

Math Night

Facilitator's Guide

Microsoft

Math Partnership



Welcome!

The Microsoft Math Partnership would like to thank you for your commitment to math education in our schools. The more a student knows about math, the more options he or she will have in life. Your teaching and guidance will help to ensure students have the higher-level math skills needed to succeed in college and work.

This booklet is intended to be a guide to help you plan and facilitate a math night in your community. It was designed to give schools and districts the tools needed to hold a meaningful event that successfully meets these objectives:

- Inform parents and students about the importance of math in today's global economy.
- Provide a safe venue for parents and students to express their thoughts and concerns about math.
- Facilitate discussions about math-related topics of interest in your community (i.e. curriculum, state policies, teaching, homework, tutoring)
- Nurture an open, two-way communication channel between the school and the community.

In the pages to follow, you will find a step-by-step guide to planning a math night. Please keep in mind that this is just a guide – a starting point to help you on your way. Since every district and every school is different, our goal is just to provide you with a proven framework that you can then customize to fit your community's needs.

If you have questions or feedback, please feel free to contact Joshua Halsey, learning and teaching research coordinator of the Puget Sound Education Service District at (425) 917-7808 or jhalsey@psesd.org.

For more information on K-12 education reform and school improvement efforts, visit www.partnership4learning.org.

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What is the Microsoft Math Partnership?

Launched in November 2006, the Microsoft Math Partnership is an initiative to raise student achievement in math in Washington State. Microsoft is acutely aware of the increasingly important role that advanced math and science play in today's economy as well as how success in math can play a role in student achievement overall.

Partnered with the American Institutes for Research, Microsoft developed The Gateway to Student Success in Mathematics, a report of national and statewide math and science research and implications for Washington's K-12 education system. Out of that research, Microsoft found that to dramatically increase the proportion of students graduating from high school with high-level, globally competitive skills, we must dramatically increase the number of students who achieve proficiency in algebra in their middle school or early high school years.

Since middle school algebra is the "gatekeeper" for student participation and success in secondary math and science (the math concepts taught in algebra provide a foundation for higher level math competencies), the goal of the Microsoft Math Partnership is to prepare all students to pass algebra by 9th grade.

As part of this initiative, The Microsoft Math Partnership has committed \$6M in grants to middle schools in eight Puget Sound area school districts -- Seattle, Highline, Bellevue, Northshore, Lake Washington, Issaquah, Renton and Kent.

The funds will support a regional project plan that will include teacher and school leader professional development activities and resources for instructional design, curriculum & assessment alignment, cross-discipline integration, peer coaching, professional learning communities and family support.

Microsoft Math Partnership



Step 1: Develop the Agenda

Every good event starts with a good plan. Developing an agenda for the evening will help you to think through the key components that make a successful event:

- **What's the goal of the event?**
- **Who should be invited?**
- **Where can I hold the event?**
- **When should it take place?**
- **Do I need a speaker at the event? If so, who should it be?**
- **What topics will be of interest? What issues should we discuss?**
- **What kind of food should I serve at this event?**
- **Will I need audio/visual capabilities?**
- **How will I pay for this event?**

While this may seem overwhelming, a good agenda will ultimately help to answer these questions for you. Each agenda will, of course, be different. But there is a standard framework to run a successful math night.

On the next page, you will find a sample agenda to get you started. This agenda is developed for a math night with parents and students. You'll see that we've suggested an evening event, no more than two hours long. We've also included guidelines for the time allotted to each speaker and/or segment. The agenda includes a mix of speakers to give you ideas for the kinds of topics to address, a Microsoft Math Partnership presentation that covers the key math messages (see the PowerPoint included in this packet) as well as various hands-on activities and information tables to give parents and students a relevant, interactive experience.

All of this and much more is incredibly important when developing an event agenda. Be sure to read through our [Master the Logistics](#) section on page 6 for more.

Sample Agenda

6-8 p.m.

- I. DINNER SERVICE (5:00pm – 6:30pm)**
- II. “Why Does it Matter?” 30-sec clip**
 - a. Provides an eye-catching opening to your event.
 - b. Helps to frame the issue of why math is important.
- III. Welcome from the superintendent or principal (3 min)**
 - a. Thank everyone for coming
 - b. Brief overview of the purpose of the event
 - c. Brief overview of the Microsoft Math Partnership
- IV. Microsoft Math Partnership Presentation given by event facilitator, i.e. math coach, teacher or other school person (10-15 min)**
 - a. The importance of middle school math
 - b. Key math messages
 - c. How math improves the odds
- V. Keynote Speaker (10-15 min) OR Open Session (1 hour)**

<ol style="list-style-type: none"> a. A dynamic speaker who can talk about how math is important in their career. 	<ol style="list-style-type: none"> a. Parents and students break off to learn more about a topic of interest, see VII.
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- VI. Panel Discussion (30 min – 15 min panel ad 15 min Q&A)**
 - a. Three panelists who each speak for no more than five minutes.
 - b. Include on the panel a high school student, a parent and a teacher
 - c. OR-include employers and admissions officers to discuss their expectations, observations and perspectives on the level of math needed to get into college and get a job.
 - d. Question and Answer
- VII. Supporting Your Child's Success in Math (30 min)**
 - a. Parents and students break off to learn more about a topic of interest, or for resources at the following tables:
 - i. Sample Test-taking Table (COMPASS, WASL, etc.)
 - ii. Career Paths Table (info on math needed for various jobs, college and work readiness, etc.)
 - iii. Math Coaching/Resources Table (local math tutor, counselor, etc.)
 - iv. Parent Involvement/Activities Table (info on what parents can do to help their kids, math activities)

Step 2: Master the Logistics

The difference between a good math night and a great math night is in the details. From the venue to food to childcare, thinking about the details will add value and convenience, increasing the number of attendees and creating a comfortable environment for them to best absorb the information you're sharing.

Secure the right venue.

A math night can be held in numerous locations. School cafeterias, local library, the campus center at the community college – the sky's the limit. But there are a few key things to think about when securing a venue:

- **How many people do you anticipate showing up?** You want to make sure whatever venue you choose is big enough for everyone.
- **Are there tables and chairs already available?** If you are serving dinner (which we highly recommend!) tables are ideal. At the very minimum, make sure there's enough seating for everyone and enough space for people to walk to and from their seat.
- **Is there enough room for a "stage" area for presenters and a panel?** Depending on how the room is set up, you may need to create an elevated "stage." You don't want parents sitting in the back row straining to see who's talking up front.
- **What's the audio visual situation like?** Your math night will likely require microphones and PowerPoint capabilities, possibly including a screen, projector and computer hook-up. You want to make sure your venue is able to accommodate your event needs.
- **Where are the restrooms and trash bins?** It may sound like a silly, minute detail but these two things are actually quite important! You want to make sure there is a restroom nearby as well as an adequate amount of trash receptacles.
- **Is there enough parking?** Taking your anticipated number of guests into account, be sure to pick a venue that has ample parking.



Cater to your audience.

Parents and students are busy. To get people to come to your math night, you have to make things as easy and convenient as possible. Here are some key tips that can make a world of difference:

- **Provide a meal.** (i.e. communal spaghetti or pizza feed). This not only softens stressed parents, but provides an added incentive.
- **Provide childcare.** For many parents, childcare is essential in order for them to attend school-related functions. However, involvement of all children in math activities can be beneficial, as well. Consider including in your programming activities appropriate for young children.
- **Consider the language needs of your audience.** Whenever possible, arrange for translation for non-English speaking parents. Work with translators prior to the night of the session to make sure meaning and content is correct.
- **Be on time.** Make sure that your event starts and ends on time. Staying on schedule shows that you appreciate and respect the time commitment made by your attendees. It can also encourage folks to come back for a future event.
- **Offer incentives.** Sometimes the first step is just getting people there. Door prizes are a great way to get parents and students interested in your event. From t-shirts to games to electronics, door prizes will encourage attendance.

Promote your event.

Now that everything is set, you want to publicize your event through a number of mediums. Be sure your announcements include:

- The main topic
- Date, time and location
- Childcare and meal information
- Door prizes and other incentives
- Translators
- RSVP date and contact
- Encouragement for parents to bring friends and relatives!

Be sure to get the information out far and wide!

- Send flyers home with students or mail them out far enough in advance.
- Have teachers announce the event in their classrooms.
- Have school counselors talk to their students about attending the event.
- Post flyers about the event around the school and in your neighborhood.
- Talk to people about the event. At open houses, the library, the grocery store, with your kids and have them spread the word! Tell as many people as possible.
- Send out reminders one week to several days before.
- If possible, follow-up reminders with an email.

Confirm everything!

An event like this will probably be planned months in advance. So two weeks before the event, you want to make sure that the commitments made to you are still strong.

- Call your caterer or food provider and make sure they have the right date, time and number of mouths to feed.
- Email all of your speakers and confirm the time and date.
- Confirm your door prizes.
- Check up on your venue and audio visual set-up.
- Make sure your childcare provider is set.
- Be sure to have contact numbers (preferably cell phone) for all of your speakers and vendors.
- Double check anything and everything to make for a nearly flawless event!
- And after all that, be sure to clear your calendar the day of the event to supervise the set-up, tend to last minute logistical needs and deal with any "fire drills" that may surface.

SAMPLE Event Timeline

Please keep in mind that this is just a guide and is based on a three-month timeframe. We recommend creating a detailed timeline for your event with specific dates that work for you.

Task	Due Date
Meet with key people to develop the agenda (this could include math teachers, your principal, superintendent, etc.)	Week 1
Develop, edit and create a near-final agenda	Week 2
Secure a venue. If you don't have a good sense of how many people will likely show up, pick somewhere that can be flexible with the space. Make sure you have one point of contact to work with from now until the day of the event. (i.e. Choose a venue big enough if large numbers turn out, but where you're able to partition off a section of the room or arrange tables closer together should you have a smaller group.)	Week 3
Reserve a room near your venue for childcare.	Week 3
Hire a childcare provider.	Week 4
Research food options and plan your meal. (NOTE: You should be able to confirm the exact number of expected attendees with your vendor a few days before the event. Ask when they require a final count.)	Week 4
Secure translators, if needed.	Week 4
Reach out to potential speakers.	Week 5-7
Develop event flyers, electronic announcements, a blurb on your school website, etc. to promote your event.	Week 6-7
Reach out to businesses and other related organizations for door prize donations.	Week 6-10
Get the word out!	Week 7-10
Call your venue to confirm the number of attendees, discuss room set-up and audio visual needs.	Week 10
Call your food vendor and confirm number of attendees, when you'd like them to deliver/serve the food, and any other needed logistics.	Week 10-11
Confirm your childcare provider.	Week 10-11
Email all of your speakers to confirm their attendance, time of their presentation and talking points, if needed. Send your speakers a map to the event and coordinate parking and any other logistics.	Week 11
Confirm the delivery of all your door prizes.	Week 11
Meet with your math teachers.	Week 11
Finalize your PowerPoint presentation.	Week 12
Get to your venue early to make sure everything is set the way you want it – tables, chairs, A/V, etc. Make sure you have a list of contact numbers (preferably cell phone numbers) for all your speakers and vendors.	Day of the event

Step 3: Manage your Message

Once your agenda is in place and you have a clear focus for your event, you want to make sure that you, your presenters, the teachers, counselors, school administrators, and anyone else who will be interacting with parents and students are all on the same page. The easiest way to confuse parents and students is by sending too many or mixed messages! Here are a few strategies to ensure that your message is consistent:

Talk to your school administrators about the math night.

It may sound like a no-brainer, but it's an important step that can sometimes be overlooked. Make sure that your district superintendent understands the importance of math and is aware of the work you're doing to educate parents and students. This is why we suggest having the superintendent open the math night – to get them involved.

Then, talk to your school principal.

Invite him/her to your math night to see what it's all about. Having your principal's support will be a key component to improving math education at your school.

Convene your math teachers well before the event.

A math night is a great opportunity for parents and teachers to communicate. But before this interaction occurs, you want to make sure your teachers are prepared to answer any "tough" questions parents may ask. And you want to make sure they all answer the questions in the same way. At your meeting, brief you teachers on:

- The math night agenda
- Purpose and goals
- Roles and responsibilities
- Talking points
- Resources for parents

Distribute the teacher talking points.

In this packet you will find "talking points" for teachers about math. We've culled the most frequently asked questions parents tend to ask their child's teacher in regard to learning, curriculum and common math myths. Some of these questions can be difficult to answer, so we've provided some suggested responses for teachers. It's incredibly important that all teachers have the same responses to these questions so parents and students feel confident about math education.

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Teacher Talking Points for
Parent Math Questions

What are teacher talking points?

While some parents see highly demanding and rigorous about their child's math learning, others can be confused and bewildered. In either case providing parents with correct information about math education is crucial to supporting student learning. The following is a list of 10 common questions parents ask about math and suggested responses or "talking points." Math teachers should also feel free to make notes and take answers to the needs of the parent or presenter.

EXCERPT FROM "ADVANCING SUPPORT SCHOOL MATHEMATICS," BY THE MATHEMATICS EDUCATION LEADERSHIP TEAM ©

1. How can I help my child when he or she comes home and I don't understand the assignment or how he or she was taught?

Math homework may look different from what you've done in the past, but that's ok. Homework should always reinforce or extend something you have already covered in class. So your child should be able to explain it to you, just allowing your child to talk through their thinking can help. If your child consistently seems to have no idea what the homework task is, contact the teacher and let them know what you can help.

My Notes: _____
2. What about basic facts? Why don't you care about them any more?

We DO care about students knowing their basic facts. Our math program is written to help ensure that your child understands number relationships, for example, while they are learning their number facts. It's not new, nor is it a goal of our math program, that some children have trouble learning basic facts. They too struggle from time to time. If your child struggles with basic facts, I can work with you to provide additional opportunities to learn through fun games and activities, or some computer programs at home.

My Notes: _____
3. I see teachers stop teaching two months before the state test so that they can spend time getting ready for the test. I see these tests crowding out the meaningful kinds of learning experiences that should be happening. What can I do about this?

You are right to be concerned by these testing practices. As teachers, we need to assess your child's understanding in order to provide appropriate learning experiences. But, that being said, one testing trend is mandated by the state of Ohio. Ohio's state testing is a high-stakes test that impacts on children, math programs, and classrooms. There is a great deal of information about various methods of testing and their impact available at the website www.ohioeducation.gov. We encourage you to check it out and continue to communicate your concerns to me, my administrators and to your friends, neighbors, and legislators.

My Notes: _____

Microsoft Community #6665 - www.microsoftmathpartnership.org
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Step 4: Engage your Audience

Okay, so you've done a great job planning your event, you have a clear message, objective and everyone is on board. Now, it's show time and you want to make sure the parents and students are engaged. Here are a few tips on how to make your event interactive and fun:

- Be clear about your message, you don't want to overwhelm the audience.
- Acknowledge the widespread fear of math, as well as the many misconceptions that may exist in the greater community.
- Consider opening the session by getting a sense of your audience and ask for the grade-levels of participants children.
- Give out door prizes in between speakers.
- Use multi-media when possible – video, PowerPoint, music, images, etc.
- Always emphasize the importance of basic skills, while balancing the need for deep understanding of math concepts.
- During presentations, try to engage participants in simple math tasks that demonstrate the points about the skills or knowledge you want to make.
- Have tables set-up for parents and students to learn more about a specific topic or engage in a math-related experience. For example, tables for parents and student to access school counselors, tutors or resources; play math games; pick up materials on college and work readiness, scholarships or financial aid; or take a sample WASL or COMPASS test.
- Let parents ask questions of the speaker but save the open question and answer period for the end.
- If pointed or angry questions come up be prepared to respond in a respectful/non-confrontational way.
- Anticipate that you might be asked how you know new math programs work--have resources prepared for parents to access research and make sure they are credible.

Step 5: Feedback and Follow-up

Whew! Congratulations, you made it through. Now what? It's a good idea to hold a debriefing meeting with teachers, coaches and other key people involved in the math night. That way you can assess what your school's parents really responded to, what worked during the night and what didn't. Also, teachers may want to share the individual questions, comments and concerns they received from parents that may not have been appropriate to address in the midst of the event. This type of meeting can give you the space to make necessary changes while the event is fresh, plan ahead and enlist help for the next event.

Something to consider: you may want to ask event participants to fill out a short feedback questionnaire. That way, you may receive more honest comments that attendees may have been too embarrassed or intimidated to share.

On the following page is a sample questionnaire for your use.

SAMPLE Math Night Questionnaire

<Insert name of event and/or location>

<Insert date here>

Your feedback is very important to us so please take a few minutes to fill out this quick questionnaire. Please rate the following sections of the event on a scale of 1-5 (1=strongly disagree, 5=strongly agree).

1. This event was well organized.

1 2 3 4 5

2. What did you like best and what would you improve about the organization of the event?

3. The keynote speaker was informative, relevant and interesting.

1 2 3 4 5

4. What was the most interesting/helpful thing you learned from the keynote speaker?

5. The information shared during the panel discussion was useful.

1 2 3 4 5

6. What topic did you find most helpful? What topics/presenters would you like to see in the future?

7. Please circle one. Overall, the information presented on math:

Confirmed what I already knew

Made me more aware

Was not helpful at all

8. Overall rating for the event (1=not informative/poor 5=very informative/excellent)

1 2 3 4 5

9. Additional comments or feedback: