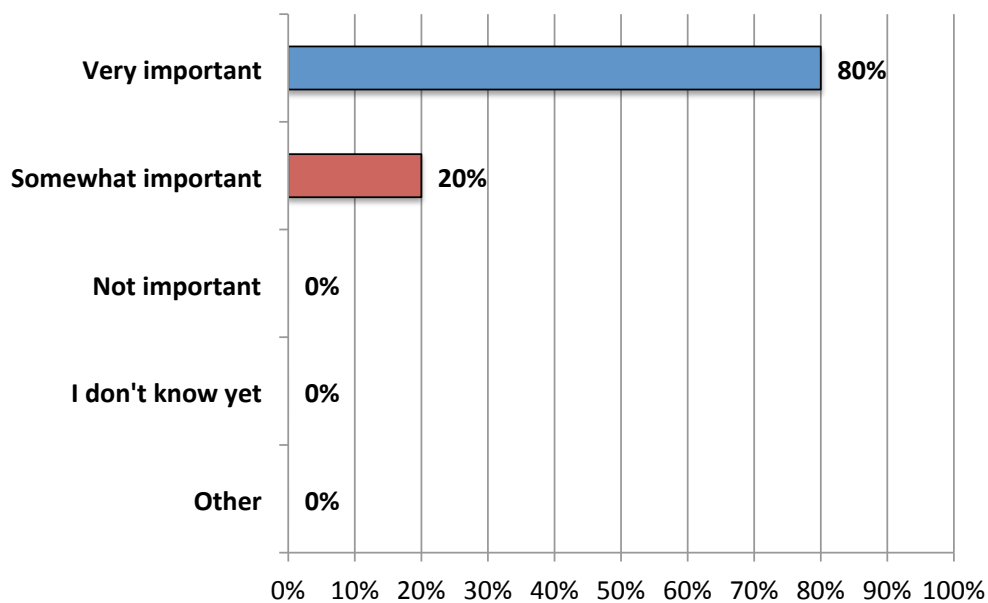






**Q24: How important is it that your administrators understand the LDC instructional strategies that you will be implementing in your classroom this year?**

(n=15)

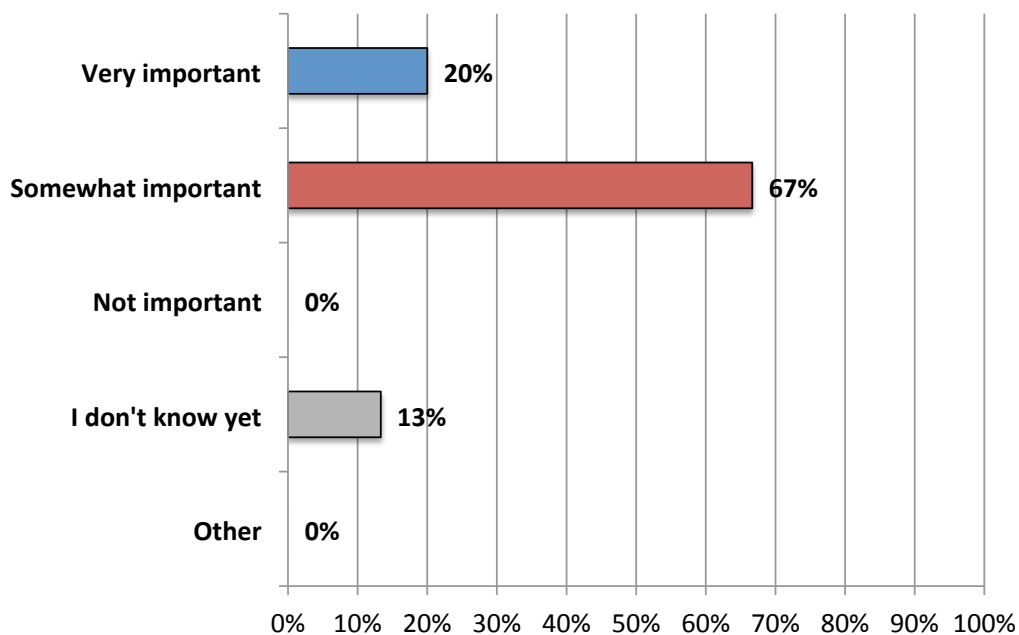






Q25: How important is it for parents to know about/understand the LDC model for science literacy and learning?

(n=15)







Q26: What do you anticipate to be your biggest challenge(s) with implementing your LDC module with your students?

(n=14)

Challenges	Teacher Grade Level		
	Grades 5-8 (n=4)	Grades 9-12 (n=8)	Grades 5-12 (n=2)
Time management	✓	✓	✓
Managing content	✓	✓	✓
Managing student expectations	✓	✓	
Student engagement	✓	✓	
Differentiation	✓		
Managing group work		✓	
Student accountability		✓	
Administrative support		✓	
Access to resources		✓	
Low student skills		✓	

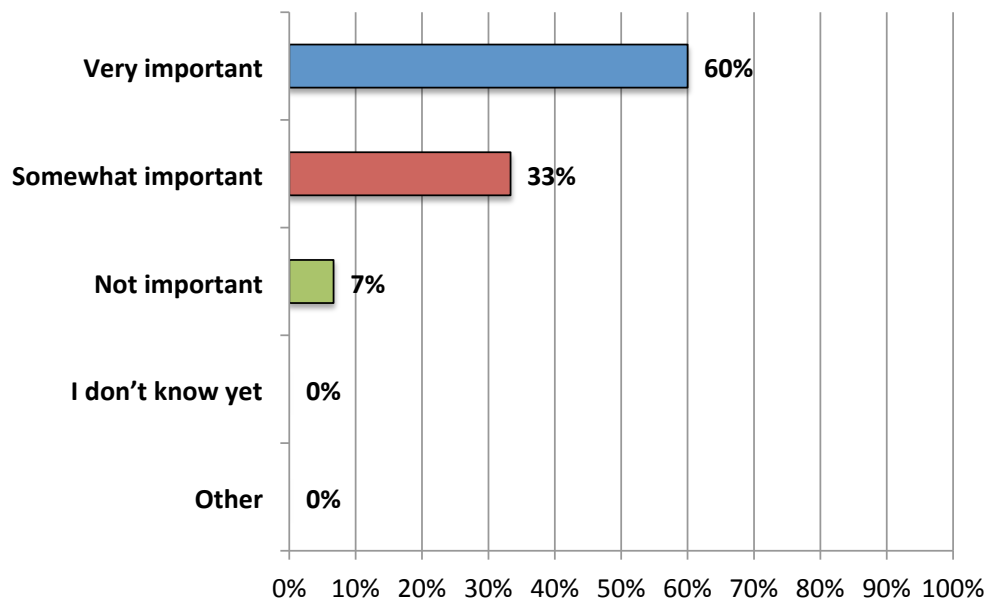






**Q27: How important is it to have access to LDC coaches during implementation of LDC modules in your classroom?**

(n=15)

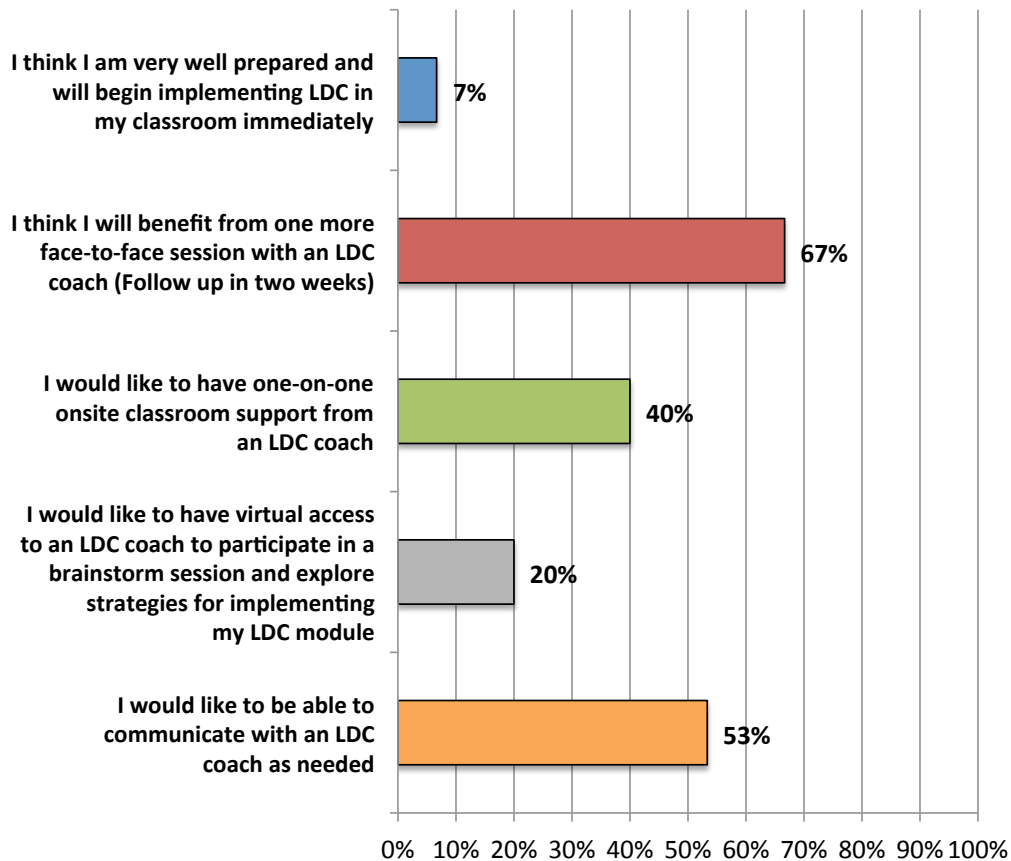






### Q28/Q3: How well prepared are you to implement your LDC module in your classroom?

Data collected on September 30, 2016 (n=15)



Note: Respondents were given the option of selecting more than one response category if applicable.

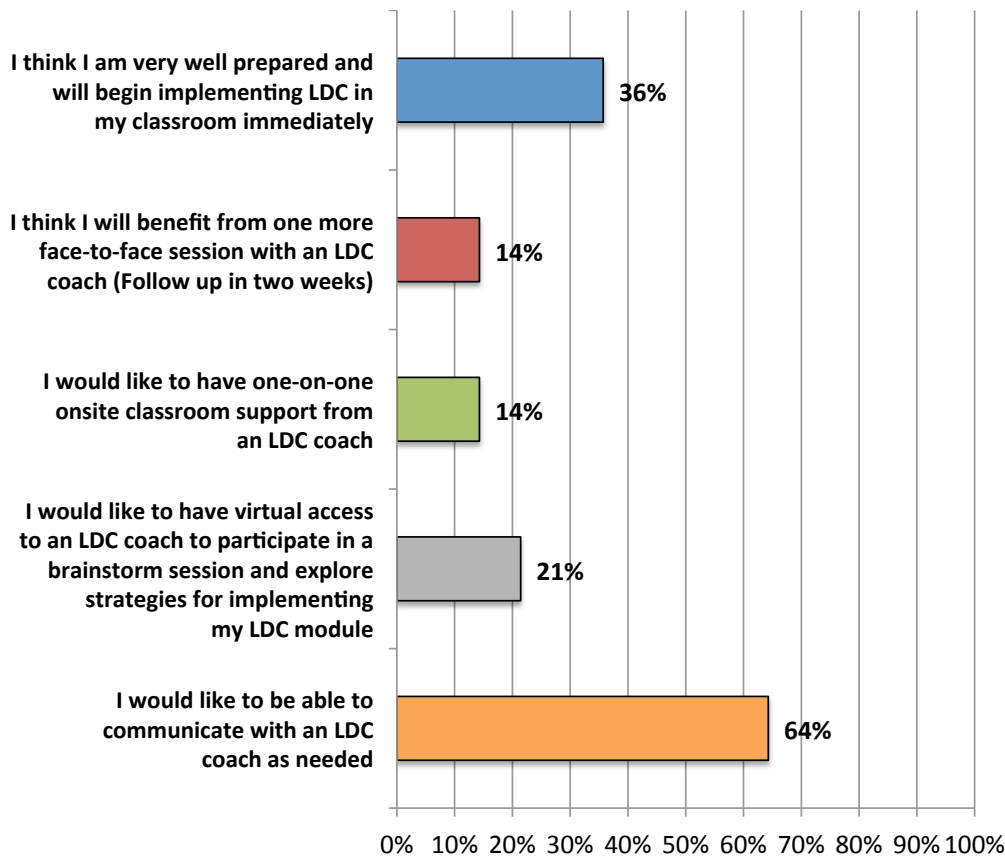






### (Continued) Q28/Q3: How well prepared are you to implement your LDC module in your classroom?

Data collected on October 14, 2016 (n=14)



Note: Respondents were given the option of selecting more than one response category if applicable.

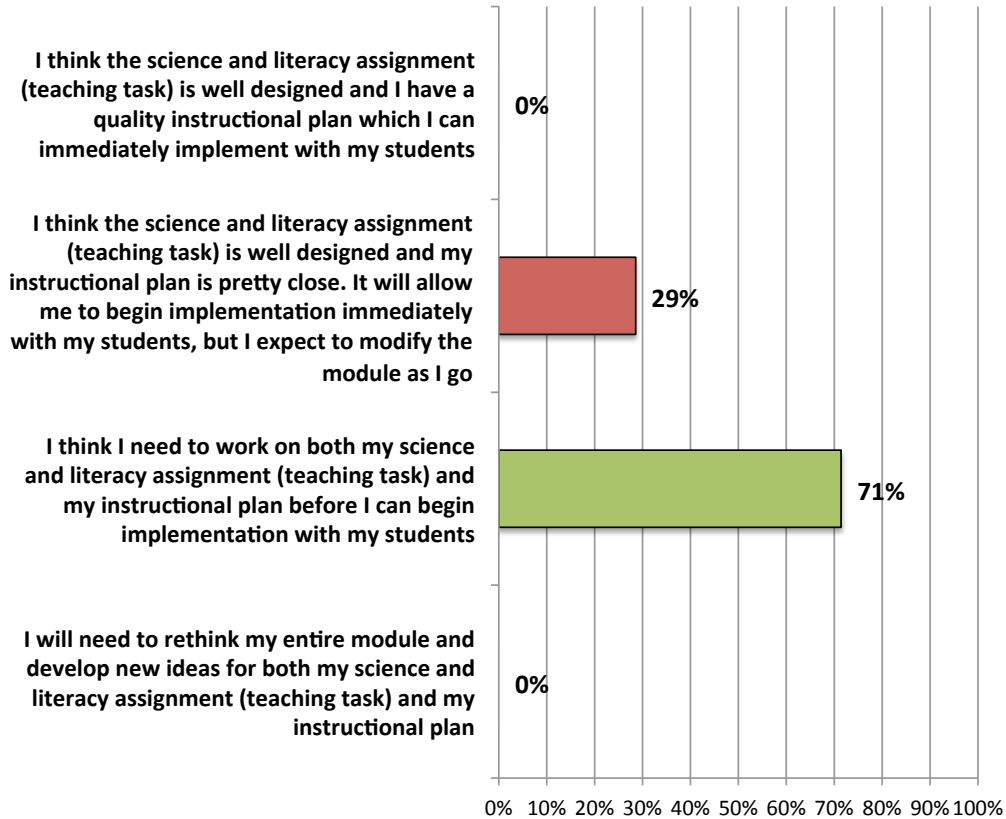






## Q29/Q4: How would you rate your first LDC module?

Data collected on September 30, 2016 (n=14)

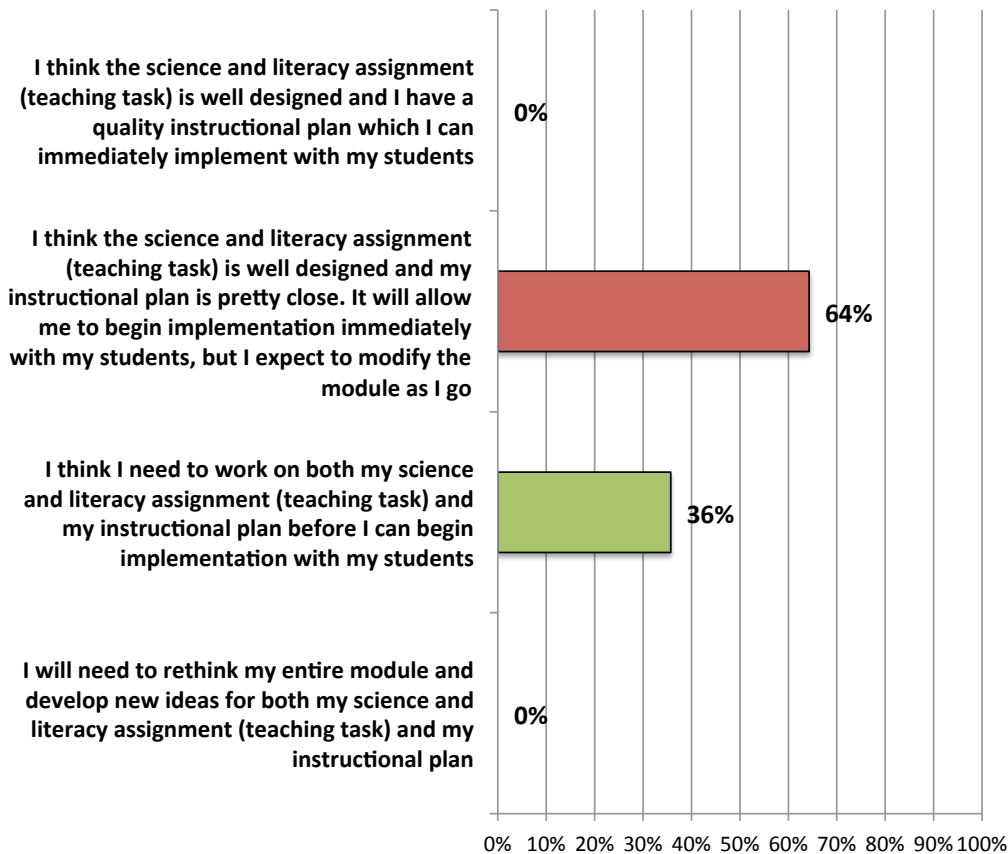






### (Continued) Q29/Q4: How would you rate your first LDC module?

Data collected on October 14, 2016 (n=14)



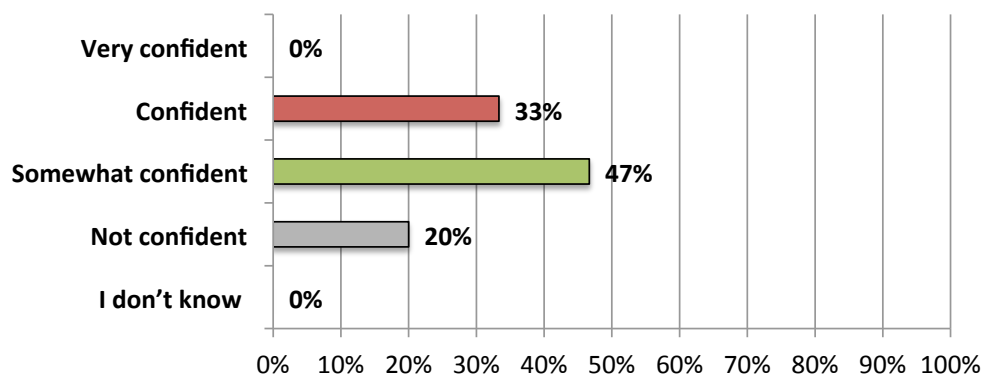




### Q30/Q5: How confident are you about the following aspects of implementing your LDC module?

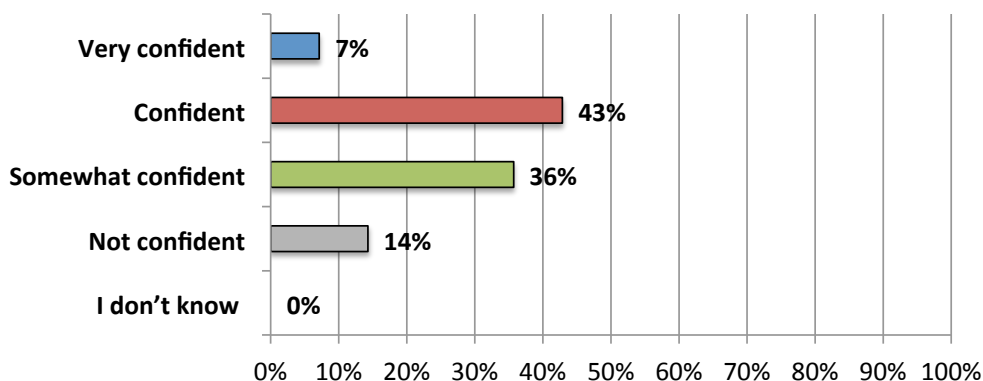
Data collected on September 30, 2016

Find time to revise/complete my LDC module (n=15)



Data collected on October 14, 2016

Find time to revise/complete my LDC module (n=14)

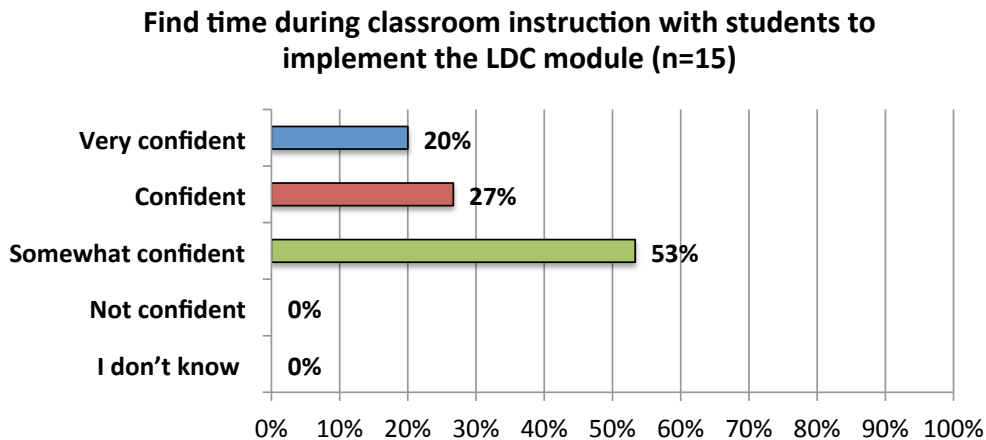




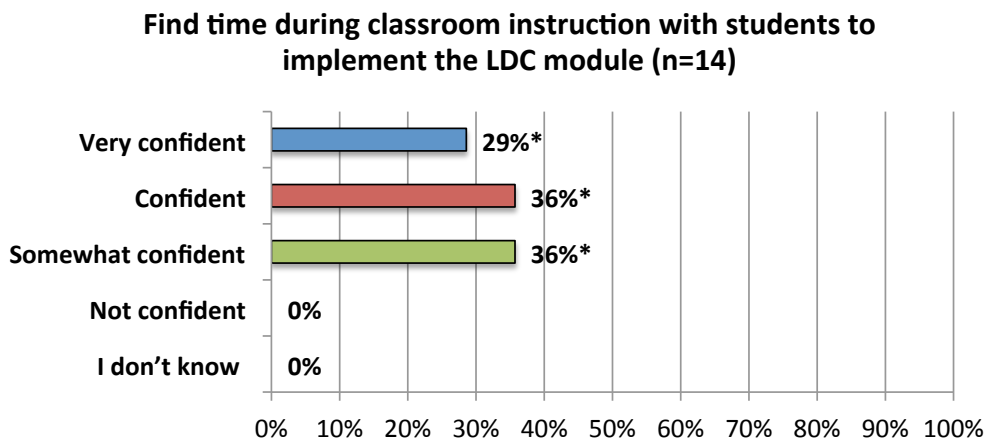


### (Continued) Q30/Q5: How confident are you about the following aspects of implementing your LDC module?

Data collected on September 30, 2016



Data collected on October 14, 2016



*\*All data is rounded to the nearest percentage point.*



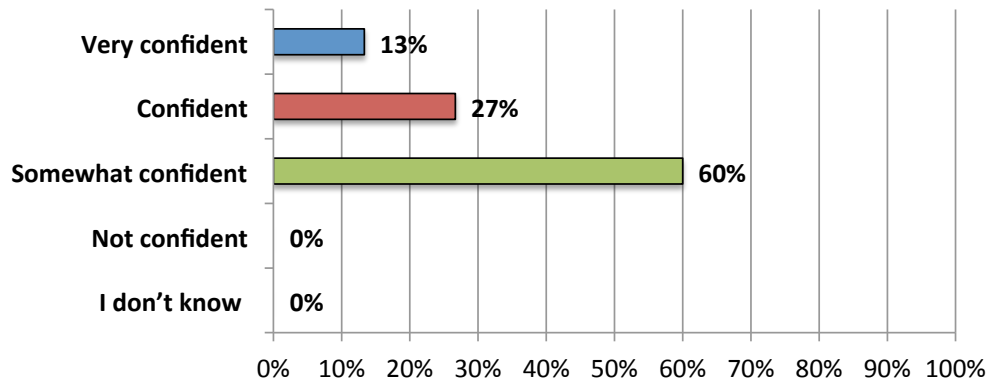




### (Continued) Q30/Q5: How confident are you about the following aspects of implementing your LDC module?

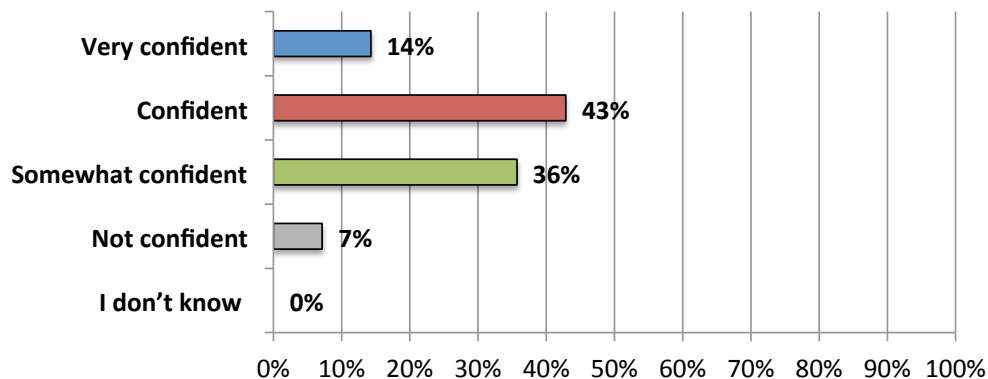
Data collected on September 30, 2016

Find time to work with LDC coaches (n=15)



Data collected on October 14, 2016

Find time to work with LDC coaches (n=14)

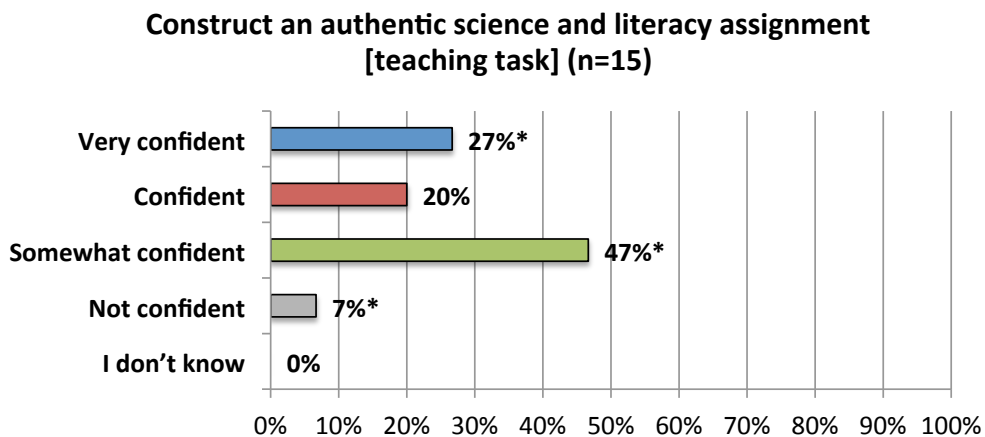




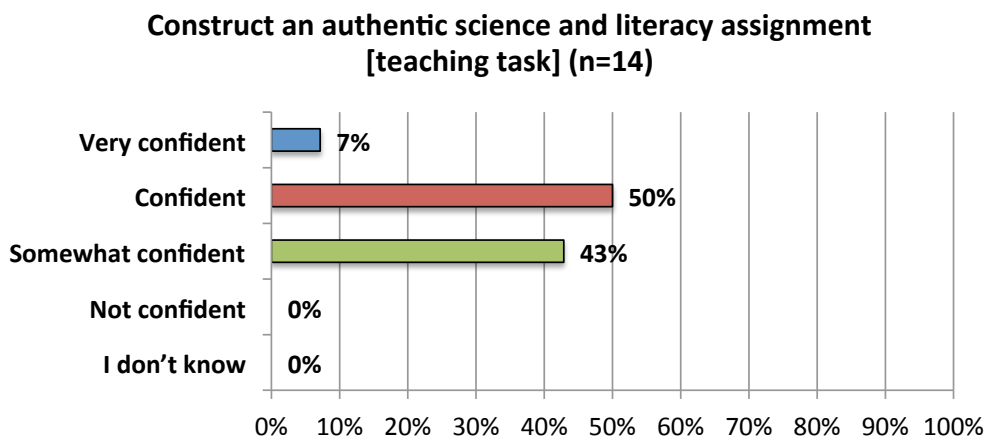


### Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

Data collected on September 30, 2016



Data collected on October 14, 2016



*\*All data is rounded to the nearest percentage point.*

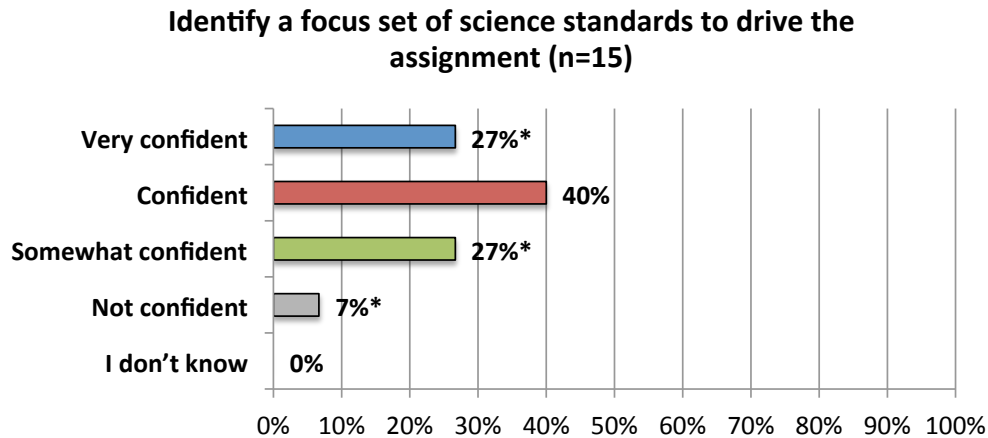




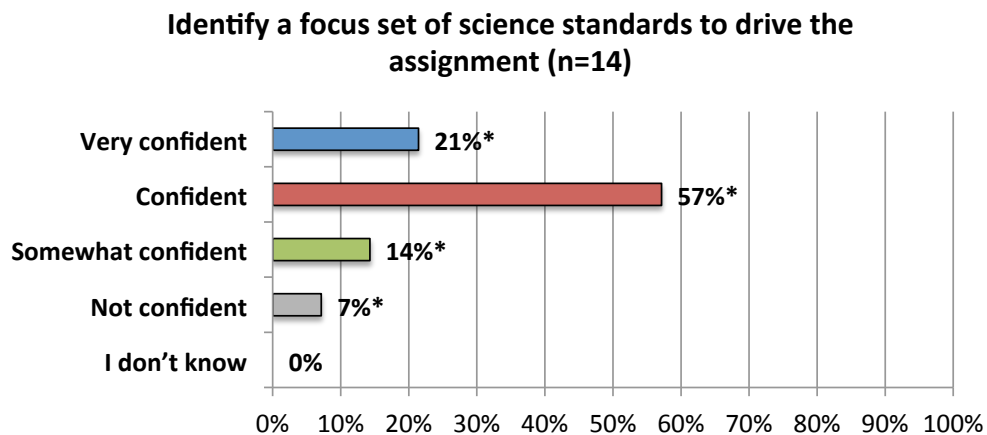


### (Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

Data collected on September 30, 2016



Data collected on October 14, 2016



*\*All data is rounded to the nearest percentage point.*

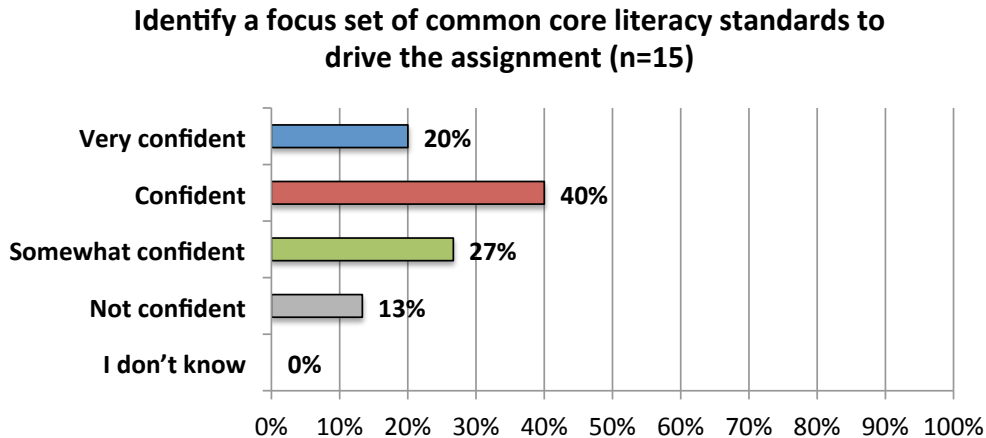




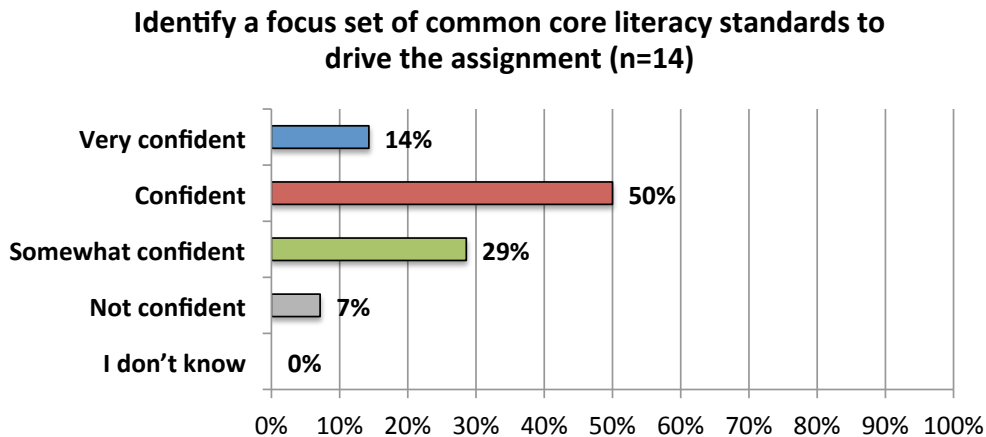


(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

Data collected on September 30, 2016



Data collected on October 14, 2016



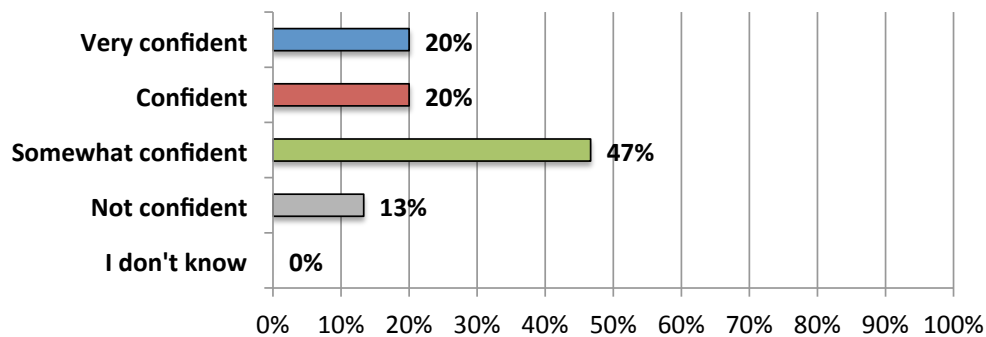




### (Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

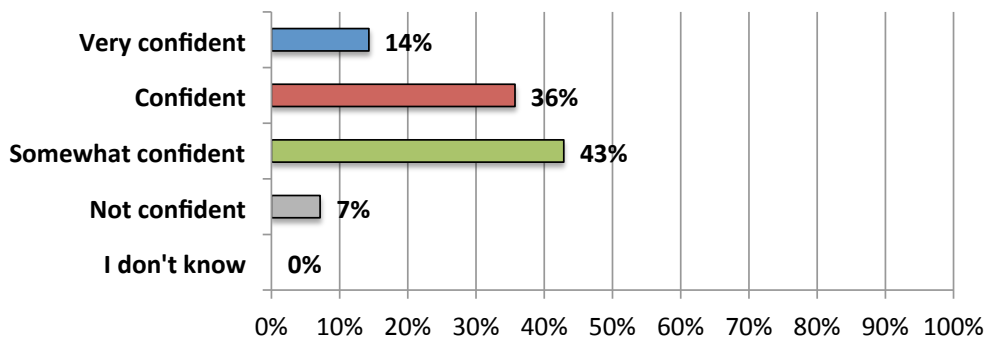
Data collected on September 30, 2016

Select complex and content rich text(s) that align to a specific set of student learning goals (n=15)



Data collected on October 14, 2016

Select complex and content rich text(s) that align to a specific set of student learning goals (n=14)



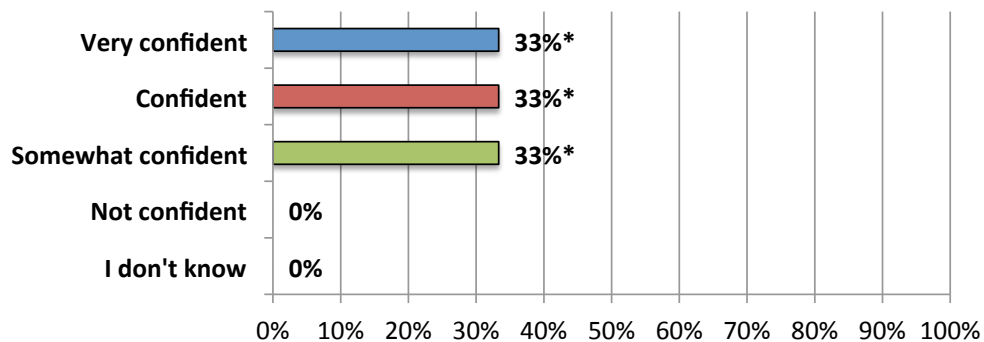




(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

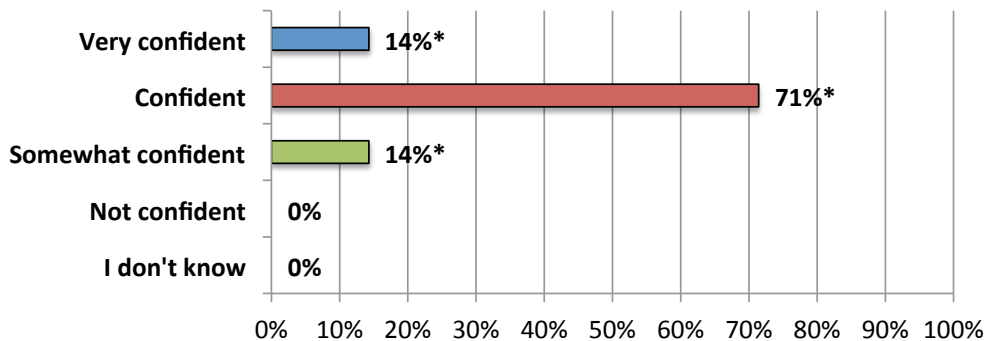
Data collected on September 30, 2016

Select a student work product that is relevant to the student learning goals of the assignment (n=15)



Data collected on October 14, 2016

Select a student work product that is relevant to the student learning goals of the assignment (n=14)



*\*All data is rounded to the nearest percentage point.*



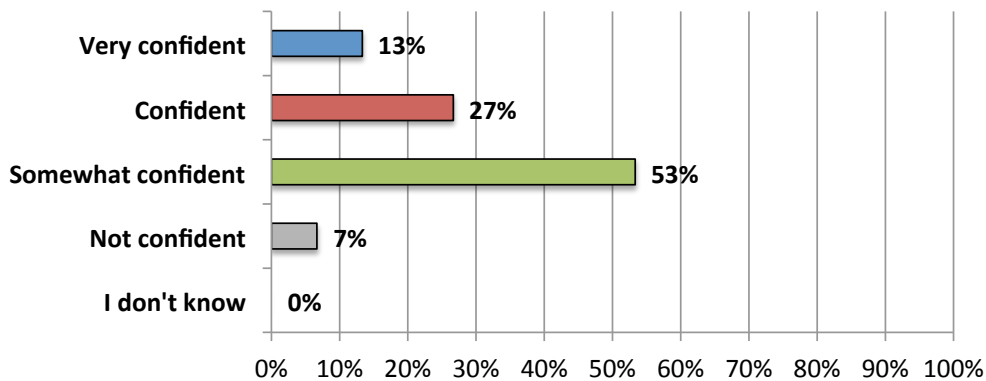




(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

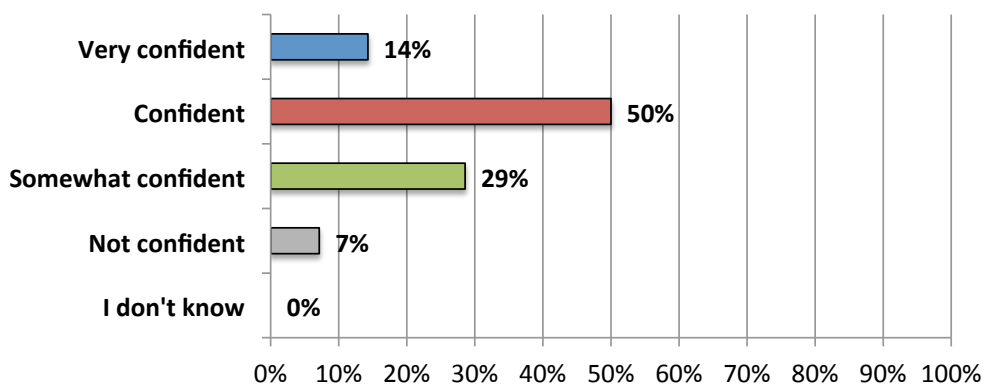
Data collected on September 30, 2016

### Develop a quality instructional plan (n=15)



Data collected on October 14, 2016

### Develop a quality instructional plan (n=14)

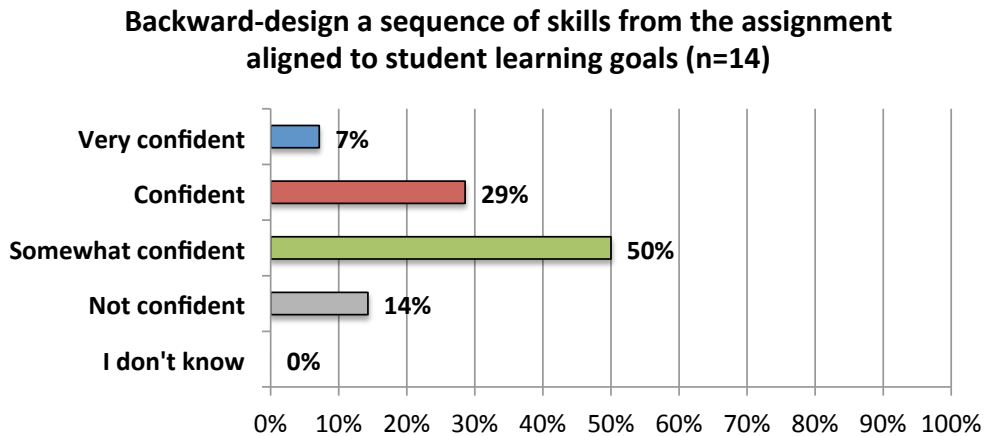




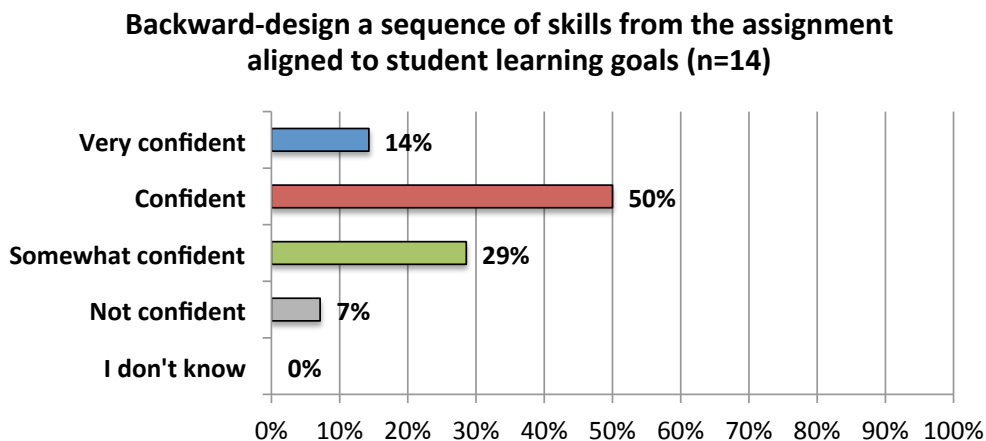


(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

Data collected on September 30, 2016



Data collected on October 14, 2016



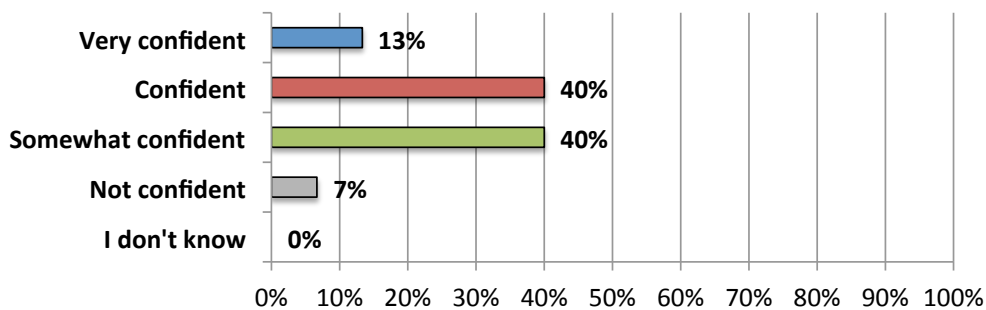




(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

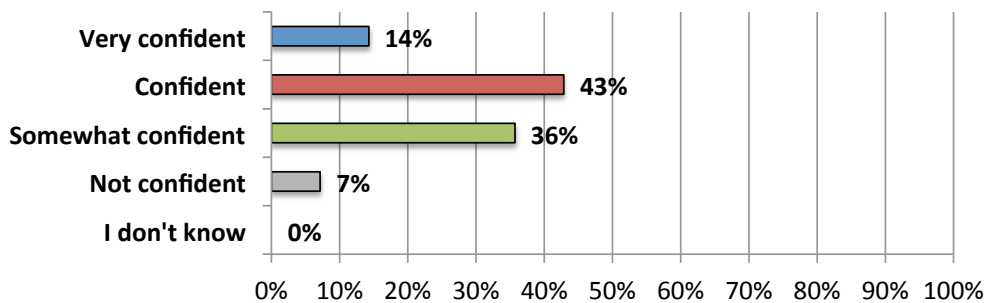
Data collected on September 30, 2016

**Develop instruction that allows students to demonstrate the skills needed to meet the expectations of the assignment  
(n=15)**



Data collected on October 14, 2016

**Develop instruction that allows students to demonstrate the skills needed to meet the expectations of the assignment  
(n=14)**



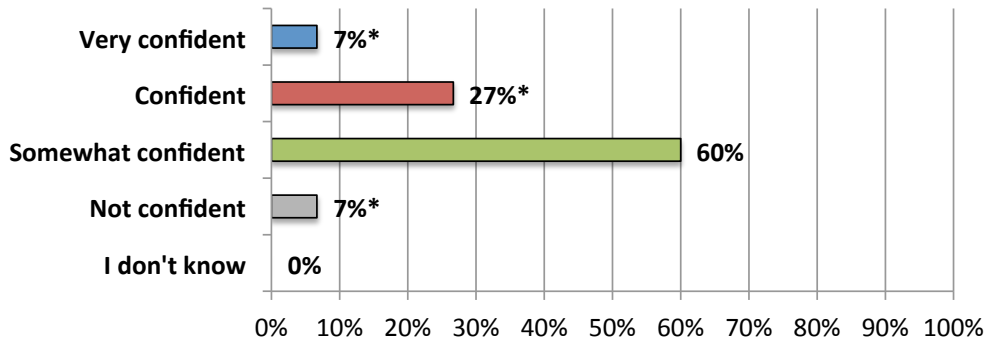




### (Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

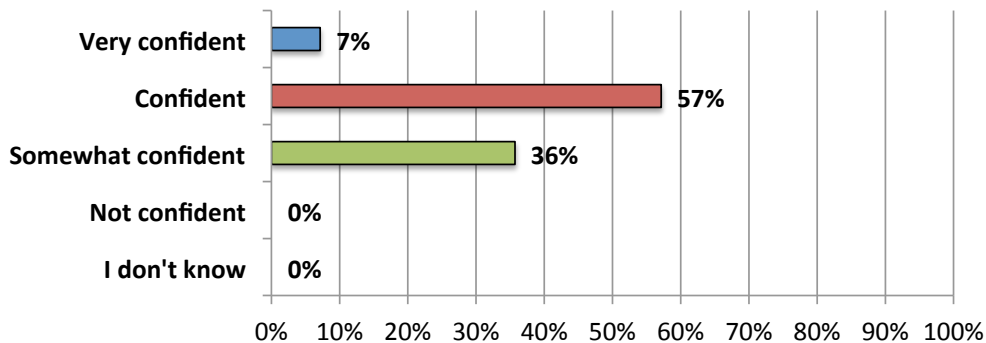
Data collected on September 30, 2016

#### Develop instruction that allows for ongoing checks (scoring guide) for understanding student skill development (n=15)



Data collected on October 14, 2016

#### Develop instruction that allows for ongoing checks (scoring guide) for understanding student skill development (n=14)



\*All data is rounded to the nearest percentage point.

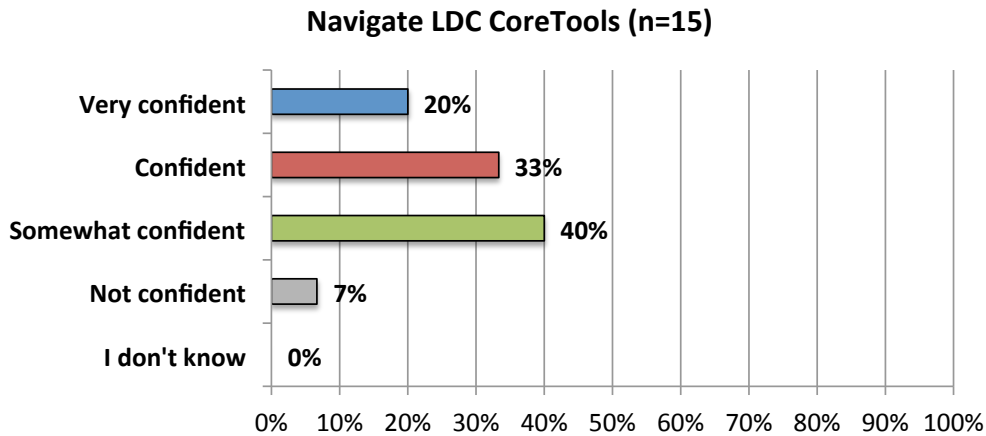




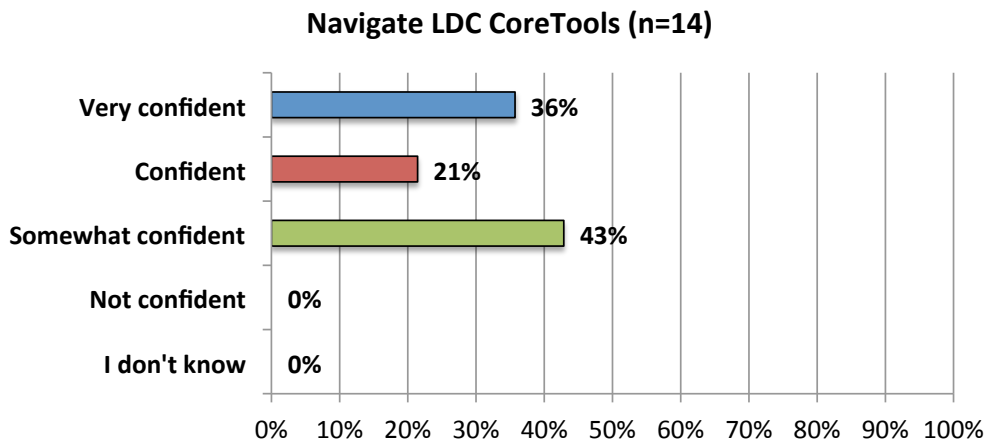


(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

Data collected on September 30, 2016



Data collected on October 14, 2016

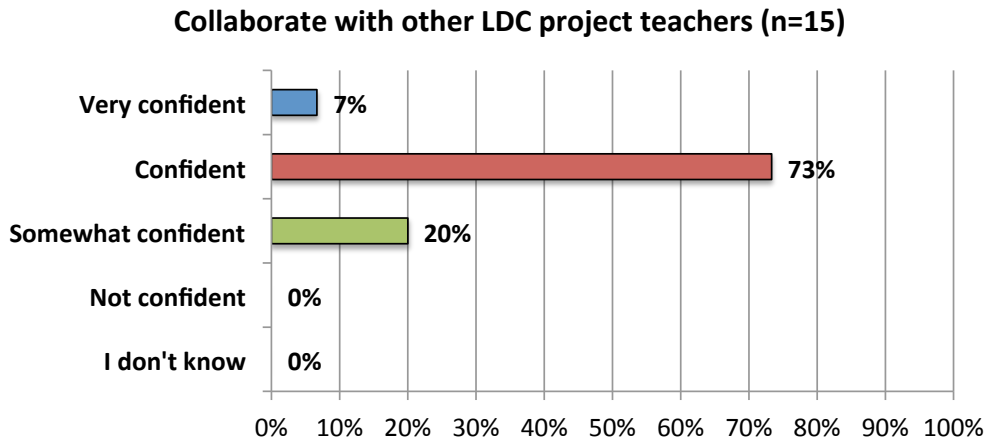




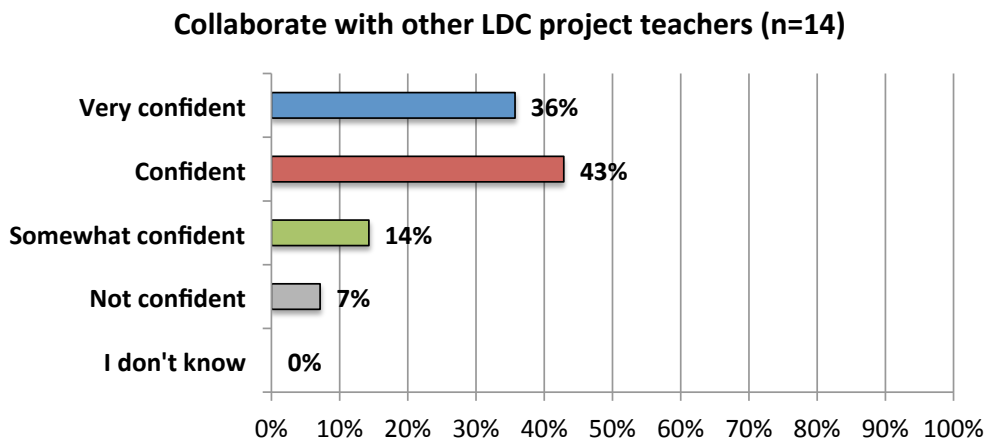


(Continued) Q31/Q6: How confident are you in your understanding and ability to implement the following components of the LDC instructional model?

Data collected on September 30, 2016



Data collected on October 14, 2016







### Q32: Briefly describe "Design Thinking" and particular benefits for student learning

(n=14)

Design Thinking	Teacher Grade Level		
	Grades 5-8 (n=4)	Grades 9-12 (n=8)	Grades 5-12 (n=2)
Product development	✓	✓	
Structured process	✓	✓	
Real world	✓		
Hands-on experience		✓	
Engineering principles		✓	
Backward design		✓	
Nontraditional		✓	
Open ended		✓	

Benefits to Students	Teacher Grade Level		
	Grades 5-8 (n=4)	Grades 9-12 (n=8)	Grades 5-12 (n=2)
Creativity	✓	✓	✓
Problem solving	✓	✓	✓
Critical thinking	✓	✓	
Learning from mistakes	✓	✓	
Seeing the big picture	✓		
Collaboration	✓		
Communication	✓		
Structured process		✓	
Organizational skills		✓	
Engagement		✓	
Ownership of learning			✓







### Q33: Briefly describe PBL and potential impacts on student learning

(n=14)

PBL	Teacher Grade Level		
	Grades 5-8 (n=4)	Grades 9-12 (n=8)	Grades 5-12 (n=2)
Structured process	✓	✓	✓
Nontraditional	✓	✓	
Real world	✓	✓	
Open ended	✓	✓	
Teacher as facilitator/Student led instruction		✓	
Applied learning		✓	
Hands-on learning		✓	

Potential Impacts on Student Learning	Teacher Grade Level		
	Grades 5-8 (n=4)	Grades 9-12 (n=8)	Grades 5-12 (n=2)
Engagement	✓	✓	✓
Ownership of learning	✓	✓	
Critical thinking	✓	✓	
Seeing the big picture	✓	✓	
Problem solving	✓	✓	
Building confidence	✓		
Research skills		✓	
Differentiation		✓	







Q34: Briefly describe any anticipated impacts on student performance using LDC components in your classroom

(n=14)

Anticipated Impacts	Teacher Grade Level		
	Grades 5-8 (n=4)	Grades 9-12 (n=8)	Grades 5-12 (n=2)
Student engagement	✓	✓	✓
Content retention	✓	✓	✓
Student growth	✓	✓	
Reading fluency	✓	✓	
Differentiation	✓	✓	
Writing skills	✓		
College and career interests	✓		
Design process	✓		
Teacher growth	✓		
Learning from mistakes	✓		
Risk taking	✓		
Problem solving		✓	
Student buy-in		✓	
Higher quality projects		✓	
Critical thinking		✓	
Time management		✓	

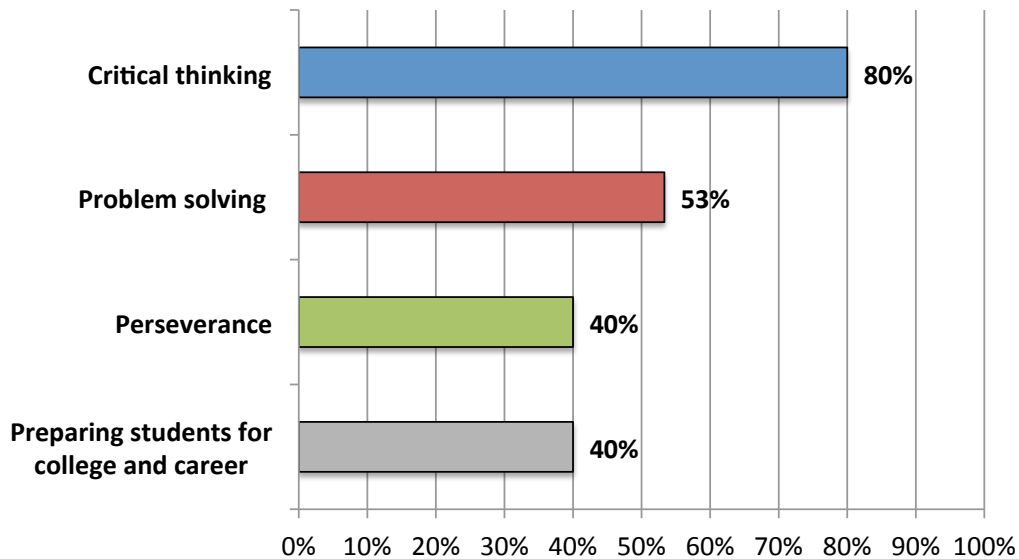






Q35: What are your top skills you would like your students to develop in your class to prepare them for the future?

**Teacher Response: Top Four Student Skills (n=15)**



Note: Teachers identified four categories among 12 choices:

[A) Problem solving; B) Critical thinking; C) Collaboration; D) Understanding the scientific process; E) Perseverance; F) Following directions/listening; G) Conducting research; H) Finding resources/valid data to support project design; I) Communication; J) Presenting research/project to their peers or other audience; K) Organization/project management; L) Preparing students for college and career; M) If other, please describe briefly]







THE  
PAST FOUNDATION

# LDC Pre-Implementation

Infographic Summary of Survey Data, Cohort 1

by Monica Hunter, PhD., Maria Green Cohen,  
Kayla Galloway, and Grayson Rudzinski





# Objective:

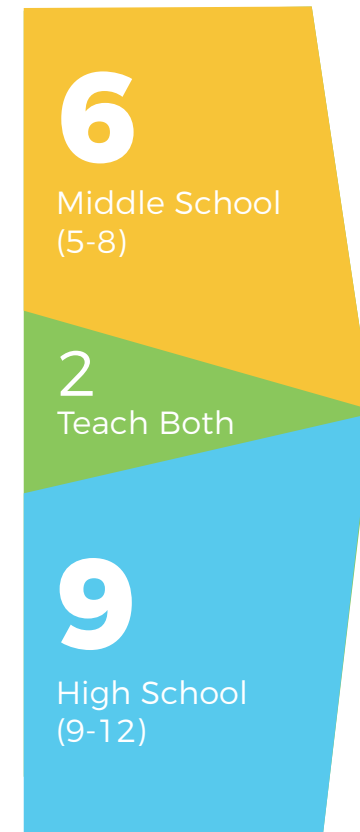
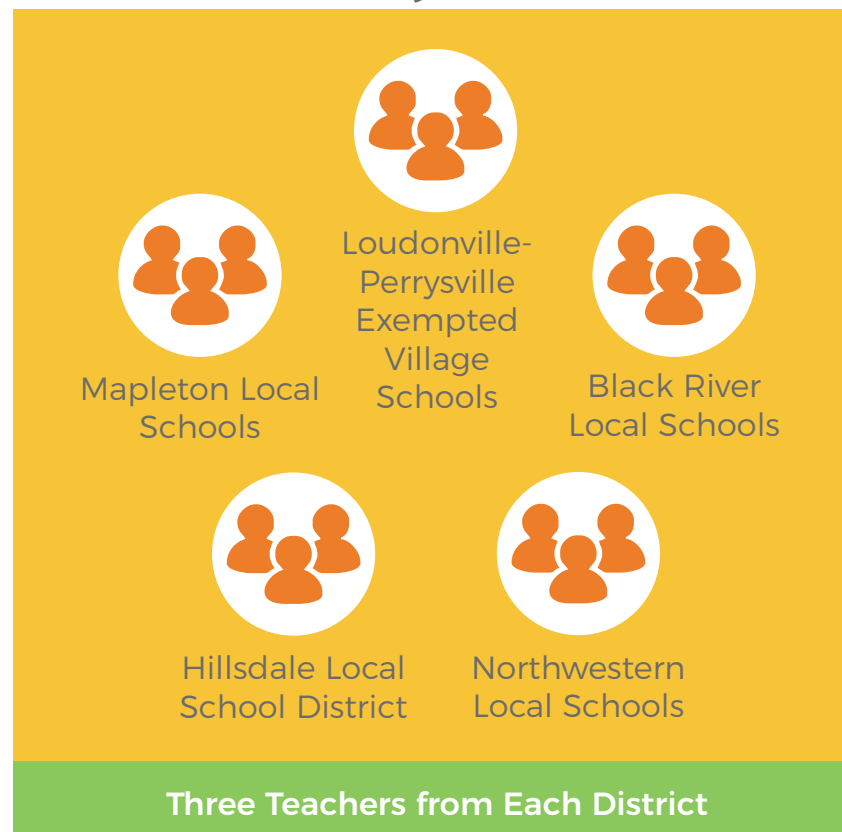
Share feedback from teachers participating in the Rural LDC Project at the outset of implementation.

# Table of Contents:

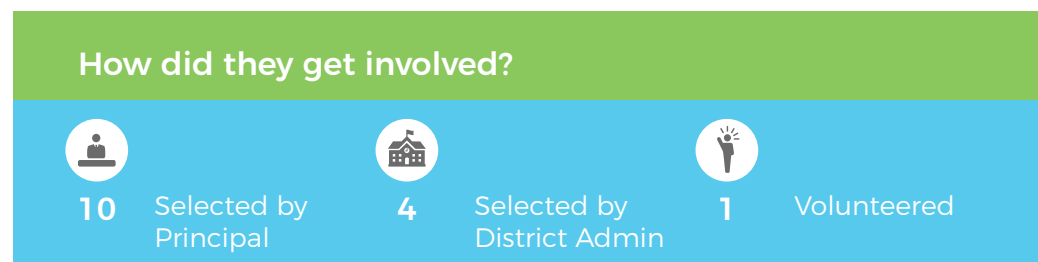
Survey Participants	3
Teaching Methods	4
Expected Challenges	5
Implementation Confidence	6
Design Thinking and PBL	7
LDC Expectations	8
Our Methodology	9
About PAST	9



# Who took this survey?



**15 Teachers**





# What methods are teachers using?

## Frequently Use:

**Most teachers** (60-87%) use these methods **weekly or monthly**.



### Cooperative Groups

Working in groups to deepen understanding of content.



### Science Equipment

Using science equipment to perform lab activities and use data collected to complete written assignments in class.



### Computers/Tech

Requiring students to use computers/tech to complete an assignment or project.



### Assigned Readings

Assigning a reading beyond the textbook.



### Vocabulary

Requiring students to use vocabulary from the subject being taught to complete assignments.



### Tables and Graphs

Having students develop and analyze tables, charts, and graphs.

## Occasionally Use:

**Some teachers** (40-47%) use these methods **weekly or monthly**.



### Presenting

Having students orally defend their thinking in front of peers.



### Data

Having students use data they have collected to justify their conclusions.



### Group Writing

Requiring student groups to complete a written product as a project component.



### Compare/Contrast

Requiring students to compare and contrast information from one text to another.



### Extended Projects

Working on an extended major project that lasts one week or more.

## Rarely Use:

**Few teachers** (20-34%) used these methods **weekly or monthly**.



### In-depth Explanations

Requiring students to write in-depth explanations about an activity or project.



### Supporting Evidence

Having students defend their thinking with supportive evidence from readings.



### Open-ended Problems

Working on problems with no obvious solutions.



### Real-life Problems

Addressing real-life problems in writing assignments.



### Essay-based Tests

Giving a test that is predominantly essay questions.



### Science Readings

Reading science-related texts and demonstrating understanding through writing.



# What challenges are teachers expecting?



## Student Expectations

Getting students to switch mindsets.



## Student Engagement

Building enthusiasm and student buy-in.



## Managing Groups

Effectively grouping students so all members participate.



## Differentiation

Responding to the needs of all learners.

## Student Interactions



## Time Management

Having enough time to plan and implement.



## Managing Content

Covering necessary standards associated with the problem.



## Admin Support

Building leaders' understanding of LDC and support for implementation.



## Access to Resources

Gathering materials to complete projects.

## Logistics

# 100%

of teachers think it is either **Very** or **Somewhat Important** for **Administrators** to understand the LDC instructional strategies teachers are implementing.

80% think it is **Very Important**.

# 87%

think it is **Important** for **Parents** to understand the LDC model.



# How confident are teachers with the modules?

Confidence Colors: **Very Confident**, **Confident**, **Somewhat Confident**, **Not Confident**

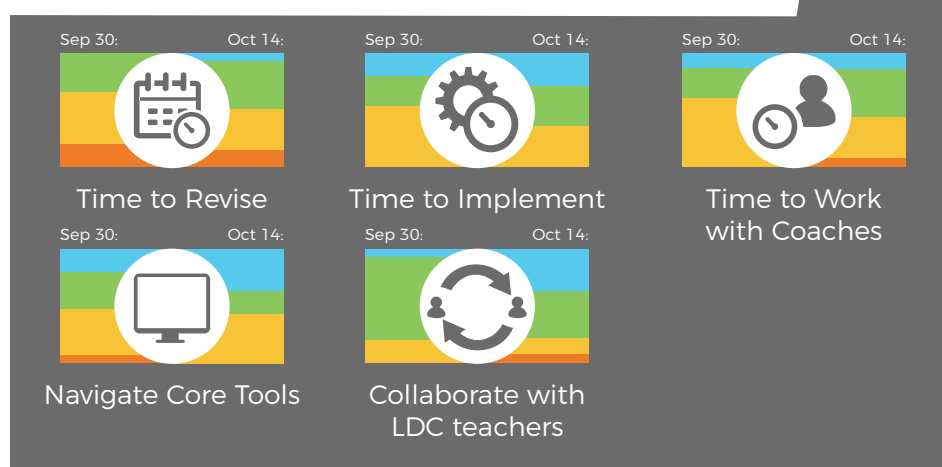
## How prepared do teachers feel?

	Sep 30:	Oct 14:
<b>Felt Well Prepared</b>	<b>1</b>	<b>5</b>
<b>Wanted One More Meeting</b>	<b>10</b>	<b>2</b>
<b>Wanted On-site Support</b>	<b>6</b>	<b>2</b>
<b>Wanted Brainstorm Session</b>	<b>3</b>	<b>3</b>
<b>Wanted LDC Coach Access</b>	<b>8</b>	<b>9</b>

## How do teachers rate their first module?

	Sep 30:	Oct 14:
<b>Good to Go, with As-Needed Modifications</b>	<b>4</b>	<b>9</b>
<b>Needs Work Before Implementation</b>	<b>10</b>	<b>5</b>

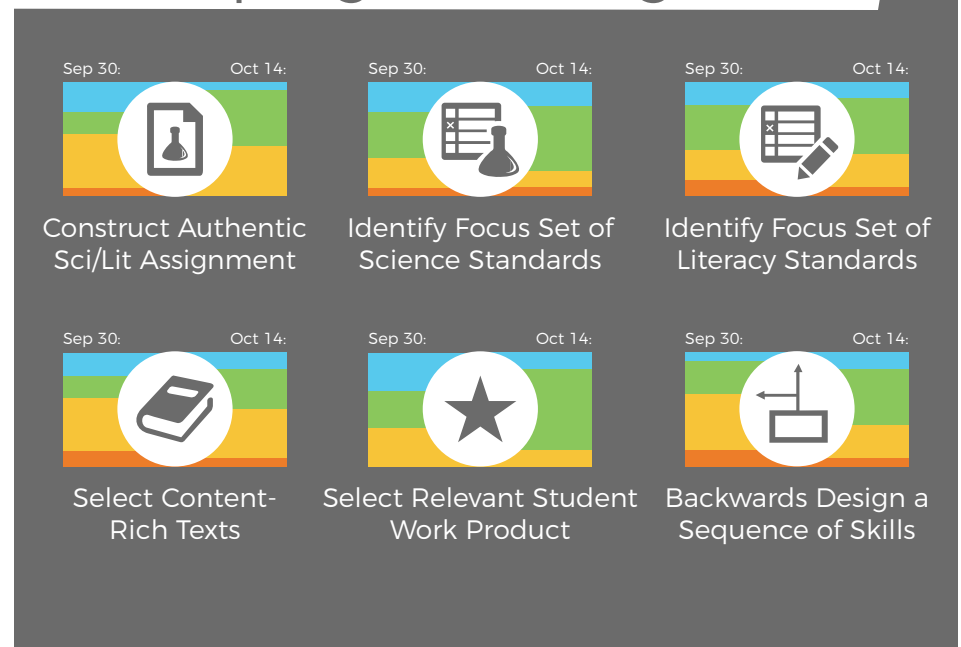
## Time and Resources



## Developing Instruction



## Developing Teaching Tasks





# What do teachers think about Design Thinking/PBL?

## What is it?

### Characteristics



#### Open-ended

Working on problems with no obvious solutions.



#### Real World

Connecting learning to the real world.



#### Nontraditional

Moving away from lectures and teaching to the test.

### Methods



#### Develop Products

Developing a product to meet a specified need.



#### Structure

Scaffolding learning with step-by-step instruction.



#### Applied Learning

Connecting content to application.



#### Hands-on Learning

Producing something tangible.



#### Student-led

Teacher acting as a "guide on the side."



#### Engineering

Introducing engineering design principles.

## What are the benefits?

### Student Skills



#### Problem Solving

Giving students experience with finding solutions.



#### Critical Thinking

Developing reasoning skills.



#### Collaboration

Helping students build the skills they need to work well in teams.



#### Communication

Building student skills in expressing ideas effectively.



#### Creativity

Fostering generative and creative skills.



#### Research

Conducting studies to discover new knowledge.



#### Organization

Building good habits for managing time, resources, and ideas.

### Student Growth



#### Engagement

Building enthusiasm and student buy-in.



#### Learn from Mistakes

Finding pathways forward through evaluating what went wrong.



#### Big Picture

Encouraging students to look for the wider relevance of their work.



#### Ownership

Giving students a sense of investment in their work.



#### Confidence

Helping students feel pride in their work, their skills, and in themselves.



# What is the anticipated impact on student performance?

## Middle School:



Writing Skills



College & Career



Design Process



Learn from Mistakes



Risk-taking



Teacher Growth

## Both:



Engagement



Content Retention



Student Growth



Reading Fluency



Differentiation

## High School:



Problem Solving



Critical Thinking



Higher Quality Projects



Student Buy-in



Time Management



# Our Methodology:

This report provides an infographic overview of survey data collected from teachers engaged in the first year of implementing Straight A funded Rural LDC Project. Project districts include: Northwestern Local Schools, Mapleton Local Schools, Hillsdale Local School District, Loudonville-Perrysville Exempted Village Schools, and Black River Local Schools.

The Rural LDC 2016 Teacher Pre-Implementation Survey (35 questions) was administered on September 30th during the second day of a two-day LDC professional development session. The survey was completed by a total number of (15) teachers. A supplemental survey (6 questions) was administered on October 14th, and was completed by a total number of (14) teachers.

The survey was administered via a secure web-based platform (SurveyMethods®), designed for conducting confidential and anonymous surveys.

# About PAST KC:

PAST Foundation has over 16 years of experience working in schools nationwide. The Knowledge Capture Team provides evaluation services necessary to support project implementation and grant reporting.

Through our work, we have seen this approach guide real-time course correction, advancing both short-term and long-term goals that achieve critical outcomes.

Our Knowledge Capture program includes systematic analysis of transformative processes supporting successful K-12 STEM education initiatives. This is especially important for multiple-year implementation processes that often rely solely on student performance on standardized tests as the only measure of positive change.

PAST can help you track and prove your success.





## Appendix G: Sample Coaching Report Form

High Schools That Work Chronology of Coaching  
Activities, Fall 2016

High Schools That Work Teacher Resources (Posted  
to the Implementation Team Google Drive Folder),  
Sept. – Dec. 2016







## HSTW LDC Coaching Report



<b>School Name</b> <b>School Address</b> <b>Date</b>
--

<b>Purpose On-Site Visit</b>	<ul style="list-style-type: none"> <li>Meet with teachers to review work completed for LDC Module 2</li> <li>Provide assistance and feedback before/during implementation</li> </ul>
<b>Teacher/Liaison</b>	<ul style="list-style-type: none"> <li>Teacher (grade and subject)</li> <li>Present/Not Present: District Liaison Name, District Liaison</li> </ul>
<b>HSTW Coaches</b>	<ul style="list-style-type: none"> <li>Name, Email, Phone</li> <li>Name, Email, Phone</li> </ul>
<b>LDC Module Title</b>	<ul style="list-style-type: none"> <li>Title</li> </ul>
<b># Students Targeted</b>	<ul style="list-style-type: none"> <li># students (groups of ?; individual/group grade)</li> </ul>
<b>Course/Content</b>	<ul style="list-style-type: none"> <li>Chemistry/Genetics</li> </ul>
<b>Duration of Module</b>	<ul style="list-style-type: none"> <li>? weeks: date to date</li> </ul>
<b>Progress on Module</b>	<ul style="list-style-type: none"> <li>For teacher rating on progress, see Teacher Performance Rubric, pg. 2</li> </ul>
<b>Progress on Major Tasks</b>	<ul style="list-style-type: none"> <li>Teaching Task/Texts:</li> <li>Instructional Ladder/Mini Task:</li> <li>RFP: X</li> <li>Design Report: X</li> </ul>
<b>Student Reflection</b>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Feedback to Battelle on Trainings</b>	<ul style="list-style-type: none"> <li>Sept 7 Jakes: X</li> <li>Sep 29 - 30: X</li> <li>Advice/Recommendations for Cohort 2: X</li> <li>Mapleton Cohort 2 Teachers: X</li> </ul>
<b>Feedback LDC Core Tools</b>	<ul style="list-style-type: none"> <li>X</li> </ul>
<b>Feedback On-Site Coaching</b>	<ul style="list-style-type: none"> <li>X</li> </ul>
<b>Module 1 to 2 Feedback</b>	<ul style="list-style-type: none"> <li></li> </ul>
<b>Next Steps/Support Requested</b>	<ul style="list-style-type: none"> <li>X</li> </ul>
<b>Questions</b>	<ul style="list-style-type: none"> <li>No additional questions</li> </ul>







## Teacher Performance LDC Modules Scoring Rubric

The Teacher Performance LDC Modules Scoring Rubric is to determine the level of completion in developing and implementing the Scoring Elements in LDC Core Tools.

Date	Date	Teacher	Teacher Name	HSTW Coaches	Name and Name
Scoring Elements	1 Work in Progress	2 Good to Go	3 Exemplar	Teacher/Coach Scoring & Comments	
<b>Title Teachers Task</b>	Needs to be developed.	Clear purpose with alignment of the RFP, texts, science content and design report	Clear and focused purpose with tight alignment of the RFP, texts, science content and design report	<b>3 Exemplar</b> Teacher has completed the implementation and everything is aligned	
<b>Standards/ Content</b>	Too many standards and weak connection to the science content	Literacy and science standards identified with connection to science content	Literacy and science standards identified with strong connection to science content	<b>X</b>	
<b>RFP/Design Specification</b>	Needs to be developed	Authentic and clear and uploaded	Authentic, clear and engaging and uploaded	<b>X</b>	
<b>Texts/Resources</b>	Not selected or relevant	Are useful and aligned and uploaded	Aligned, relevant and engaging	<b>X</b>	
<b>LDC Rubric</b>	Needs revisions	Revised to include all scoring elements	Revised to include all scoring elements and detailed content description	<b>X</b>	
<b>Skills/Mini-Tasks</b>	Skills/Mini-tasks not reviewed or edited.	Skills/Mini-tasks selected and uploaded. Mini-Tasks relate to the skills list with resources uploaded	Mini-tasks relate to the skills list and designed to support student success with resources and student products uploaded	<b>X</b>	
<b>Design Report/ Student Work</b>	Design reports template drafted, but not developed.	Design report template uploaded with <i>LDC Scoring Rubric</i>	Design reports uploaded with <i>LDC Scoring Rubric</i> at all scoring levels	<b>X</b>	
<b>Teacher Resources</b>	Not uploaded	Uploaded and relevant	Uploaded, relevant and customized	<b>x</b>	







## Report to The PAST Foundation for NWLS Straight A Grant

### Chronology of Rural LDC Activities by HSTW LDC Coaches

August 29, 2016 through December 31, 2016 (page 1 of 2)

Submitted: January 18, 2017, by Diana Rogers, Regional Coordinator

#### HSTW NE Ohio Region

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**Black River, Hillsdale  
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**Northwestern &  
Loudonville**

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angelascozz@gmail.com

330.685.6032

**Mapleton**

Staff	Date	Event/Activity	Documentation Product	Participants
Diana Rogers (DR)	8/29/16	Monthly LDC Liaison Meeting Northwestern (2 hrs)	HSTW LDC Introductory PowerPoint	See Rural LDC Collaborative Participant Contact Information
DR, Barb Baltrinic (BB), Barb Nichols (BN), Angela Smith (AS)	9/7/16	Rural LDC Meeting and Social, Jake's of Wooster (2 hrs)	HSTW LDC Introductory PowerPoint for district reps	See Rural LDC Collaborative Participant Contact Information, invited district guest; See S Smith for the sign-in sheet
DR, BN	9/20/16	Monthly LDC Liaison Mtg. Mapleton (2 hrs)	No HSTW products	See Rural LDC Collaborative Participant Contact Information
DR, Gwen Bryant (GB), BB, BN, AS	9/28/16	HSTW LDC Coaches Training Day, Wayne Co. School CTC (5 hrs)	HSTW LDC Coaching Notebook and handouts	No additional participants. Closed training HSTW LDC Coaches only
DR, Gwen Bryant (GB), BB, BN	9/29/16	Battelle Training Day 1 Northwestern (7 hrs)	Battelle Training Materials provided No HSTW products	See Rural LDC Collaborative Participant Contact Information; S Smith for the sign-ins
DR, Gwen Bryant (GB), BB, BN	9/30/16	Battelle Training Day 2 Northwestern (7 hrs)	Battelle Training Materials provided No HSTW products	See Rural LDC Collaborative Participant Contact Information; S Smith for the sign-ins
BN, DR	10/5/16	On-Site Visit at Mapleton (2 hrs)	HSTW LDC Coaching Report	L Bowers, Liaison, three teachers: J Otis, T Bunt, L Colosimo
BN, DR	10/5/16	On-Site Visit at Hillsdale (3 hrs)	HSTW LDC Coaching Report	J Stump, Liaison; two teachers: T Cline, M Williams
BN, DR	10/6/16	On-Site Visit at Black River (3 hrs)	HSTW LDC Coaching Report	J Beiser, Liaison; three teachers: S Infantino, C VanDoren, MYocum
BB, DR	10/11/16	On-Site Visit at Northwestern (4 hrs)	HSTW LDC Coaching Report	J Zody, Liaison; three teachers: J Hagans, A Michalak, K Woodruff
BN, DR	10/12/16	On-Site Visit at Loudonville (3 hrs)	HSTW LDC Coaching Report	C Puster, Liaison; three teachers: K Aubel, J Conley, K Carnegie
BN	10/12/16	On-Site Visit at Hillsdale (1 hr)	HSTW LDC Coaching Report	J Stump, Liaison; teacher L Bowen
DR, GB, BB, BN, AS	10/14/16	Battelle Training Day 3 at Northwestern (7 hrs)	Battelle Training Materials provided No HSTW products	See Rural LDC Collaborative Participant Contact Information; S Smith for the sign-ins
BN, AS	10/17/16	On-Site Visit at Black River (All Day)	HSTW LDC Coaching Report	J Beiser, Liaison; three teachers: S Infantino, C VanDoren, M Yocum
DR	10/31/16	Monthly LDC Liaison Meeting Hillsdale (2hrs)	No HSTW products	See Rural LDC Collaborative Participant Contact Information
BN, DR, AS	11/7/16	On-Site Visit at Hillsdale (3 hrs)	HSTW LDC Coaching Report	J Stump, Liaison; two teachers: T Cline, M Williams
BN, DR	11/8/16	On-Site Visit at Loudonville (All Day)	HSTW LDC Coaching Report	C Puster, Liaison; three teachers: K Aubel, J Conley, K Carnegie
BB, DR	11/9/16	On-Site Visit at Northwestern (2 hrs)	HSTW LDC Coaching Report	Two teachers: J Hagans, A Michalak
GB, AS, BN	11/16/16	On-Site Visit at Mapleton (3.5 hrs)	HSTW LDC Coaching Report	L Bowers, Liaison, three teachers: J Otis, T Bunt, L Colosimo
BN, AS	11/21/16	On-Site Visit at Black River (5 hrs)	HSTW LDC Coaching Report	J Beiser, Liaison; three teachers: S Infantino, C VanDoren, MYocum
DR	11/21/16	Monthly LDC Liaison Meeting Loudonville-Perrysville (2 hrs)	HSTW On-Site Calendar/Resources	See Rural LDC Collaborative Participant Contact Information







## Report to The PAST Foundation for NWLS Straight A Grant

### Chronology of Rural LDC Activities by HSTW LDC Coaches

August 29, 2016 through December 31, 2016 (page 2 of 2)

Staff	Date	Event/Activity	Documentation Product	Participants
BB, DR	11/29/16	On-Site Visit at Loudonville (3 hrs)	HSTW LDC Coaching Report/ Photos	C Puster, Liaison; three teachers: K Aubel, J Conley, K Carnegie
BN, AS	11/30/16	On-Site Visit at Hillsdale (All Day)	HSTW LDC Coaching Report/ Photos	J Stump, Liaison; three teachers: T Cline, M Williams, L Bowen
BB, DR	12/2/16	On-Site Visit at Northwestern (3 hrs)	HSTW LDC Coaching Report/ Photos	Three teachers: J Hagans, A Michalak, K Woodruff
BN, DR	12/5/16	On-Site Visit at Mapleton (3.5 hrs)	HSTW LDC Coaching Report/Photos	L Bowers, Liaison, three teachers: J Otis, T Bunt, L Colosimo
DR, GB, BB, BN, AS	12/9/16	Battelle Training Day 4 at Northwestern (7 hrs)	Battelle Training materials provided HSTW PowerPoint and 5 Display Boards featuring all 15 teachers by district	See <i>Rural LDC Collaborative Participant Contact information</i> ; SSmith for the sign-ins
DR	12/19/16	Monthly LDC Liaison Meeting Black River (2 hrs)	HSTW On-Site Calendar	See <i>Rural LDC Collaborative Participant Contact Information</i>







### High Schools That Work Teacher Resources (Posted to the Implementation Team Google Drive Folder), Sept. – Dec. 2016

1. LDC Student Peer/Self-Editing Review and Feedback: LDC Student Work Rubric – Argumentation Task – Grades 6-8
2. LDC Student Peer/Self-Editing Review and Feedback: LDC Student Work Rubric – Argumentation Task – Grades 6-8
3. Ashland University Credit Available for the FY17 HSTW NE Ohio Region Professional Development Series for HSTW/MMGW Sites
4. Certificate of Attendance Template: Rural LDC September 29-30, 2016 – October 14, 2016
5. Example Writer's Notebook – Thiebes
6. LDC Coaching Rural Implementation Team PowerPoint
7. LDC Principal and Administrators' Guide to Supporting Teachers
8. Memo to Schools on Advanced Careers
9. Ohio-SREB Grant Memo
10. Rural LDC Map and Contacts







# Appendix H:

## Battelle Education LDC Professional Development Calendar for 2016-17

### Battelle Education Fall Coach Planning Sessions, Fall 2016







## LDC Rural Collaborative

### Calendar Spring 2017 – Battelle Education

1.12.2017

Date	Event	Description
Dec 18, 2016	Teachers should have teaching tasks drafted	Teachers should have teaching task section drafted. This should include: <ul style="list-style-type: none"><li>• Title - help us remember what your module is!!!</li><li>• Standards/ Content identified</li><li>• Teaching Task</li><li>• Request for Proposal (RFP)</li><li>• Texts (background research)</li><li>• Final report rubric</li></ul>
Dec 24, 2016	Coaches will deliver feedback to all drafted teaching tasks	Battelle coaches will deliver feedback on teaching task section.
January 10, 2017	First draft of instructional ladder due for feedback	Teachers should have instructional ladder section drafted. This includes: <ul style="list-style-type: none"><li>• Select skills you will teach based on teaching task</li><li>• What products students will produce in mini-task<ul style="list-style-type: none"><li>○ Example - what is the product for testing critical design components? Is it lab notes? a table? a paragraph?</li></ul></li><li>• What it looks like to be successful on mini-task</li><li>• Which mini-tasks you will use to really check in on student progress<ul style="list-style-type: none"><li>○ Examples: Research notes; decision making matrix with evidence; data tables</li></ul></li></ul>
January 16, 2017	Coaches deliver feedback on first draft of instructional ladder	Dorothy, Peter, Claire and Kelly  <b>Coaching and support</b> <ul style="list-style-type: none"><li>• Analyze teacher modules using peer review rubric.</li><li>• Leave actionable feedback on each teachers module</li><li>• Identify recommendations for mini-tasks and place them in shared CoreTools Collection</li><li>• Make recommendations for LDC <b>online support</b> courses to teachers as needed.</li></ul>
January 30, 2017	Planning for Scale up	Liaisons will collaborate to plan logistics for scale up
March 24, 2017	Part III Face-	Full teams will come back together (teachers, scientists, and







	to-face session: <b>Evaluate and Improve design.</b>	coaches) to: analyze student work from final student product against rubric (this is done in grade level teams) <ul style="list-style-type: none"><li>• identify areas students met or exceeded expectations and areas for growth</li><li>• design/modify mini-modules to improve student performance based on student work analysis</li><li>• Infuse new disciplinary STEM content into mini-module for future implementation</li><li>• Submit for national review and feedback.</li></ul>
June 6-8, 2017	<b>Share Solution</b>	<p>After the rapid prototyping, participants from the first consortia design cycle will come together to imagine and design a plan for expansion.</p> <p>Teachers from round 1 will be selected to lead deployment to their colleagues. These selected educators will learn how to coach adult learners and will have time with Battelle coaches to plan orientation and ongoing support for new educators. Completion benchmarks include:</p> <ul style="list-style-type: none"><li>• Selection of teachers from 2016-2017 implementation to serve as coaches-in-training</li><li>• Identification of improvements to the delivery model based on learning from pilot.</li><li>• Identification of mechanisms to sustain ongoing collaboration within and among participating districts.</li></ul>
June 2017 – 2018	<b>Scale up</b>	Scale up dates are not yet finalized.







## Battelle Education: Fall 2016 Coach Planning Sessions

Date	Who	Description	Attachments
8/31/2016	Peter/Kelly	Planning kick off session for Jake's in Wooster (9/7) and drafting agenda for Overview session (9/29-9/30)	
9/21/2016	Peter/Kelly	Reviewing teacher homework and finalizing facilitator agenda for Sept 29 - 30 Overview	
9/23/2016	Peter/Dorothy/Claire/Kelly	Finalizing coaching roles and responsibilities for NW overview session on Sept 30	
10/5/2016	Peter/Kelly	Finalizing agenda for October 14 session	
10/11/2016	Dorothy/Claire/Kelly	Finalizing Coaching role for the October 14 PD session	
10/28/2016	Peter/Kelly	Planning rough draft agenda for Dec 9 Part II session, reviewing objectives	
11/21/2016	Peter/Claire/Dorothy/Kelly	Analyze Science and LDC modules	Module status sheet – google drive. Module Peer review forms – google drive. How to jury slides (this has agenda) – google drive
11/30/2016	Peter/Kelly	Finalizing agenda for Dec 9 Part II session based on 11.21.2016 module review	
12/16/2016	Dorothy/Kelly	Reflections and planning next steps – coaches are asked to review reflections and complete one of their own, then we have a 1 on 1 reflection session using their answers as a starting place.	12.16.2016 Dorothy Sutton December training reflection + December 9 <sup>th</sup> reflections from participants
12/21/2016	Peter/Kelly	Reflections and planning next steps – coaches are asked to review reflections and complete one of their own, then we have a 1 on 1 reflection session using their answers as a starting place.	12.22.2016 Claire Hampel December training reflection
12/22/2016	Claire/Kelly	Reflections and planning next steps – coaches are asked to review reflections and complete one of their own, then we have a 1 on 1 reflection session using their answers as a starting place.	12.21.2016 Peter DeWitt December reflection and planning







## Appendix I: Rural LDC Professional Development Activities, Fall 2016

Rural LDC Professional Development Agenda 9.29.16-9.30.16  
Rural LDC Professional Development Agenda 10.14.16  
Rural LDC Professional Development Agenda 12.09.16  
Project Participant Exercise: Identify Skill Sets, Challenges, and  
Successes, 9.07.16  
Content Clarifier for Cohort 1 Teachers, 9.07.16  
Rural LDC Professional Development Exit Slip Activity 09.29.16  
Rural LDC Professional Development Bullet Point Report and Exit  
Slip Activity 12.09.16







## BATTELLE Education

Science and Literacy with LDC  
Northwestern High School Library  
7473 N Elyria Rd  
West Salem, OH 44287  
September 29-30, 2016

### Day 1 Agenda

<b>Breakfast and Coffee</b> Network: NRWS_District Password: 124dd5bef2	7:30-8:00AM
<b>Welcome</b> <ul style="list-style-type: none"><li>- Icebreaker (15 min)</li><li>- Why we are here (15 min)</li></ul>	8:00-8:30AM
<b>What is the Literacy Design Collaborative (LDC)?</b> <ul style="list-style-type: none"><li>- Cloze read mini-task: What is a Science Literacy Design Collaborative (LDC) module? (20 min)</li><li>- Defining LDC (45 min)</li></ul>	8:30-9:35AM
<b>Break</b>	9:35-9:45AM
<b>Project Scope</b>	9:45-10:00AM
<b>Introduction to LDC Coretools</b>	10:15-10:30AM
<b>Teaching Task Think Tank</b>	10:30-11:30AM
<b>Lunch</b>	11:30-12:00PM
<b>Constructing a powerful science and literacy assignment (Teaching Task)</b> <ul style="list-style-type: none"><li>- Building out your teaching task on CoreTools: what is the final product, what are kids making, what does success look like, what major content standards will you address (1 hour 15 min)</li><li>- Prep for shark tank presentations (15 min)</li><li>- Shark Tank Presentations/Feedback of you Teaching Task (60 min)</li><li>- Revisions (20 min)</li></ul>	12:00-2:50PM
<b>Closing</b>	2:50-3:00PM







# BATTELLE Education

## Day 2 Agenda

<b>Breakfast and coffee</b> Network: NRWS_District Password: 124dd5bef2	7:30-8:00AM
<b>Welcome</b>	8:00-8:05AM
<b>Skills and Instruction Deep Dive</b> “What Factors Influence Plant Carbon Dioxide Production and Usage?”	8:05-8:30AM
<b>Backwards Design: Skills and Products</b> How do we know students are on track?	8:30-8:45 AM
<b>The Design Process with Battelle Principal Research Scientist</b>	8:45-9:15AM
<b>Backwards Design: Products by skill cluster</b>	9:15-9:45AM
<b>Break</b>	9:45-10:00AM
<b>Developing an instructional plan</b> <ul style="list-style-type: none"><li>- The nuts and bolts of the instructional plan: skills list and mini-tasks (30 min)</li><li>- Developing your first mini-task (instruction focused on one skill) (30 min)</li><li>- Presenting your mini-task (20 min)</li><li>- Next steps for afternoon (10 min)</li></ul>	10:00-11:30AM
<b>Lunch</b>	11:30-12:00PM
<b>Evaluations</b> <a href="http://tinyurl.com/h2xov2v">http://tinyurl.com/h2xov2v</a>	12:00-12:30PM
<b>Developing your instructional plan</b> 2-3 mini-tasks sign off by coach	12:30-2:00PM
<b>Break</b>	2:00-2:15PM
<b>Instructions between now and October 14<sup>th</sup></b>	2:15-2:30PM
<b>Developing your instructional plan continued</b>	2:30-2:50PM
<b>Closing</b>	2:50-3:00PM







## BATTELLE Education

**Science and Literacy with LDC**  
Northwestern High School Library  
7473 N Elyria Rd  
West Salem, OH 44287  
October 14, 2016

### Day 3 Agenda

<b>Open work time</b> <b>(Breakfast and Coffee)</b> Network: NRWS_District Password: 124dd5bef2	7:30-8:00AM
<b>Welcome</b>	8:00-8:15AM
<b>The Design Report</b> <ul style="list-style-type: none"><li>- David Chase – context</li><li>- What might this look like in HS or in MS</li><li>- Student Rubrics</li></ul>	8:15-9:45AM
<b>Break</b>	9:45-9:55AM
<b>The Design Report cont'd</b> <ul style="list-style-type: none"><li>- Can all students design (10 min)</li><li>- <b>Write MT's associated with the Design Report (75 min)</b></li></ul>	9:55-11:20AM
<b>FAQ's</b> <ul style="list-style-type: none"><li>- Group work; time for grading, hook (vision)</li></ul>	11:20-11:30AM
<b>Lunch</b>	11:30-12:00AM
<b>RFP and technical reading</b> <ul style="list-style-type: none"><li>- David Chase – context (15 min)</li><li>- Example analysis -Technical reading of an RFP (15 min)</li><li>- Technical reading MT debrief (10 min)</li><li>- <b>RFP writing time/ Technical Reading MT writing time (50 min)</b></li></ul>	12:00-1:30PM
<b>Open work time (MT's, RFP, anything) ***</b>	1:30-2:30PM
<b>Evaluation</b>	2:30-2:40PM
<b>Closing</b>	2:40-3:00PM

\*\*\*Scott will lead discussion with District liaisons in a separate break out space.

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# BATTELLE Education

**Science and Literacy**  
**Part II: Assess Outcomes & Iterate Instruction**  
December 9, 2016

Breakfast	6:45-7:45
Welcome	8:00-8:20
Collecting data from final student work	8:20-10:20
Break	10:20-10:30
Analyzing instructional ladder (based on data)	10:30-11:00
Brainstorming Teaching task for Spring	11:00-11:30
Lunch	11:30-12:00
Next Steps	12:00-12:15
Work time: Teaching task and RFP development	12:15-2:15
Developing your mini-task library based on identified needs	2:15-2:45
Closing	2:45-3:00







# BATTELLE Education

## Analyzing Instructional Ladder Based on Data Protocol (adapted from The Aspen Institute Looking at Student Work Protocol)

### LDC DESIGN MODULE:

What type of student work was assessed? (e.g. first draft, test, independent work)

What standards did you focus your LDC module on?

1. Content:
2. Reading:
3. Writing:

What **strengths** were apparent in the student work which was assessed?

What skills + instructional strategies might have accounted for these identified strengths?

Skills that were strengths	Instructional Strategies







## BATTELLE Education

What **needs** were apparent in the student work which was assessed?

What skills + instructional strategies might be targeted to address the needs you identified?

Skills that need to be addressed	Instructional Strategies







## BATTELLE Education

Task Template: DESIGN  
Content Focus:

[Insert optional question: \_\_\_\_\_]  
\_\_\_\_\_]

After reading (Select one: RFP or design requirements or \_\_\_\_\_), conducting background research on (content: \_\_\_\_\_), and designing and testing (prototype: \_\_\_\_\_), write (Select one: proposal/design report/ \_\_\_\_\_) in which you describe your design and argue its effectiveness in meeting the requirements of (Select one: RFP or design requirements or \_\_\_\_\_). Support your response with evidence from your research.

Insert optional question: \_\_\_\_\_  
\_\_\_\_\_]

After reading (Select one: RFP or design requirements or \_\_\_\_\_), conducting background research on (content: \_\_\_\_\_), and designing and testing (prototype: \_\_\_\_\_), write (Select one: proposal/design report/ \_\_\_\_\_) in which you describe your design and argue its effectiveness in meeting the requirements of (Select one: RFP or design requirements or \_\_\_\_\_). Support your response with evidence from your research.

Insert optional question: \_\_\_\_\_  
\_\_\_\_\_]

After reading (Select one: RFP or design requirements or \_\_\_\_\_), conducting background research on (content: \_\_\_\_\_), and designing and testing (prototype: \_\_\_\_\_), write (Select one: proposal/design report/ \_\_\_\_\_) in which you describe your design and argue its effectiveness in meeting the requirements of (Select one: RFP or design requirements or \_\_\_\_\_). Support your response with evidence from your research.

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# BATTELLE Education

*[Insert optional question: \_\_\_\_\_]*

After reading *(Select one: RFP or design requirements or \_\_\_\_\_)*, conducting background research on *(content: \_\_\_\_\_)*, and designing and testing *(prototype: \_\_\_\_\_)*, write *(Select one: proposal/design report/ \_\_\_\_\_)* in which you describe your design and argue its effectiveness in meeting the requirements of *(Select one: RFP or design requirements or \_\_\_\_\_)*. Support your response with evidence from your research.

*[Insert optional question: \_\_\_\_\_]*

After reading *(Select one: RFP or design requirements or \_\_\_\_\_)*, conducting background research on *(content: \_\_\_\_\_)*, and designing and testing *(prototype: \_\_\_\_\_)*, write *(Select one: proposal/design report/ \_\_\_\_\_)* in which you describe your design and argue its effectiveness in meeting the requirements of *(Select one: RFP or design requirements or \_\_\_\_\_)*. Support your response with evidence from your research.

*[Insert optional question: \_\_\_\_\_]*

After reading *(Select one: RFP or design requirements or \_\_\_\_\_)*, conducting background research on *(content: \_\_\_\_\_)*, and designing and testing *(prototype: \_\_\_\_\_)*, write *(Select one: proposal/design report/ \_\_\_\_\_)* in which you describe your design and argue its effectiveness in meeting the requirements of *(Select one: RFP or design requirements or \_\_\_\_\_)*. Support your response with evidence from your research.







### Rural Collaborative LDC

#### Project Participant Exercise: Identify Skill Sets, Challenges, and Successes

September 7, 2016

Rural LDC Collaborative Straight A Fund Kick-off event participants were invited to brainstorm in their group at each table, which largely reflected participants by district. Groups were presented with three questions by the lead LDC Coach:

1. Apart from content, what are the skills learned in science class that prepare kids for the future?
2. What are your greatest successes?
3. What are your biggest challenges?

Participants were provided with large poster-size paper and multiple color pens, allowing the groups to collectively brainstorm ideas through discussion and record their ideas. Participants were then asked to share out the most important idea/aspect for each of the three categories of Skill Sets, Challenges and Successes. The most important ideas/aspects identified and reported are indicated with an asterisk (\*).

### HILLSDALE

#### *Skill sets*

- Critical thinking\*
- Computational thinking
- Problem solving
- Questions
- Observation skills
- Perseverance and planning
- Organization
- Debate
- Share results

#### *Successes*

- Establish culture of risk\*
- See science differently
- Learn from mistakes
- Think deeper
- Get girls to be involved at the same ratios as boys

#### *Challenges*

- Think outside the box\*
- Do paperwork
- Priorities
- Facilities/equipment
- Time constraints/structure of school day







## NORTHWESTERN

### *Skill sets*

- Critical thinking, Collaboration, Communication – (3 C's)\*
- Organization
- Multi-step instruction
- Listening
- Problem-solving

### *Challenges*

- Critical thinking\*
- Technical reading
- Math skills
- Communication
- Typing, spelling (Language)
- Time constraints

### *Successes*

- Global Awareness \*
- Collaboration
- Enthusiasm

## LOUDONVILLE-PERRY

### *Skill sets*

- Problem solving\*
- Inquiry
- Research

### *Challenges*

- Engagement\*
- Having resources
- Overcoming learned helplessness

### *Successes*

- Knowing students are prepared for next step\*
- Making a positive impact
- Watching students mature







## **BLACK RIVER**

### *Skill sets*

- Following directions\*
- Collaboration
- Problem solving
- Inquiry
- Research
- Communication
- Persistence

### *Challenges*

- Afraid of failure\*
- Lack of vocab
- Instant answers/"The easy way"
- Lack of social skills
- Time
- Materials

### *Successes*

- Experiencing joy/ "Ah-ha moment"\*
- Enthusiasm
- Engagement
- Collaboration when it works
- Depth of interest/inquiry
- Avenue for students to experience success
- Spark career interests







### MAPLETON

#### *Skill sets*

- Communication\*
- Creative thinking
- Problem solving
- Team work
- Safety

#### *Challenges*

- Outdated equipment supplies\*
- Prep time
- Involvement of students and their availability

#### *Successes*

- Enjoyment\*
- Science Fair
- Love of Learning
- "Ah-ha" moments
- Increasing enrollment of upper level\*
- College Credit Plus

### **HIGH SCHOOLS THAT WORK and NORTHWESTERN DISTRICT ADMINISTRATOR**

#### *Skills*

- Problem Solving\*
- Scientific Process\*
- Team building\*
- Collaboration
- Research/Reading

#### *Challenges*

- Resources\*
- Empowering students
- Facilities
- Time
- Breaking down pre-conception
- Teachers training (PBL, PLTW)
- Cross curricular

#### *Successes*

- Embrace failure\*
- "Ah! Ha!" moments/ discovery
- Real world/authentic
- Open-minded
- Divergent







## Content Clarifier for Cohort 1 Teachers, 9.07.16

**Clarifying Content:** Use this flowchart to help identify the content (covered between Oct. 1 and Dec. 1) on which you will base your LDC

Course Being Taught:	<b>Unit 1:</b> <i>Main Content:</i>  <i>Timeframe:</i>	<b>Priority Unit A:</b>  <b>Rationale:</b> <i>What data indicates that this unit has particular instructional need?</i>  <i>How might this need best be addressed?</i>	<b>Most Engaging Priority Unit:</b>  <b>Rationale:</b> <i>How could this unit to connect to the world outside the local school community?</i>   <i>Why might students find this unit particularly engaging?</i>
	<b>Unit 2:</b> <i>Main Content:</i>  <i>Timeframe:</i>		
	<b>Unit 3:</b> <i>Main Content:</i>  <i>Timeframe:</i>		
	<b>Unit 4:</b> <i>Main Content:</i>  <i>Timeframe:</i>		
		<b>Priority Unit B:</b>  <b>Rationale:</b> <i>What data indicates that this unit has particular instructional need?</i>  <i>How might this need best be addressed?</i>	

NAME: \_\_\_\_\_







### Rural Collaborative LDC: Professional Development – Day One

#### Project Participant Exit Slip

September 29, 2016

Rural LDC Collaborative Professional Development participants, specifically the 15 teachers and four district liaisons, were asked to provide their takeaways from the first day of Professional Development. Participants were presented with three questions by the lead LDC Coach:

1. What is one positive takeaway from the first day of Professional Development?
2. What is a question you would like to be addressed during the second day of Professional Development?
3. What is your biggest concern after the first day of Professional Development?

LDC and High Schools that Work Coaches reviewed the participants' feedback, and formatted the second day of Professional Development to address the participants' questions and concerns.

#### PARTICIPANT FEEDBACK

1. Participant 1
  - a. Positive: Success finalizing my teaching task
  - b. Question: What is a good timeframe to implement? Too long? Too Short?
  - c. Concern: Bad attitudes
2. Participant 2
  - a. Positive: Tech opportunity and collaboration
  - b. Question: Time constraint
  - c. Concern: I'm concerned about making this as in depth as the example
3. Participant 3
  - a. Positive: Great content and liked the Shark Tank exercise
  - b. Question: Is more grade band work coming?
  - c. Concern: Please don't hold us over – teachers have childcare needs
4. Participant 4
  - a. Positive: Glad to have my teaching task
  - b. Question: What should we have done by the end of the day tomorrow?
  - c. Concern: Toxic people in group work – using profanity and hating
5. Participant 5
  - a. Positive: Great to work with other professionals







- b. Question: These are good ideas that get me thinking. How do we get and order supplies to create?
  - c. Concern: This was a long process. I teach four different classes a day. How do I make it manageable?
6. Participant 6
- a. Positive: Happy that my module idea is becoming more defined and taking shape
  - b. Question: I wonder if rather than grouping by ages taught, grouping by content regardless of age would have allowed for a quicker arrival for consensus of topic?
  - c. Concern: N/A
7. Participant 7
- a. Positive: Better understanding of LDC and project creation
  - b. Question: How will I guide my students with developing their filters?
  - c. Concern: Finding texts, producing solid questions and teaching task
8. Participant 8
- a. Positive: Progress on project and good discussions during work sessions
  - b. Question: Interfacing LDC Core Tools with existing platforms
  - c. Concern: Still concerned (but less so) about time required to implement
9. Participant 9
- a. Positive: My idea will work
  - b. Question: How do I put my thoughts in your form
  - c. Concern: I have too much going on to work on this. See me after October 10<sup>th</sup>
10. Participant 10
- a. Positive: I think I have a solid idea for my first project
  - b. Question: Will we be doing P.O's for supplies we need?
  - c. Concern: I have to fill out an electronic form . . .
11. Participant 11
- a. Positive: Feel good about the overall project
  - b. Question: What am I testing? Hopefully testing will work maybe
  - c. Concern: Concerned about the details of getting all the tasks for students
12. Participant 12
- a. Positive: LDC.com science is nice
  - b. Question: Are they going to finish and complete task?
  - c. Concern: Research and text information

13. Participant 13







- a. Positive: Enjoyed how the process was scaffold
- b. Question: Possibility concern doing a jigsaw to shorten the reporting out process
- c. Concern: N/A

### 14. Participant 14

- a. Positive: Very well organized and flowed quickly
- b. Question: Accessing other ideas from Core Tools
- c. Concern: Purchasing orders; how to purchase. PD go for teachers for the project – they do have funds from the grant

### 15. Participant 15

- a. Positive: LDC.com – beneficial to “shop” and look through it. Also, hearing the wide variety of proposals and the thought process involved
- b. Question: Time frame? Ongoing support for LDC.com
- c. Concern: N/A

## POSITIVES

- Success finalizing my teaching task
- Tech opportunity and collaboration
- Great content and liked the Shark Tank exercise
- Glad to have my teaching task
- Great to work with other professionals
- Happy that my module idea is becoming more defined and taking shape
- Better understanding of LDC and project creation
- Progress on project and good discussions during work sessions
- My idea will work
- I think I have a solid idea for my first project
- Feel good about the overall project
- LDC.com science is nice
- Enjoyed how the process was scaffold
- Very well organized and flowed quickly
- LDC.com – beneficial to “shop” and look through it. Also, hearing the wide variety of proposals and the thought process involved

## QUESTIONS

- What is a good timeframe to implement? Too long? Too short?
- Time constraint
- Is more grade band work coming?
- What should we have done by the end of the day tomorrow?
- These are good ideas that get me thinking. How do we get and order supplies to create?







- I wonder if rather than grouping by ages taught, grouping by content regardless of age would have allowed for a quicker arrival for consensus of topic?
- How will I guide my students with developing their filters?
- Interfacing LDC Core Tools with existing platforms
- How do I put my thoughts in your form
- Will we be doing P.O's for supplies we need?
- What am I testing? Hopefully testing will work maybe
- Are they going to finish and complete task?
- Possibility concern doing a jigsaw to shorten the reporting out process
- Accessing other ideas from Core Tools
- Time frame? Ongoing support for LDC.com

### CONCERNS

- Bad attitudes
- I'm concerned about making this as in depth as the example
- Please don't hold us over – teachers have childcare needs
- Toxic people in group work – using profanity and hating
- This was a long process. I teach four different classes a day. How do I make it manageable?
- N/A
- Finding texts, producing solid questions and teaching task
- Still concerned (but less so) about time required to implement
- I have too much going on to work on this. See me after October 10<sup>th</sup>
- I have to fill out and electronic form . . .
- Concerned about the details of getting all the tasks for students
- Research and text information
- N/A
- Purchasing orders; how to purchase. PD go for teachers for the project – they do have finds from the grant
- N/A







### **Rural LDC: Professional Development Project Participant Exit Slip December 9, 2016**

Rural LDC Professional Development participants were asked to provide their takeaways from the first implementation round of their LDC module. The participants were instructed to write their takeaways on a Post-it note, form a circle, and throw their Post-it note to a fellow participant across from them. The participants then shared out the takeaways that they received.

Teacher 1: *Seeing/understanding the importance of clarity in assignments in order to make it possible to meet expectations.*

Teacher 2: *I learned the kids are excited to build their own creations – overwhelming.*

Teacher 3: *Intentional and authentic design are key to the process.*

Teacher 4: *Directions/mini tasks need to be specific to ensure success with the rubric. Student engagement is high during this process.*

Teacher 5: *Must be more careful to streamline module – avoid redundant and less effective mini tasks.*

Teacher 6: *The most significant thing I learned from this round of implementation is how capable my students are at mastering difficult scientific techniques and their ability to adapt and figure things out on the fly. I also was excited to personally learn more about microbiology myself.*

Teacher 7: *I've learned from the first implementation that I greatly underestimated how long it would take for supplies to be ordered, PO collaboration, and items into my students' hands. This made all other portions of the first implementation behind schedule.*

Teacher 8: *This is a fun, engaging method to use with students to use their creativity and supplement or enhance their literacy and skills.*

Teacher 9: *Need to make sure the product is aligned to the standards.*

Teacher 10: *Be detailed in expectations of students! They don't always pick up on the fine details.*

Teacher 11: *I feel much better about #2 because of my experience with round one. I felt two steps behind for the majority of the first project.*

Teacher 12: *LDC is hard but rewarding. Scaffold to success.*

Teacher 13: *Backward design is a valuable method/strategy to plan a unit. Skills can be taught much earlier than the actual module.*







## Appendix J: Professional Development Summary, Fall 2016

Battelle Education LDC Module Curriculum  
Alignment Rubric





## **Science and Literacy Rural Collaborative Professional Development: Summary of Module 1 Implementation and Proposed LDC Training Modifications, January 2017**

Battelle Education's goal for the LDC science and literacy professional development in 2016-17 is to improve upon the first iteration of the of the LDC science and literacy tool and the first training phase conducted in Spring 2015 with (5) teachers at Metro STEM Early College High School. Based on the lessons learned from the Metro pilot, we modified the Rural Collaborative training design to provide additional time for Cohort 1 Teachers to learn the process for developing their first modules. This resulted in adding a second 1-day training session in October, two weeks after the initial training in September. Additionally, Cohort 1 Teachers received on-site classroom coaching support provided by High Schools That Work (HSTW). Battelle Education made the assumption that this would give teachers adequate time to become familiar with the LDC tool and technology. Battelle Education also assumed that with multiple examples of modules, Cohort 1 Teachers would be starting with more resources than the pilot cohort, and would be able to go much further in progressing through the LDC Module design and implementation.

### Preparing for Second Training Session, October 14th

After the September 29-30 training session, data from the survey responses and observations revealed a few key points for coaches to consider:

1. Teachers want to see examples of the student end-product.
2. Time was a number one concern, with only 33% of teachers feeling confident they would find time to revise/complete their LDC module.
3. A little over 50% of teachers left the first two days (9/29-30) indicating they were only somewhat confident in developing a quality instructional plan

To address these concerns, Battelle Education's coaching team made the following adjustments to the October follow-up workshop (2 weeks after the 9/29-30 overview training):

1. Designed a 90-minute session on the student design report. This included:
  - a. A Battelle Engineer setting context of what an actual Design Report looks like in industry
  - b. Time to analyze student design report examples produced from the first pilot at Metro
  - c. Time to score student design report examples using the LDC student scoring rubric
2. To address teacher's concern around time to revise/complete their LDC module, we modified the agenda for October 14<sup>th</sup> to maximize the amount of time provided throughout the day for structured work time for teachers. Three hours of time (about half of the workshop day) was designated as "work time." We also highlighted this work time in red on the agenda and included an announcement at the beginning of the day that we were responding to a shared concern for adequate time to work on their modules that was expressed in the September training, and that we reorganized the October training to identify more time within the day for work time with support and assistance from the Battelle Education and HSTW coaching teams.
3. As a large portion of the instructional plan revolves around the RFP and the Design Report, we structured the October training day to focus on those components. Beginning with time to analyze elements of a Design Report during the first half of the day, the second half of the day was spent analyzing elements of an RFP. The RFP session began with a Battelle Engineer setting the real world context, explaining where and how he uses an RFP, how he reads it, etc. Next, a Battelle Teacher coach walked participants through a technical reading of an RFP, followed by a debrief. This was designed to give teachers a chance to both see what goes into an RFP as well as to practice using skill sets students need when reading an RFP. The final part of the day was dedicated to work time with embedded support for teachers to work with assistance from



coaches on developing the RFP and instruction for the Technical Reading component of the module.

## Module 1 Evaluation of Work in Progress

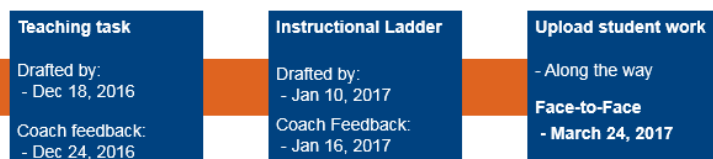
When the Battelle Education coaching team reviewed Module 1 a few days prior to the October 14th follow-up session, it was apparent that very few teachers had gone back into the LDC website to work on their modules to make any edits. This trend continued throughout the fall. From the pattern of work reflected on the LDC Core Tools website, most teachers implemented their edits and completed uploading final Module 1 components towards the end of the fall term, finishing right before the group was scheduled to meet for the third training session on December 9<sup>th</sup> with very little progress evident in Core Tools during mid-late October and early November.

### Preparing for December 9th

The Battelle coaching team met in-person on November 21<sup>st</sup> to review Cohort 1 participant modules. The coaching team identified three different types of modules based on the scoring rubric:

- 1 – Modules where the task and instruction were both “Good to Go” or close. Some things were missing, but overall the module was on track.
- 2 – Modules where the tasks are largely “Good to Go,” but not a lot of detail instructionally. In other words, we expect the teacher will complete the module but if we were to give the module to another teacher, they would have a hard time replicating and implementing the module.
- 3 – Modules with very little work completed – this raised questions as to whether teachers had documented planning outside of the CoreTools website, or whether they were not documenting their module planning in any manner (e.g., on paper only)

To support teachers to stay on track for Module 2, the coaching team set deadlines for teachers to complete components of Module 2, and for coaches to send feedback to teachers. This change is intended to provide participants with a clearer set of timelines and expectations so that they can receive timely feedback on their work. Additionally, it was noticed that often teachers were not aligning the mini-task to the specific skill. To address this trend, Battelle Education incorporated time during the December 9<sup>th</sup> session to look at examples and non-examples of skill-aligned mini-tasks. During the December 9<sup>th</sup> session, teachers expressed concern with the timeline for implementing the second module. Recognizing their concern, the Battelle Education group modified the schedule to allow teachers three additional weeks for classroom implementation of Module 2.



### **Next Steps: Potential Modifications for 2017-18 Training and Implementation**

Based on our experience during 2016-17, we have identified (5) areas for improvement as we look towards next year. We aim to complete as many of these as possible before Cohort 2 rolls out. That being said, we are also working to adjust our timeline to better meet the needs of the Rural Collaborative. Based on proposed timeline changes being considered by the Rural Collaborative districts at this point, Battelle Education may need to prioritize which of these should occur before May.



1. **RFP template** – rather than just providing examples, Battelle Education will develop a template teachers can use.
2. **Design Report “Exemplar” examples** – with the 20117 PD being only the second iteration, Battelle Education needs to collect more Exemplar examples of student work. We hope to identify some examples from this year to share with Cohort 2 Teachers in 2017-18.
3. **Shortened skills list** – Before Cohort 2 training, Battelle Education will reduce the number of skills on the LDC list. We believe the list can be reduced by 1/3 without loss of quality of the module design. This has presented a challenge in the past, however, we currently have one teacher who is exploring use of a shortened skills list during Spring 2017. The Battelle team will closely evaluate the teacher’s student products later this spring to determine the results for quality and substance of the module.
4. **Pre-loaded mini-tasks** – To support success for teachers, Battelle Education has determined that pre-loading general skill-aligned mini-tasks for teachers to build from, will allow Cohort 2 Teachers to begin the process with additional resources to support module development. This is a time intensive task that will be tackled in the summer and ready for Cohort 2 Teachers in fall 2017.
5. **Non-negotiables for a testable design task** – We would like to include some examples and non examples for module development. While most Cohort 1 Teachers had a testable design in their first module, the second module produced several cases where teachers were not able to incorporate a testable design for experimentation. Noting that teachers had less time to complete Module 2 in Spring 2017,, teachers did not get as much feedback from the coaches, leaving teachers to rely on their own content knowledge and ability to include a testable design component for Module 2. Battelle Education believes that developing some additional tools to help teachers navigate this in the form of a list of “look fors” essential to a successful design task, including providing more examples and non-examples to guide teachers in creating a strong experimentation component of their modules.

Additionally, the Battelle coaches also recognized that teachers with less exposure to STEM/problem based learning need more supports. We think that the (5) supports listed above will reduce the number of choice points for a teacher with less STEM experience to successfully initiate the LDC science and literacy module design process, while still giving teachers autonomy in selecting what content to focus on, and to make adaptations based on their local contexts and student needs.

### **Core Tool (CT) Analytics (spreadsheet)**

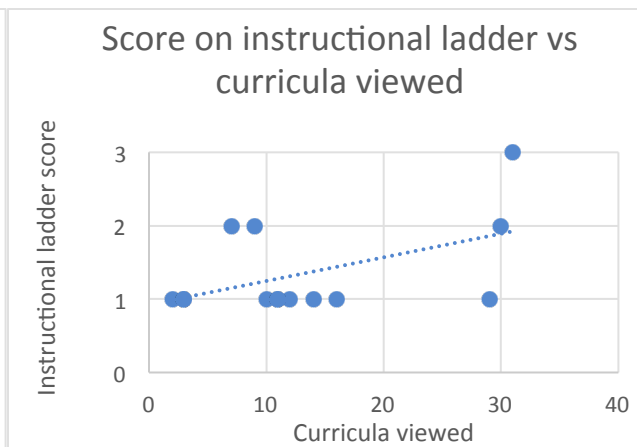
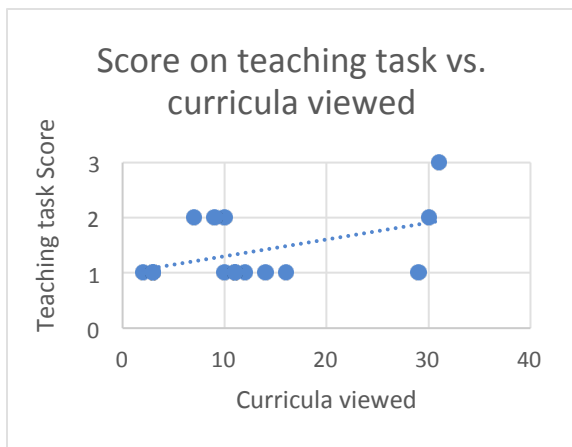
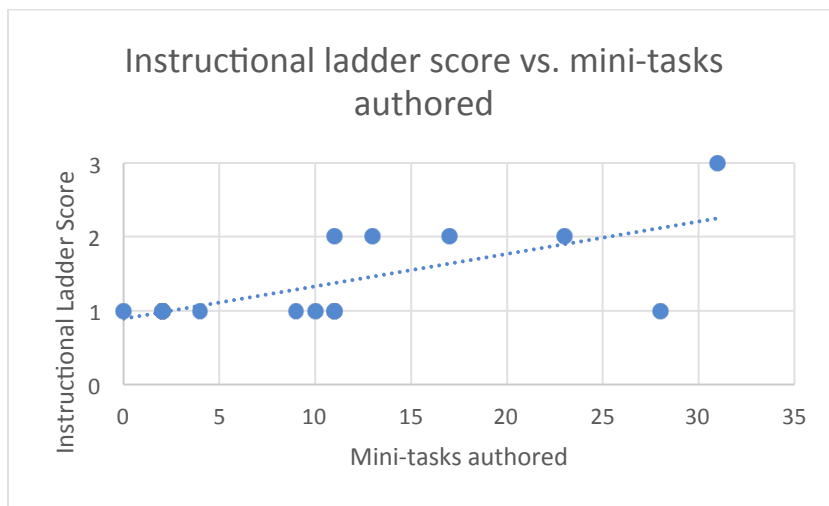
Data tracking on Cohort 1 Teachers included information on the following:

1. *Modules authored* = Any module which has been created new or copied and modified in any way. If the mini-task has one changed element it is factored into this report.
2. *Mini-tasks authored* = Any mini-task which has been created new or copied and modified. If the mini-task has one changed element it is factored into this report.
3. *Modules with comments* = Number of modules authored which include one or more comments.
4. *Mini-tasks with Comments* = Number of stand alone mini-tasks authored which include one or more comments. Please note that if a mini-task lives within a module and a coach has left a comment here, it is included as a “module with comment” not as a mini-task with comments.

Unsurprisingly, teachers who have spent more time viewing/creating/modifying mini-tasks typically had higher scores on the instructional ladder. In the figures below, “1” represents a “Work-in-Progress” score on the instructional ladder; “2” represents a “Good-to-Go” score on the instructional ladder; and,



“3” represents an “Exemplar” score on the instructional ladder. This tells us that to be successful, teachers do need to commit additional planning time to the initiative beyond workshop days to access Core Tools resources including existing modules to replicate and adapt for their use to support high quality module design and implementation.



### Student Work Rubrics

The morning of the Dec 9<sup>th</sup> session also focused on evaluating student work products. Participants evaluated student work in groups using the LDC student work rubric. Several teachers had not yet completed their modules by December 9<sup>th</sup> and were unable to bring final student work products for review. Those that did were asked to select 3 student work products for the group to score. This review allowed teachers to analyze their instructional ladder based on data collected from their sample student work. A sample set of student scored rubrics were collected, however, even after a second round of calibration, we do not feel like the group was yet calibrated on the student scoring rubric enough to be consistent across different breakout groups. To ensure more consistent data collection in 2017-18 module implementation, Battelle Education will ask teachers to submit a google form after the scoring



session to submit scores and comments on three samples of student work. We will also do another round of calibration as a full group to build consistency.





## LDC Module Curriculum Alignment Rubric

Module Information					
Module Title					
Module ID					
Reviewer(s)					
Date Reviewed					
LDC Task Holistic Score	<u>SELECT ONE:</u>	Not Scored	Work in Progress	Good to Go	Exemplary
LDC Instructional Ladder Holistic Score	<u>SELECT ONE:</u>	Not Scored	Work in Progress	Good to Go	Exemplary
Reviewer Summative Comments					



## LDC TASK SCORING GUIDE

<b>GQ1: Does the teaching task, along with texts, content and writing product, have a clear and coherent purpose and focus, allow for diverse responses, and require students to respond to texts?</b>			
<b>Clarity &amp; Coherence</b>			
	<b>Work in Progress</b>	<b>Good to Go</b>	<b>Exemplary</b>
	<ul style="list-style-type: none"> <li>• Template type uses a writing mode that does not match the intended purpose of the prompt.</li> <li>• Task purpose is overly broad or narrow.</li> <li>• Prompt wording is unclear.</li> <li>• Prompt wording, student background, or overview of the task biases students toward a particular response.</li> <li>• Task is answerable without using the texts or instructional scaffolding in module.</li> <li>• Background statement may not frame task for students.</li> </ul>	<ul style="list-style-type: none"> <li>• Template task uses a writing mode that matches the intended purpose of the prompt.</li> <li>• Task purpose is focused.</li> <li>• Prompt wording is clear.</li> <li>• Prompt wording is unbiased, leaving room for diverse responses.</li> <li>• Prompt wording, content, texts, and writing product are aligned to task purpose (a "good fit").</li> <li>• Task is text dependent, requiring students to go beyond prior knowledge to use evidence from the texts in their responses.</li> <li>• Background statement frames task for students.</li> </ul>	<p>("Good to Go" characteristics and...)</p> <ul style="list-style-type: none"> <li>• Task is worded precisely to give students a clear and focused purpose for writing and unambiguous directions.</li> <li>• Prompt, texts, content, and writing product are tightly aligned (are close to a "perfect fit") to task purpose.</li> <li>• Task provides a pattern that can be used as a model to create other teaching tasks in the discipline.</li> </ul>
<b>GQ2: Does the teaching task build students' content knowledge, enduring understandings, and complex, higher order thinking skills central to the discipline?</b>			
<b>Content</b>			
	<b>Work in Progress</b>	<b>Good to Go</b>	<b>Exemplary</b>
	<ul style="list-style-type: none"> <li>• Has a weak connection to content central to the discipline.</li> <li>• Oversimplifies a topic, OR does not require students to engage in analytic reading and thinking skills.</li> <li>• Includes content or skill standards that are not relevant the task</li> </ul>	<ul style="list-style-type: none"> <li>• Addresses content central to the discipline and grade level CCSS reading standards, requiring students to build strong content knowledge.</li> <li>• Engages students in a range of analytic reading and thinking skills.</li> </ul>	<p>("Good to Go" characteristics and...)</p> <ul style="list-style-type: none"> <li>• Addresses big ideas or enduring understandings central to the discipline.</li> <li>• Engages students in complex, higher- order thinking skills specific to the discipline.</li> </ul>



### LDC TASK SCORING GUIDE (CONTINUED)

<b>Texts</b>	<b>GQ3: Are the provided text(s) engaging, authentic, accessible, tightly relevant to the prompt, and appropriately complex, requiring students to apply CCSS reading skills?</b>		
	<b>Work in Progress</b>	<b>Good to Go</b>	<b>Exemplary</b>
	<ul style="list-style-type: none"> <li>Are loosely aligned or misaligned to the purpose of the task.</li> <li>Bias students toward a particular response.</li> <li>Are too difficult or too easy for the range of student ability.</li> <li>Include so many texts or allow so much student choice that it will be difficult to support reading closely and provide appropriate instruction.</li> </ul>	<ul style="list-style-type: none"> <li>Are useful for providing content and evidence to be used in addressing the task.</li> <li>Do not bias students toward a particular response.</li> <li>Are accessible to most target students and appropriately complex, requiring them to apply grade level CCSS reading skills to comprehend and analyze content.</li> </ul>	("Good to Go" characteristics and...) <ul style="list-style-type: none"> <li>Are engaging, tightly relevant (indispensable), and authentic.</li> <li>Are tightly aligned to the task purpose.</li> <li>Represent central modes of discourse in the discipline.</li> <li>Are carefully selected, excerpted, or modified to provide texts with varied complexity (using either quantitative or qualitative measures) appropriate to students' reading ability.</li> </ul>
<b>Writing Product</b>	<b>GQ4: Does the teaching task engage students in applying CCSS writing skills to produce writing in a genre that is appropriately challenging, central to the discipline, and appropriate for the task content?</b>		
	<b>Work in Progress</b>	<b>Good to Go</b>	<b>Exemplary</b>
	<ul style="list-style-type: none"> <li>Is inappropriate to the discipline, content, or challenge of the task.</li> <li>Is too difficult or too easy for the range of student ability.</li> </ul>	<ul style="list-style-type: none"> <li>Is appropriate for the discipline and content, and coherent with the purpose of the task.</li> <li>Is accessible to all students and intellectually challenging, requiring them to apply CCSS writing skills to demonstrate their content understanding and CCSS reading skills.</li> </ul>	("Good to Go" characteristics and...) <ul style="list-style-type: none"> <li>Authentically engages students in rhetorical modes and types of writing central to the discipline.</li> </ul>



## LDC TASK SCORING GUIDE (CONTINUED)

Task Holistic Score	Work in Progress		Good to Go		Exemplary	
	Needs revision for reasons listed below.		The teaching task creates academic contexts for applying grade level CCSS reading and writing standards, and engages students in reading texts closely, as well as writing that is text-based and appropriate for the discipline, purpose, and/or audience. Teaching task is text-dependent and has a clear, focused, and coherent purpose overall. Task prompt, texts, and writing product are aligned to the content and purpose of the teaching task. Teaching task addresses content central to the discipline; engages students in applying a range of analytic reading and thinking skills; and employs useful text(s) that are appropriate for most students at the target grade level.		The teaching task creates academic contexts for applying grade level CCSS reading and writing standards, and engages students in reading texts closely, as well as writing that is text-based, appropriate, and authentic for the discipline, purpose, and/or audience. Teaching task is text-dependent and has a clear, focused, and coherent purpose and precise elements overall. Task prompt, texts, and writing product are tightly aligned to content and to the purpose of the teaching task. Teaching task addresses content and big ideas central to the discipline; engages students in applying higher order thinking skills specific to the discipline; and employs carefully selected or customized, relevant text(s) of varying complexity suited to the range of students in the target grade level. Focus of teaching task is central to the discipline or course and has broad applicability.	
	Feedback:					



## LDC INSTRUCTIONAL LADDER SCORING GUIDE

<b>What Skills?</b>	<b>GQ5: Does the Skills List address the specific demands of the teaching task, include CCSS reading and writing skills that are appropriate for the grade level, and support access to the texts and completion of the teaching task?</b>		
	<b>Work in Progress</b> <ul style="list-style-type: none"> <li>Skills list misses one or more significant demands of the task.</li> <li>Skills are not clustered and sequenced to support the teaching task.</li> <li>Skills list reflects the default skills list and includes skills that are not relevant to the teaching task.</li> </ul>	<b>Good to Go</b> <ul style="list-style-type: none"> <li>Skills list is relevant to teaching task, (including the task prompt, content, discipline, text(s), and writing product).</li> <li>Skills are clustered and sequenced to support the teaching task.</li> <li>Skills list includes grade-level appropriate reading, writing, and thinking skills.</li> </ul>	<b>Exemplary</b> <p>("Good to Go" characteristics and...)</p> <ul style="list-style-type: none"> <li>Skills list is precise and tightly aligned to the task and the demands of the texts.</li> <li>Skills are clustered and sequenced to support access to the texts and completion of the teaching task product.</li> </ul>
<b>What Instruction?</b>	<b>GQ6: Do the mini-tasks, instructional strategies, and materials provide students with opportunity to develop grade level CCSS reading and writing skills and sufficient support to complete the teaching task successfully?</b>		
	<b>Work in Progress</b> <ul style="list-style-type: none"> <li>Some mini-tasks (product, prompt, and scoring guide) do not relate to skills list.</li> <li>Mini-tasks rely on general strategies that provide weak support for the skills, texts, and teaching task OR provide too much support, removing any challenge for students.</li> <li>Instructional strategies are loosely connected to mini-tasks and completion of the teaching task.</li> <li>Pacing is not realistic.</li> <li>Materials, references, and supports used in instruction are not available to other teachers.</li> <li>Module does not present adequate opportunity to teach writing in response to reading.</li> </ul>	<b>Good to Go</b> <ul style="list-style-type: none"> <li>Mini-tasks (product, prompt, and scoring guide) relate to skills list.</li> <li>Mini-tasks support the teaching task (including the prompt, content, discipline, text(s), and writing product).</li> <li>Instructional strategies support the mini-tasks and completion of the teaching task, (and are aligned to prompt, content, discipline, text(s), and writing product).</li> <li>Mini-tasks and instructional strategies provide opportunities for students to learn specified grade level CCSS reading, writing, and thinking skills.</li> <li>Pacing is realistic.</li> <li>Materials, references, and instructional strategies are included, linked, or cited in enough detail to allow other teachers to obtain them.</li> </ul>	<b>Exemplary</b> <p>("Good to Go" characteristics and...)</p> <ul style="list-style-type: none"> <li>Mini-tasks and instructional strategies are coherent, tightly aligned to the skills, and well designed to support student success on the teaching task.</li> <li>Mini-tasks and instructional strategies explicitly build student capacity to apply discipline-specific literacy skills to complex texts.</li> <li>Mini-tasks and instructional strategies explicitly build student capacity to produce clear and coherent writing appropriate to discipline, task, purpose, and audience.</li> <li>Mini-tasks are well placed to provide formative feedback and give evidence about student progress.</li> <li>Materials, references, and instructional strategies are high quality, customized to the purpose of the teaching task, and described in enough detail for another teacher to use them.</li> <li>Scoring guides for mini-tasks include clear criteria aligned to the skill being taught.</li> <li>Texts, mini-tasks, or instructional strategies are differentiated for diverse learners.</li> </ul>



## LDC INSTRUCTIONAL LADDER SCORING GUIDE (*CONTINUED*)

<b>What Results?</b>	<b>GQ7: Has the module been taught, and does it include student work samples that have been scored and/or annotated?</b>		
	<b>Work in Progress</b>	<b>Good to Go</b>	<b>Exemplary</b>
	<ul style="list-style-type: none"> <li>No student work samples are included</li> </ul>	<ul style="list-style-type: none"> <li>Student work samples are included</li> </ul>	<ul style="list-style-type: none"> <li>Students work samples representing different score levels are included, with scored rubrics</li> </ul>
<b>Ladder Holistic Score</b>	<b>Work in Progress</b>	<b>Good to Go</b>	<b>Exemplary</b>
	Needs revision for reasons listed below.	Instructional ladder generally aligns to grade level CCSS standards and creates an opportunity to teach writing in response to reading. Instructional ladder is coherent and aligned to the teaching task. Instructional ladder supports the teaching task with a well-planned instructional sequence in which mini-tasks lead to the final product's completion. Instructional ladder provides sufficient detail so that others might use it. Student work samples may be included (but are not required to receive a holistic Good to Go score).	Instructional ladder closely aligns to grade level CCSS standards and creates an opportunity to build discipline-specific literacy and thinking skills, and to teach writing in response to reading text(s) closely. Instructional ladder is highly coherent, tightly aligned and customized to an "Exemplary" or "Good to Go" teaching task, and appropriate in rigor to the course. Instructional ladder supports the teaching task with a well-planned and strategic instructional sequence in which mini-tasks lead to the final product's completion. Instructional ladder is detailed and polished with attention to the needs of a wide educator audience. Texts, mini-tasks, and/or instructional strategies may be differentiated for diverse learners. Scored and/or annotated student work samples representing different score levels are included.
	Feedback:		