

Mathematics K to 9 Project Implementation Grant 2009-2010 Rationale

Because professional development is an ongoing event based on an ever evolving process that partners a wide range of stakeholders, NRLC believes that all members of that partnership will best be served through sharing resources, recognizing expertise within the region and designing professional development, in-service, and learning activities that are dynamic, organic and evolutionary in their nature. Professional development must respond, morph, and grow in response to the environment within which it is embedded.

When teachers see the links between innovations, change becomes a systemic, connected and therefore manageable process. "We are all in this together" replaces feelings of isolation and overload that can stall or derail change efforts". (Hall & Hord, 2004, Fullan, 2003; Guskey, 1994, 2001).

Program Development Goals

- Support Alberta Education's priorities*
- Identify our partner's and potential users' priorities and needs*
- Obtain feedback and follow-up*
- Network with other consortia*
- Avoid duplication of service*
- Evaluate and redirect*

Program Development Principles

- Based on Identified Needs of Consortium Members*
- Involve Consortium Partners in Planning*
- Opportunity for Ongoing Development & Support*
- Open to all Consortium Members*
- Ongoing and Follow Up Evaluation*
- Interactive and Focus on Practical Application*
- Multiple Site Locations*
- Central to a Number of Consortium Members*
- Utilize Local Expertise and Resources*
- Incorporate a Variety of Presentation Models*

The development of the NRLC Math Implementation Support plan is driven by the following tenets:

***Effective Collaboration is the process
Effective Practice provides the content
Effective Adult Learning is the context***

Enduring Understandings

- *Effective Curriculum implementation is a shared responsibility for all stakeholders*
- *Effective Curriculum implementation is developmental and contextual*
- *Effective Curriculum implementation must be systemic, systematically planned and sustained.*
- *Collaboration leads to deeper understanding and shared commitment*
- *PD is interactive, continuous and reflective*
- *Effective adult learning is meaningful, purposeful and provided for through a variety of learning*

Plan to Support Math Implementation Goals

Given that students' learning is enhanced when jurisdiction staff have access to effective Professional Development, and that professional development needs to focus on enhancing professional practice as well as leadership capacity at the school and jurisdiction levels, we have identified:

Overarching Goal:

Students will demonstrate achievement of specific learner outcomes for their grade level according to the Alberta Mathematics Curriculum, 2007.



As Professional development is a shared responsibility, **NRLC** believes that our **role** in actualizing this goal **is to create strategies and professional development support that will provide teachers, administrators, and parents opportunities to deepen their understandings around, knowledge of, and expertise with instruction effective for implementing the intent of, the revised Alberta Program of Studies for Mathematics, 2007.**

Environmental Factors That Have Influenced Plan

Provincial Directives

Consortia will offer a wide variety of approaches and opportunities to include provision for such activities as:

- ✚ capacity building
- ✚ familiarity with programs of studies
- ✚ facilitating assessment practices
- ✚ establishing communities of teaching and learning practice based on related research
- ✚ assisting school authorities with their implementation plans and delivery models/approaches

Emerging technologies within the plan will allow for increased variety for adults to learn

Each Consortium may employ a subject area coordinator/consultants to help facilitate effective implementation and delivery plans and to suit regional and other stakeholders needs

Trends/Themes Identified from Local Needs Assessments

Working hand in hand with regional Superintendents, Curriculum co-ordinators, teachers, administrators, AISI leaders, district teams and math lead teachers/PD facilitators the following themes have been identified. The consultation process included formal and informal surveys, interviews, face to face meetings and feedback comments mined from evaluations of current programs.

Support that enables teachers to actualize the instructional focus and content of the revised Alberta Program of Studies for Mathematics in their classrooms :

- ✚ Expert input to guide teacher inquiry groups (PLC 's, AISI teams)
- ✚ Grade Level specific workshops to support planning and assessment
- ✚ Direct modeling and coaching in classrooms

Support that enables administrators to actualize their roles as instructional leaders in support of implementation of the revised Program of Studies for Mathematics:

- ✚ Just in Time Coaching Tools
- ✚ Information to share with Parents
- ✚ Infusion of expertise into planning professional development events/activities

Support that enables Local ATA and District PD committees and event organizers as they:

- ✚ Identify and book speakers and sessions for local and District PD to provide support that aligns with the philosophy, intent and instructional focus of the revised program of studies

Support that enables District Administrators, AISI Leaders, Curriculum Co-ordinators to identify, develop and utilize local expertise:

- ✚ Creating and sustaining local curriculum leaders/mentors and coaches
- ✚ Creating and sustaining networking opportunities to provide on going support to teacher inquiry groups with maximum impact and minimum disruption to their daily schedules
- ✚ Support with providing information to parents
- ✚ Support with infusing technology into delivery of professional development activities

Thoughts on Successes and Challenges

NRLC Mathematics Report 2009-2010

Prepared and Submitted by Geri Lorway, NRLC Mathematics Consultant

Successes

1) Systemic, Comprehensive Support

The NRLC approach to supporting curriculum implementation that focused mainly on providing workshop series with demonstration lessons built in, that included on going follow up opportunities and were supplemented with in school coaching has paid off. Whole schools, grade levels, and Districts participated in NRLC workshop series and are requesting continued support as they build on going implementation plans. *Examples: HFCRD used our workshop series from Grades 1 to 9 as PLC's for their mathematics teachers. All teachers of mathematics were registered. High Prairie Elementary School registered all of their Grades 2, 3, 5 and 6 teachers. GPCSD registered all of their Grade 3, 6 and 9 teachers.*

2) Buy- In Continues to Build: More Participation every year

“Innovations that have the best chance of sustainability are those that have constituencies grow around them.”

Larry Cuban 1997

As a locally responsive, immediately accessible agent for support with change, NRLC has the ability to respond within days to the emerging concerns of District teachers and administrators to help design programs, projects and provide expert, experienced transformational coaches.

(CJ Schurter School, HPSD 48, High Prairie Elementary School, HPSD 48; HFCRD Divisional Grade Level PLCs, GPCSD Grade 3, 6, 9)

3) Building Leadership Capacity

“Effective staff development is like effective teaching. It actively engages the learner who eventually learns to facilitate and sustain his/her own learning.”

Joyce, Calhoun, Hopkins 2000

NRLC has been able to provide access to transformational coaches who provide teachers with rich, provocative, experiences that focus their attention on teaching and learning mathematics, not “doing mathematics”.

As Local Districts have come to recognize the complex, personal nature of teacher change when it pertains to instruction, understanding and belief, NRLC has been able to provide support for a three year project aimed at developing a team of teachers as transformational coaches. Examples are available across the jurisdictions that demonstrate the confidence and these coaches are developing within their own practise, the leadership they are beginning to demonstrate within their schools and Districts.

(GPPSD, Tracie Anthony, Jennifer Koganow; PWSD, April Brown, Collette Simpson, Corry Stark; HPSD, Jenna Cox, Lasha Sebo, Andrea Pollock; FVSD, Leanne Miller, Kerstin Wilbur; GPCSD, Meiling Hong, Alicia Burdess)

4) NRLC Developed Resources

A list of Math Resources to support teacher learning and parent education can be accessed at <http://tiny.cc/Assessment Math>

- *Included on the site are cached tapes of Elluminate Presentations for K to 3, 4 to 6 and 7 to 9*
- *Tapes from the Senior High Institutes Jan and June 2010*
- *Powerpoint Presentations for use during Family Math Presentations*

Challenges

1) Sustainability

"Teachers need extensive help to learn and apply the ideas of current research on teaching. It is patently foolish to expect teachers to accomplish this by themselves. Apparently, teacher education and commercial materials have not helped teachers to teach conceptual understandings. Most materials present information that describes how to use algorithms to solve problems. This algorithm driven approach provides little or no help to teachers who desire to teach the conceptual underpinnings implicit to math." (Elmore 1992)

The past 30 years of research on professional development points to a number of critical components for effectiveness, no matter what the topic:

Teachers must

- practice their new skills in their classroom environment
- study and learn evidence-based strategies linked to the instructional content
- Engage in hands-on practice with new skills and strategies in the instructional context to effectively integrate those skills into their teaching repertoire.
- Receive long term on going coaching and access to expertise of sufficient duration to produce long-term sustained use of new strategies in the instructional setting. (up to 30 times)

Of all these components, provision of consultation in the natural setting is both the most challenging to deliver and the most important in terms of changing teacher practices. Teachers need opportunities to interact with, observe, demonstrate in front of and receive corrective feedback from experts as they study, implement, and build expertise with new skills in real-life contexts. Joyce and Showers found that approaches to educator training that included didactic sessions, demonstrations, practice, and on site coaching 95% of those teachers being trained were actually used the new skills in the classroom.

The key piece: the expert came to the trainees' classrooms, modeled the new skill with students, and offered feedback on trainee implementation of the skill.

Districts continue to request NRLC support in making available on site coaches to support teachers in this change. **THIS WORK NEEDS TO CONTINUE.** Grades K-1, 4 and 7 began this journey three years ago. They are only now seeing the impact that their willingness to adopt changes in their teaching are having across grade levels. Grades 3, 6, 9 and 10 are in their first year of implementation; they deserve and are demanding the same amount of time and support as their colleagues received. **Two more years minimum.**

2) Embedding Professional Inquiry and Coaching into the Working Day

Teachers must shift their priorities to spend some time daily or weekly studying teaching practices; focus on planning lessons and then reflecting on their effectiveness.

Teachers must be provided vivid examples of alternative teaching methods.

Teachers must learn to analyze students' work with the intent to use their growing understandings of how students think in order to adapt and refine their instruction and assessment. (NSDC, 2009)

An initial pilot series aimed at reaching K to 3 teachers in the North and delivered through Elluminate met with success encouraging us to pursue Elluminate and VC options with more vigor. It would appear that the key to success in this delivery mode rests with its use as a follow up to initial face to face contact. Keeping the experience hands on, minds on is a challenge and the ability to provide not just technical support to those who facilitate groups in this medium but a technical support person who has a rich and connected background in teaching mathematics for understanding and is willing participate in the sessions is proving to be an important component of success with this medium. A goal in the coming year will be to find ways to link directly into school and District PLC scheduling in order to provide support to teachers during their working day.

References:

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- Willis, J., Thompson, A., & Sadera, William. (1999). Research on technology and teacher education: Current status and future directions. *Educational Technology Research and Development*, 47 (4), 29-45.

You can visit the **NRLC Mathematics Curriculum Corner** to preview plans, archived Elluminate sessions, and other support documents.

<http://www.nrlc.net/content/mathematics>

MOODLE SITE: Supports for Math K to 9 Implementation

<http://collaboration.pwsd76.ab.ca/course/view.php?id=76>

Family Math PowerPoints, Parent Newsletters

Assessment Samples

Lesson Samples

Activity Samples

Planning Samples

PD Video Samples

Cached Elluminate Presentations

Elementary & Junior High Cohort Planning and Assessment Pieces will be housed here

Support for Speakers:

ATA Day PRSD/HFCRD/MPTC

Speakers sponsored for math presentations to all divisions, Family Math, Administrators

Support for Leadership Capacity Building

Conversation Series: Peace River, Grande Prairie Dinner Series'

Elementary Cohort: cross jurisdictional leadership/coaching group

Junior High Cohort: cross jurisdictional leadership/coaching group

Mentoring District Coaches:

Meiling Hong: GPCSD

Marj Ferris: FVSD,

Corry Stark, April Brown: PWSO

Elementary Team: GPPSD

District Coaches: HPSD

AISI Leads: PRSD

Administrator Presentations: FVSD, GPPSD, HPSD

Number of Specific to Grade Levels Events:

Elementary Events: 41

Junior High Events: 21

Senior High Events: 19

Essential Condition	Action	Challenge
Teacher Buy In/Teacher Ownership		
<p>Teachers must see, feel, experience the need to change their approach to teaching and learning mathematics. Initiatives for change that become self sustaining are those that have “constituencies grow up around them” (Larry Cuban 1997).</p>	<p>Embed experiences within pd events that allow for the "aha" of sudden understanding. Embed evidence of student engagement, understanding and achievement. Provide models of different ways of "coming to know" mathematics.</p>	<p>This work will challenge their beliefs about themselves and their abilities. It is emotional work that can create feelings of anxiety and insecurity.</p>
Teachers Must Study the Mathematics		
<p>This curriculum demands that teachers teach math for understanding. They must understand how concepts are connected across grade levels and topics.</p>	<p>Embed opportunities for engaging in mathematical explorations into pd opportunities. Provide pd on teaching specific topics in ways that promote conceptual understanding. Cache samples and exemplars on Moodle Site.</p>	<p>Teachers were not taught mathematics this way. Uncovering and assessing conceptual understanding is a "new" idea for many. This work will challenge their beliefs about themselves and their abilities. It slow, cautious work must be sustained over long periods of time.</p>
Teachers Must Study the Curriculum		
<p>The front matter of the curriculum must be integrated into that study.</p>	<p>Make explicit links in all pd events to the significant sections of the front matter: Goals Processes Nature of Mathematics Relationships Instructional Focus <i>"Students will learn to set and attain achievable goals"</i></p>	<p>Provide models of non linear, integrated planning frameworks. Build links to other subjects and curriculums to allow teachers to see the integrated whole of teaching and learning as process. Link the focus on problems solving to all disciplines of study.</p>
Teachers Must Study Teaching		
<p>Through the use of manipulatives and a variety of pedagogical approaches, teachers can address the diverse learning styles, cultural backgrounds and developmental stages of students. Teachers must study, adapt and refine their teaching.</p>	<p>Provide vivid models of effective teaching through demonstration and observation lessons within workshops, on site visits to schools, video presentations during workshops. Provide planning and support for Districts to develop and distribute teacher coaches within their schools.</p>	<p>Teachers are studying ways of teaching that may not conform to their current beliefs or principles. Effective study of a new model of teaching can take as many as twenty to thirty hours; effective learning of the model may require fifteen to twenty active demonstrations (Joyce & Weil, 1999) and cannot be accomplished without direct coaching in the classroom.</p>
Teachers Must Study Student Learning		
<p>Students learn by attaching meaning to what they do, and they need to construct their own meaning of mathematics (<i>Alberta Program of Studies, 2007</i>)</p>	<p>Embed artifacts of student learning in pd experiences. Build a platform for sharing and engaging in student work on line, NRLC Moodle, Elluminate Sessions Provide samples of student learning for teachers to study: NRLC Moodle</p>	<p>Teachers must study student work samples that result from their change in practise. If the evidence from student work indicates that the innovation positively impacted achievement they will be more likely to incorporate it into their current practise.</p>
Systemic Support		
<p>Districts must develop and support the leadership capacity and expertise to sustain teacher growth. Implementation and sustainability are ultimately dependent on whether the essence of the reforms become part of the daily routines of the professionals who work in schools. (<i>Earl, Torrance, Fullan, Sutherland, Ali, 2003</i>)</p>	<p>Consulting Support Days specific to Districts to support implementation planning. Provide support for Parent, Aide and Administrator Presentations.</p>	<p>Change is an evolutionary process involving on going reflection and continuous re design. Even if desired changes are instituted successfully absent constant vigilance, organizations tend to revert back to older, familiar behaviors and attitudes. Change, once effected, must be institutionalized to endure.</p>

Event Summary 2009-2010

Summer Institute Seeing the World Mathematically
NRLC Provided Speakers

Summer Numeracy 2009 Two Day Event K to 9
Dr. Grayson Wheatley, Dr. Ralph Mason, Geri Lorway, Jackie Ratkovic

McATA Leadership Symposium: Triangulating Assessment
Team of K to 9 teacher leaders supported to attend

K to 6 Support 51 Events

Grade 2, 3, 5, 6 Peace River	Teacher Leadership Coaches co facilitating with Leadership Coach: Geri Lorway	Smartboards, Video tape Three /four day implementation series
Grades 2, 3, 5, 6 Grande Prairie	Teacher Leadership Coaches co facilitating with Leadership Coach: Geri Lorway	Smartboards, Video tape Three/ four day implementation series
Elluminate Pilot Series: K to 3	April Brown, Leadership Coach: Geri Lorway	Elluminate Series 4 parts
ATA Day Presentations	3 Teacher Speakers Provided	Grades 2, 3, 5
Mighty Peace Convention	2 Teacher Speakers Supported 3 Speakers Provided	K to 3, 4 to 6
Elementary Coaching Cohort:	Leadership Coach: Geri Lorway	Four day series: Cross Jurisdictional

7 to 9 Workshop Series 32 Events

Grade 7, Grade 8 Cohort	Jackie Ratkovic	Three day support for implementation series Smartboard Work included
Mighty Peace Teacher Convention 3 Sessions Provided	Jackie Ratkovic	
Grade 8/9 Cohort	Jackie Ratkovic	Three day support for implementation series Smartboard Work included
Junior High Assessment 3 Day Series Grande Prairie Peace River	Susan Ludwig	Two 3 day support for implementation series
Grade 9 Ready for Change: Grande Prairie	Jackie Ratkovic	Four day support for implementation series Smartboard Work included
Grade 9 Ready for Change: Peace River	Jackie Ratkovic	Four day support for implementation series Smartboard Work included
Grade 9 Ready for Change: Grande Prairie	Jackie Ratkovic	Four day support for implementation series Smartboard Work included
Junior High Coaching Cohort	Geri Lorway	Cross Jurisdictional

Senior High Pre-Implementation Support 21 Events

Ready for Change: Senior High:	Susan Ludwig	Pre-Implementation Day
Ready for Change: Senior High:	Susan Ludwig	Pre-Implementation Day
Senior High Institute January	Peter Lilejhedal	Provincial WeB CAST Local Facilitators Supported
Senior High Institute June	Peter Lilejhedal Local	Provincial WeB CAST Local Facilitators Supported
Senior High Leadership Cohort Building Local Capacity	Peter Lilejhedal	Illuminate Local Facilitators Supported
Mighty Peace Convention 2 Days Planning for 10C	Dr. Ralph Mason	Open to all Senior High Math Teachers
Common Ten UBD Planning	Susan Ludwig	Illuminate 4 Part Planning Series
Common Ten Pre Implementation Planning Peace River	Roslind Carson	On site planning with teachers
Math 10C Lesson Analysis UBD One day, 4 sites	Joan Coy	On site presentation introducing On-line materials available for Common Ten

Direct to District Support Days

Detailed on following pages

Consulting and planning support days to districts were used for Administrative Presentations, Family Math Night Planning, Specific grade level PLC support, On Site Demonstration Lessons, In School Coaching, Coaching Workshop Leaders, Coaching Coaches

PWSD: Contacts: Ian Osborne, Corry Stark, Mike McKay
2009-2010 In-School Support from Northwest Regional Learning Consortium

Math Implementation-PD Strategy—Direct Support to PWSD76 from NRLC.
 NRLC Math Project Coordinator/Consultant: Geri Lorway
 Phone (780) 826-1495 glorway@telusplanet.net

<i>Date</i>	Event	Who	Where
August 5	Planning	Corry Stark: Div 1 & 2	Teepee Creek
October 23	Workshop	Corry Stark: Div 1 & 2	Beaverlodge
December 18	Planning	Corry Stark: Div 1 & 2	Grande Prairie
May 18	Planning	Corry Stark: Div 1 & 2	Grande Prairie
Nov 24, Jan 8, Feb 25, June 2	Elementary Cohort	April Brown, Corry Stark	Grande Prairie
April 30	Assessment Symposium	Corry Stark	Calgary

The days above were provided with no charge to PWSD.

NRLC Math Implementation Supports PWSD Teachers participated in 2009-2010

- **Summer Numeracy** August 2009
- **Dinner Conversation Group:** monthly meetings, strong PWSD participation
- **Elementary Cohort:** 1 PWSD teacher sponsored
- **Grade 2,3,5,6: Workshops Series'** Various teachers participated
- **MPTC:** NRLC sponsored speakers for Div 1,2,3 and 4, Admin Presentation and Family Math Presentation

- **Senior High Institute Days** January & June 2010
- **Junior High Assessment Series** Susan Ludwig
- *This series was set up as a specific response to Mike McKay's request for support for his Junior High Cohort*

- **Introduction to Change at the High School** Susan Ludwig
- **Illuminate Senior High Planning Series** Susan Ludwig
- **Assessment Symposium:** 1 teacher sponsored from PWSD
- **Common 10 Lesson Analysis UBD:** Joan Coy Senior High

All NRLC Math Events are subsidized by AB ED grants. Participants are charged a minimal administration fee to cover registration and refreshments.

Fort Vermilion SD Contact: Kathryn Kirby
2009-2010 Direct to District Support from NRLC

Date	Grades	
September PD Day	2 and 5	April Brown, Geri Lorway
March 2	K to 6 Coaching, Workshops, Demo Lessons, Dinner Meetings	Geri Lorway
March 3	K to 6 Coaching, Workshops, Demo Lessons, Dinner Meetings	Geri Lorway
March 4	K to 6 Coaching, Workshops, Demo Lessons, Dinner Meetings	Geri Lorway
May 20	K to 6	School Visits, Demos, Workshops, Planning
May 21	Grades 2,3,4,5,6 & Senior high	April Brown Geri Lorway Joan Coy Meiling Hong
Various Dates	Coaching Support to Junior High Lead	Jackie Ratkovic
Dec 9, Jan21, Feb 3, Feb 17, Mar 24	K to 3 Elluminate Series	Geri Lorway, April Brown

The days above were provided with no charge to FVSD.

NRLC Math Implementation Supports FVSD Teachers participated in 2009-2010

- **Summer Numeracy** August 2009
- **Grade 2,3,5,6,7,8,9: Workshop Series** Various teachers participated
- **Junior High Cohort:** 1 FVSD teacher sponsored
- **Ready for Change Senior High Presentation:** Susan Ludwig
- **Senior High Institute Days** January & June 2010
- **Elluminate Series K to 3 Math:** 4 evening pilot specifically for FVSD
- **Administrators Presentation:** Susan Ludwig

All NRLC Math Events are subsidized by AB ED grants. Participants are charged a minimal administration fee to cover registration and refreshments.

HFCRD: Contact: Dana Laliberte
2009-2010 Direct to District Support from NRLC

Math Implementation-PD Strategy—Direct Support to Districts from NRLC.

NRLC Math Project Coordinator/Consultant: Geri Lorway
 Phone (780) 826-1495 glorway@telusplanet.net

Date	Grades		
Sept 23	Grade 5	PLC Support, Family math Planning Team	Geri Lorway
Sept 24	Grade 3	PLC Support	Geri Lorway
Sept 24	8/9	PLC Support	Jackie Ratkovic
Oct 14	7 to 9	Holy Rosary Manning	Jackie Ratkovic
Oct 15	7 to 9	Glenmary	Jackie Ratkovic
Dec 7	8/9	PLC Cohort	Jackie Ratkovic
Feb 23	8/9	PLC Cohort	Jackie Ratkovic
Mar 23	7 to 9	MacLennan	Jackie Ratkovic

All HFCRD teachers participated in our Grade specific Workshop Series this year. Grade 1 to 6 with Geri Lorway, April Brown, Collette Simpson and Meiling Hong. Grade 7 to 9 with Jackie Ratkovic.

NRLC Math Implementation HFCRD Teachers participated in 2009-2010

- **Summer Numeracy** August 2009
- **PRSD/HFCRD ATA Day** Speakers provided
- **Dinner Conversation Group**
- **Elementary Cohort:** 2 HFCRD sponsored
- **Junior High Cohort:** 2 HFCRD teachers sponsored
- **Speakers for MPTC:** Div 1,2,3 and 4, Admin Presentation and Family Math
- **Senior High Institute Days** January & June 2010
- **Junior High Assessment Series** Susan Ludwig
- **Introduction to Change at the High School** Susan Ludwig
- **Illuminate Senior High Planning Series** Susan Ludwig
- **Assessment Symposium:** 1 teacher sponsored from HFCRD
- **Joan Coy Series**

All NRLC Math Events are subsidized by AB ED grants. Participants are charged a minimal administration fee to cover registration and refreshments.

GPPSD Contact: Sharron Graham
2009-2010 Direct to District Support from NRLC

Math Implementation-PD Strategy—Direct Support to GPPSD from NRLC.			
NRLC Math Project Coordinator/Consultant: Geri Lorway			
<i>Date</i>	<i>Event</i>		
Feb 26	Grade 8 Coaching	Grade 8 PLC group	Jackie Ratkovic (Junior High)
October 23	Grade 2 Workshop	All Grade 2 teachers	Geri Lorway Grande Prairie
Nov 25	Coaching Support	Senior High/ Michelle Blair	Susan Ludwig Grande Prairie Composite High
January	Grade 5 Workshop	All Grade 5 teachers	Geri Lorway Grande Prairie
January 29	PD Day	All K to 6 math teachers	Geri Lorway/ April Brown Grande Prairie
March 24	Coaching Support	Senior High/ Michelle Blair	Ralph Mason Grande Prairie Composite High
April 30	Grade 9 Coaching and PLC	Grade 9 PLC group	Jackie Ratkovic (Junior High)
May 19	Admin Presentation	All GP Admin	Geri Lorway, Jackie Ratkovic
Nov 24, Jan 8, Feb 25, June 2	Elementary Cohort	Tracie Anthony, Jennifer Koganow, Lois Leibel	Geri Lorway Grande Prairie
April 30	Assessment Symposium	Tracie Anthony	Calgary
June 1	JR High Cohort	Jill Burgess, Tracie Trace	Geri Lorway

The days above were provided with no charge to GPPSD.

NRLC Math Implementation GPPSD Educators participated in 2009-2010

- **Summer Numeracy** August 2009
- **Admin Dinner Meeting:** August 2009
- **Dinner Conversation Group:** monthly meetings
- **Grade 2,3,5,6,7,8,9: Workshops Series** Various teachers participated
- **Elementary Cohort:** 3 GPPSD teachers sponsored, 7 participated
- **Junior High Cohort:** 2 GPPSD teachers sponsored, 3 participating
- **Speakers for MPTC:** Div 1,2,3 and 4, Admin Presentation and Family Math
- **Senior High Institute Days** January & June 2010
- **Junior High Assessment Series** Susan Ludwig 3 Days
- **Introduction to Change at the High School** Susan Ludwig
- **Illuminate Senior High Advisory & Planning Series** Susan Ludwig Linear Functions Unit
- **Lesson Analysis 10C UBD:** Senior High Support Joan Coy

All NRLC Math Events are subsidized by AB ED grants. Participants are charged a minimal administration fee to cover registration and refreshments.

HPSD 48: Contact: Evan Dearden
2009-2010 Direct to District Support from NRLC

Math Implementation-PD Strategy—Direct Support to HPSD from NRLC NRLC Math Project Coordinator/Consultant: Geri Lorway Phone (780) 826-1495 glorway@telusplanet.net			
<i>Date</i>	Event	Who	
Nov 17	K to 6 Coaching	AISI Project Support : Kinuso	Geri Lorway
Nov 18	K to 6 Coaching	AISI Project Support: Fahler	Geri Lorway
Dec 8	Admin Presentation	AISI Project Support	Geri Lorway: High Prairie
Feb 9	K to 6 Coaching	AISI Project Support	Geri Lorway: Schurter School
Feb 24	Coaching Demonstrations	Grade 7 to 9	Jackie Ratkovic: Donnelly School
April 26	Coaching Demonstrations	Grade 7 to 9	Jackie Ratkovic: Prairie River School
April 29	Coaching Demonstrations	Grade 7 to 9	Jackie Ratkovic: Kinuso School
Nov 24, Jan 8, Feb 25, June 2	Elementary Cohort	Jenna Cox, Melissa Julia Drefs, Kim Corless	Grande Prairie
April 30	Assessment Symposium	Brenda Coloumbe, Andrea Pollock	Calgary
June 1	Junior High Cohort		Grande Prairie

The days above were provided with no charge to HPSD 48.

NRLC Math Implementation HPSD Teachers participated in 2009-2010

- **Summer Numeracy** August 2009
- **Grade 1, 2, 3,4, 5, 6 Workshop Series** All HPE teachers participated in these 4 day series
- **Elementary Cohort:** 2 HPSD sponsored teachers, 4 participated
- **Junior High Cohort:** 1 HPSD teacher sponsored
- **Senior High Institute Days** January & June 2010
- **Illuminate Senior High Advisory & Planning Series** Susan Ludwig
- **Assessment Symposium:** 1 teacher sponsored from HPSD, 2 attended
- **Common 10 Lesson Analysis UBD:** Senior High Series Joan Coy

All NRLC Math Events are subsidized by AB ED grants. Participants are charged a minimal administration fee to cover registration and refreshments.

PRSD: Contacts: Carol Fedoruk, Gail McNabb
2009-2010 Direct to District Support from NRLC

Math Implementation-PD Strategy—Direct Support to PRSD from NRLC.			
NRLC Math Project Coordinator/Consultant: Geri Lorway Phone (780) 826-1495 glorway@telusplanet.net			
Date	Event		
Feb 2	Div One Cohort	Implementation Support	Kennedy Elementary, Geri Lorway
Feb 3	Div Two Cohort	Implementation Support	Berwyn School, Geri Lorway
Feb 4	Classroom /visits	Grade 5/6, 5, 2	Nampa, Kennedy, Springfield Schools
March 30	Div One Cohort	Implementation Support	Kennedy Elementary, Geri Lorway
March 31	Div Two Cohort	Implementation Support	Berwyn School, Geri Lorway
May 4	Div One Planning	Year Planning	Kennedy Elementary, Geri Lorway
May 5	Div Two Planning	Year Planning	Berwyn School, Geri Lorway
June 24	Common 10	Planning	Roz Carson
June 25	Common 10	Planning	Roz Carson

The days above were provided with no charge to PRSD.

NRLC Math Implementation Supports PRSD Teachers participated in 2009-2010

- **Summer Numeracy** August 2009
- **Dinner Conversation Group:** monthly meetings
- **Elementary Cohort:** 2 PRSD teachers sponsored
- **Junior High Cohort:** 2 PRSD teachers sponsored
- **Grade 1,2,3,4,5,6: Workshops Series'** Various teachers participated
- **Ready for Change Series: Grade 9:** Four days at Peace River High with Jackie Ratkovic
- **PRSD/HFCRD ATA Day** Speakers provided
- **MPTC:** NRLC sponsored speakers for Div 1,2,3 and 4, Admin Presentation and Family Math Presentation
- **Senior High Institute Days** January & June 2010
- **Junior High Assessment Series** Susan Ludwig
- **Introduction to Change at the High School** Susan Ludwig
- **Illuminate Senior High Advisory & Planning Series** Susan Ludwig
- **Lesson Analysis 10C UBD:** Senior High Support: Joan Coy

All NRLC Math Events are subsidized by AB ED grants. Participants are charged a minimal administration fee to cover registration and refreshments.

