



Working Together to Make a Difference



Lori Gibson

Lori Gibson holds a Master's Degree in Educational Leadership and has teaching degrees in mathematics and physical education. She is currently a Math Staff Developer for Bismarck Public Schools. Lori has presented at many state and regional conferences, provided staff development for districts and has served on many district and state committees.

A vita and more information about Lori's qualifications, experiences and references will be given upon request.

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Note: Teachers may obtain continuing education credits by participating in the courses. The course descriptions may be changed to align with the goals of the district or professional development plan. All sessions give teachers time to collaborate with others and an opportunity to be actively involved in the learning process.

More Professional Development for Math Teachers

Algebra! Algebra! Algebra!

Connecting the Five Representations

For: Teachers grades 4-12.

Goals: Participants will:

- Deepen their Algebra content knowledge.
- Engage in many rich Algebra problems to see the connections among the five representations (table, verbal, graph, geometric model, and algebraic expression)
- Recognize key mathematical ideas with which their students are grappling.
- Appreciate the power and complexity of student thinking.
- Develop questioning skills that will help students deepen their mathematical understanding.
- Make more mathematical connections, enhancing their ability to help their students do so.

Note: This course consists of 8-10 three-hour sessions. It can also be condensed to meet the needs of the district.

NCTM Principles & Standards of School Mathematics

For: Teachers grades K-12.

Goals: Participants will:

- Become familiar with process and content standards.
- Reflect on their current teaching practices and align them with the national standards.
- More information will be given upon request.

Note: This can be a 1-5 day professional development opportunity.

Research-Based Teaching Practices in Mathematics

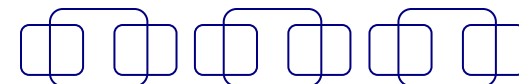
For: Teachers grades K-12.

Goals: Participants will:

- Become familiar with current research and how we can help students retain information.
- Obtain information on different teaching strategies to help reach all learners.
- More information will be given upon request.

Note: This can be a 1-5 day professional development opportunity.

More courses are available to meet your district's needs.



Professional Development for Teachers

Effective Questioning Techniques, Brain Research, Effective Teaching Strategies and Much More Opportunities



If you have questions about the content of these professional development opportunities, contact Lori Gibson.

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Professional Development for Teachers

Effective Questioning

This course is designed for teachers grades K-12. This can be a 1-5 day professional development opportunity for districts.

This professional development opportunity will invite teachers to look at the following questions:

- How can effective questioning help transform a traditional, teacher-centered classroom into a student-centered, inquiry-oriented community of learners?
- What are the connections between quality questions and student learning and achievement?
- Why are there gaps between what we know about effective questioning and what we do in the classrooms?
- What makes a great question?
- What types of questions are appropriate in certain situations?
- How many questions are ideal in a 50-minute period?

Teachers will have the opportunity to learn about:

- Questioning to advance thinking, learning, and achievement.
- Formulating questions that trigger thinking.
- Engaging all students in answering questions.
- Prompting to promote thinking.
- Teaching students to generate questions.

There may also be an opportunity for teachers to collect data on the types and numbers of questions that are being asked. Effective tools will be provided to help teachers gather data from their classrooms. The data will help them to reflect on and improve their instruction.

Work Smarter, Not Harder

This course is designed for teachers grades K-12. This can be a 1-5 day professional development opportunity for districts.

This professional development opportunity will invite teachers to look at the following questions:

- How do experts learn and how is this different from non-experts?
- What can teachers and schools do - with curricula, classroom settings, and teaching methods - to help children learn most effectively?
- How much time does it take for the brain to decide if the information is important enough to go to working memory, so it has a chance to go into long-term memory? You will be surprised!
- Are there practical instructional strategies that we can implement in our classrooms to help students retain information *after* the test?

Objectives:

Teachers will:

- Reflect on their own teaching practices. What strategies are working? Which ones are not?
- Become more familiar with "new research about the mind, the brain, and the processes of learning that provides answers to these and other questions."
- Become familiar with how teaching strategies affect student learning.
- Feel comfortable creating lesson plans for different learners by having this experience at the end of the course.
- Become familiar with the different learning modalities and will learn how to teach to different learners.

One of three things must happen before students store information in long-term memory. After becoming familiar with the different learning styles, teachers will look at different ways of reaching all students. This session will give teachers ideas on how to work smarter, not harder to reach all students.

Professional Development for Math Teachers Developing Mathematical Ideas (DMI)

For: Teachers grades K-8.

Goals: To help participants:

- Learn more mathematics content.
- Recognize key mathematical ideas with which their students are grappling.
- Appreciate the power and complexity of student thinking.
- Ask questions of students that will help them deepen their mathematical understanding.
- Make more mathematical connections, enhancing their ability to help their students do so.

Note: This course consists of 8-10 three-hour sessions or can be condensed into a 5-day workshop.

Fostering Geometric Thinking

For: Teachers grades 4-12.

Goals for Teachers:

- To understand a conceptual framework to help teachers understand middle school students' thinking in geometry and measurement, and to guide them in engaging their students' thinking more productively,
- To explore rich mathematical problems in geometry and measurement, and tools for discussion and reflection aimed at deepening teachers understanding of geometric thinking,
- To further develop teachers' approaches to gathering and analyzing data about how students' thinking about geometry and measurement develops, and
- To further develop teachers' approaches to discussion about mathematics, curriculum, student thinking and other issues related to teachers' practice.

Note: This course consists of 8-10 four-hour sessions or can be condensed to a 3-day workshop.

More professional development opportunities for math teachers are listed on the back of this brochure.