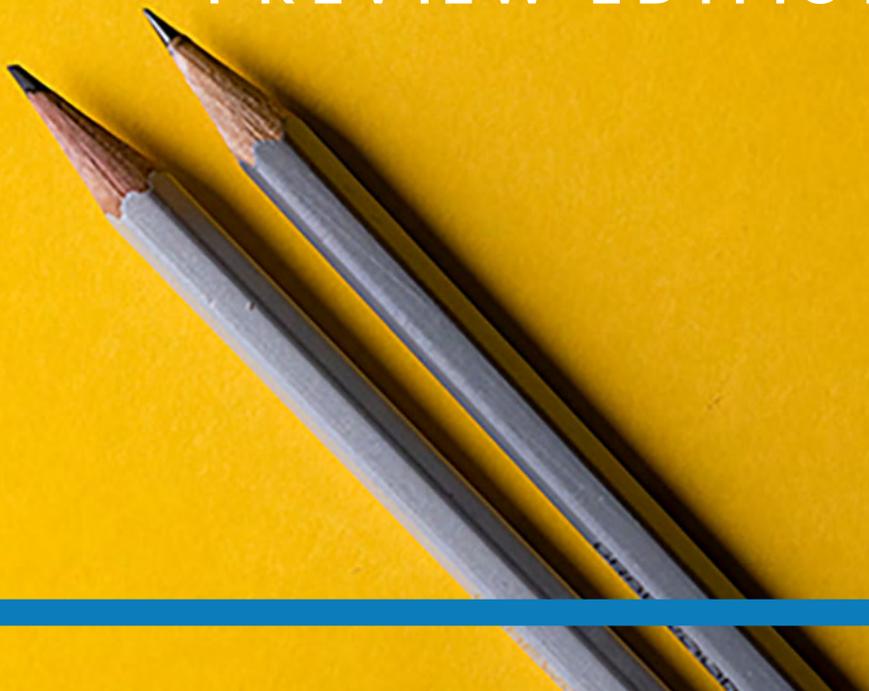


Math Adventure

PRESENTS

THE
MATH
ADVENTURE
KIT

PREVIEW EDITION





SECTION 1: INTRODUCTION

We're excited to share this kit with you! You're one of the first people to read this nearly-final version – thank you. We're making this version free, so that you can read through and hopefully have clarity on all of the parts of the event, the timeline, staffing, and cost structure. We want you to be able to ask us any questions you might have before buying the full kit.

A Math Adventure Night is designed to be a truly unique take on a math night:

- It blends math puzzles, dramatic mini-adventures, and rewards for a roughly two-hour event that fosters teamwork and builds community at your school.
- It requires about 4-6 weeks of preparation, and a few dedicated volunteers to get it rolling ahead of time, plus a bunch of volunteers the night of. (Those volunteers can be the parents of the kids attending, or can be older students looking for volunteer hours.)
- It gives kids a reason to do math, where they work together to solve puzzles, unlocking clues that help them solve the dramatic mini-adventures, earning small rewards along the way. Those then lead to more puzzles.
- We've built these events and this kit after 10+ years throwing fantastic Math Adventure events in the Seattle area, watching kids grow from anxious about math to excited for their next math puzzle.

**We want to help you spread this important idea at your school:
math can be fun!**



USING THE KITS

With the right people at the helm, and with this kit, you'll have an event that will get your school community excited about math, something they'll be talking about for a long time.

Subsequent years will get easier, since your community will know the event, and so will the people doing it, so selling and staffing it will become smoother to put on, and easier to advertise.

As we publish future Math Adventure kits, you'll have a terrific math night every year, each with a different storyline and puzzles, and new, fresh material for the kids to enjoy and experience.



HOW EVENTS WORK

The night of the event, kids will arrive in teams, and will always have a parent coach with them. As they solve each puzzle packet, they reveal a clue which leads them to an adventure, unlocking a key part of the storyline they're now part of.

That storyline is fueled in part by volunteer actors, many of which will be parent volunteers acting out parts of the story via scripts. Every adventure, once successfully completed, earns the kids another puzzle – and a reward.



WHY KIDS LIKE THEM

Upon completion of the adventure, the kids have the satisfaction of knowing they've completed several major goals throughout the evening, and that all of those goals have been powered by math. They have become the heroes of their own story.

The event is non-competitive, so kids and teams can move at their own pace. Puzzle packets are at grade-level, so there is no special kid preparation required to do the event. Parent volunteers do have some preparation, depending on the role they select. The focus of this event is showing kids that math really can be fun.



WHAT'S IN THIS PREVIEW, AND WHAT ELSE IS AVAILABLE

The complete kit has three parts. We provide the first part as a free preview, so that schools can evaluate if the Math Night Adventure Kit is right for them. Then, if they want to move forward, they purchase the premium, all-in kit.

The free preview. This how-to document – which you’re holding – provides an overview of what the event is, what and who you’ll need to run it, how to staff it, and the cost structure for an event. Hopefully, it gives you a sense of what it’ll take for you to host the event at your school, and will give you the confidence to purchase the full kit.

The in-depth resources and instructions. Once the kit has been purchased, we provide both PDF and online resources which include (but are not limited to):

- A breakdown of costs and ways to raise funds
- Instructions by role for staff
- Marketing templates for community engagement
- Complete registration instructions and recommendations
- Ideas and best practices on volunteer recruitment and retention
- Puzzle self-diagnostics for kids to determine their best Adventure Level
- FAQ and how-to videos with our founders and puzzle creators
- Supply lists, event milestones, and checklists for every station and role
- Ongoing customer support by email

The story and the puzzles. What’s the night without the adventure? Once the kit has been purchased, you receive a complete storyline and a set of puzzles that interlock with that story.

- There are two puzzles per grade, K-6, depending on when you host your event – in the first half of the year, or in the second half.
- Plus, one of those puzzles gets a bonus twist just for your school – we customize one of those puzzles to your kids and location, working with you to find an answer that’s unique to your community.
- Along with the puzzles, you’ll receive all the scripts and instructions you need to gather everything you need to immerse your kids in the Math Adventure that will make math fun.



SECTION 2: SCHOOL SUPPORT, SELECTING A DATE, AND STAFFING

So let's help you figure out how to make this event happen. This section focuses on building school support, selecting a date, and staffing requirements.

GATHERING SCHOOL SUPPORT: SELLING THE IDEA

In the last 10+ years of doing these kinds of events in the Seattle area, we've had a lot of experience selling the idea to various stakeholders – principals, teachers, PTAs, and general school communities. Rather than put that information in the kit, we've added it to our website, since we're guessing that you might have already done that step.

But – if you haven't, we're here for you! Please visit www.mathnightadventures.com/sellingtheidea.

SELECTING A DATE AND BUILDING A TIMELINE

To ensure the most community support and involvement, we recommend choosing a Friday evening, or whichever night is traditional for evening activities at your school. Pick one that is far from a holiday or vacation week.

Also, choose a date where the entire school can be booked, so that you have full access to all areas of the school, and you're not conflicting with other activities that might draw resources – or students and parents – away from this Math Night.

FALL, WINTER OR SPRING?

We've found that having a Math Adventure in winter or spring is easiest, given the ramp-up time required. But it's really up to you and your event calendar – and your team – to determine what's right for your school community.

We also know that math levels change through the school year, so we include two puzzle levels per grade in the puzzle kit. If you want to do a fall or winter event, use the easier one (A). If your event is in the spring, use the harder one (B), which by then will be just right.



HOW FAR IN ADVANCE SHOULD YOU START PLANNING?

If this is your first Math Night, we recommend starting 3 months in advance. Now, you can absolutely turn this around sooner – in as little as 4-6 weeks – but with less lead time, you may find it more difficult to secure students and parent volunteers. That being said, it's been done, and anything is possible with the right organizers!

Depending on how your school plans events, you might need to attend your PTA's board meeting or general session, and propose the idea there – or work with your school's principal to propose the idea to her or him, and then bring that to the PTA.

In the full kit, we provide checklists, event timelines, and complete instructions on how to build out the milestones, event staff, the marketing, and the community support you'll need to have this event at your school. We want to help you make this as easy as possible.



STAFFING

How many helpers will you need, and how should you sign them up?

This depends on how much time each person has. Rather than prescribe how many people you'll need, we've listed out on the following pages the types of jobs there are, along with what each job type will do. You may find that one person can do multiple job types, or that you'll need one person for each type. You might even find that two people want to split up a job type. It really depends on your school.

What follows are outlines of each job type – the full kit's Resources section gives complete details and step-by-step instructions on how to do each of these roles.

NOTE: In the Appendix at the end of this document, there's a sample of the full instructions for one role, Registration – so that you can see the depth of information provided in the full kit.

THESE ROLES DO MOST OF THEIR WORK IN THE WEEKS LEADING UP TO THE EVENT.



EVENT LEAD (CHAIR)

Goals:

1. Find people to sign up for the roles in the first section below – the roles that need to be done prior to the event
2. Confirm the event with the principal, teachers, and PTA
3. Secure any budget needed ahead of time
4. Set up an Information Night if needed (an agenda and talking points for this are provided in the full kit)
5. Help the other roles move through their event milestones towards the event date



REGISTRATION*

Goals:

1. Manage the registration list
2. Develop a system for individual students and teams to register
3. Help parents find and use that registration system, whether in paper form or online (or both)
4. Create teams out of individual students and partial teams
5. Communicate with those teams before the event, so they know what team they're on
6. Once lists are finalized, tell the team count to Purchasing, and the team count by level to Printing
7. Have a point person available the night of the event, so that when teams arrive, they know where they're sitting



VOLUNTEER RECRUITMENT

Goals:

1. Recruit volunteers according to detailed instructions
2. Work with Registration to see how many volunteers you have signed up via teams, and how many more you still might need
3. Make sure that parents don't sign up for multiple roles
4. Assign volunteers to roles
5. Hand out and track any other paperwork required by your school-age volunteers
6. Communicate role assignments to Volunteer Coordination

Detailed instructions for each role are provided in the full kit.

**** See the appendix for a detailed sample of this role.***

THESE ROLES DO MOST OF THEIR WORK IN THE WEEKS LEADING UP TO THE EVENT.



MARKETING & ENGAGEMENT

Goals:

1. Gather templates from the marketing templates section of the website and customize them
2. Consider planning an Information Night
3. Send out emails and website announcements
4. Use hand-outs and print-outs
5. Send emails to teachers for them to send along to families
6. Use PTA General Meeting Announcements
7. Make life easier with the Event Milestones Checklist (provided in the full kit)



PRINTING

Goals:

1. Print out puzzles in the right numbers: determine a final print count by grade and ordering the print jobs (or print them up yourself)
2. Pack up and delivering the puzzles to the stations
3. Print team lists for each station, and for check-in
4. Print table numbers



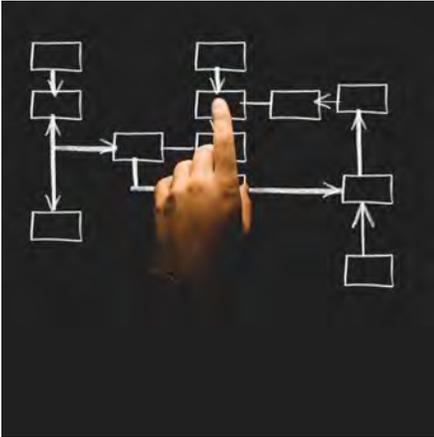
ACCOUNTING & PURCHASING

Goals:

1. Collect registration fees (if applicable)
2. Match fees to teams
3. Purchases props and giveaways
4. Track expenses of props and giveaways, to arrange for reimbursements
5. Track any PTA funding
6. Make a final report back to the PTA , accounting for any net income or cost overruns

Detailed instructions for each role are provided in the full kit.

THESE ROLES ARE SPECIFIC TO THE NIGHT OF THE EVENT, AND REQUIRE LITTLE TO NO PREP AHEAD OF TIME.



ON-SITE VOLUNTEER COORDINATION

Goals:

1. Work with Volunteer Recruitment to ensure volunteers arrive to their roles and know what they've been assigned to
2. Have a complete list of volunteers and assignments prior to and at the event
3. Be visible and present at the event and can help volunteers find their places
4. Know the event well, and can help last-minute volunteers find roles
5. During the event, rove to ensure that all roles are covered and kid volunteers are taking breaks



PUZZLE SOLVING STATION LEAD

Goals:

1. Understand the larger story happening at the event
2. Know how many volunteers needed as Math Mentors, and who they are, prior to the event (work with Volunteer Recruitment)
3. Calm and correct common early jitters
4. Oversee the end of the event



THEATRIC STATION LEADS (4)

Goals:

1. Understand the larger story happening at the event
2. Understand well the narrative happening at the station you've been assigned to
3. Know how many volunteers you need for your story to be successful, and who they are, prior to the event (work with Volunteer Recruitment)
4. Oversee the station, or jump in to take on a role if needed
5. Calm and correct common early jitters
6. Deal with bottlenecks

Detailed instructions for each role are provided in the full kit.



SECTION 3: STORY SUMMARY

This year's event is called A Cold, Creamy Crime. In this adventure, a local ice cream factory has been burglarized, and the frantic scientist asks the police for help. Kids are junior officers, and the police chief instructs his force (the teams) to get on the case. They'll need to figure out:

- What was stolen? (An ice cream with special powers)
- Does it work? (Yes, one of the scientists who tried it has now turned invisible)
- Can they get it back? (Yes, the secret formula is locked in a safe inside a cantina)
- Who stole it? (One of a series of suspects)

As they move through the adventure, they receive ice cream toppings as rewards at each station, and fill out key questions on a police report. At the end, they turn in that police report to the chief, summarizing their findings and earning their final prize: a bowl of ice cream, which may, or may not, be the secret ice cream formula! If the ice cream toppings have survived this far, the kids now understand what to do with them.

So as you can probably tell, your main giveaways for this event are going to be ice cream and toppings. Your main props will be police-officer and villain related. The kids love becoming junior officers for the night. The next section outlines the costs associated with the items that you'll need for the various stations, and what we estimate costs to be.



SECTION 4: COSTS

Now it's time to think about the costs associated with the event: mainly, paper for printing the puzzles, the props needed for the event, and the giveaways.

There are three main buckets of costs associated with this event. Prices below reflect an estimate for an event that has 100 students or 25 teams. While we've sourced everything as if we're buying it new, you *shouldn't*! You should source items from your school community – that's a great way to engage them in building this event, and it'll save lots of money, too.

On the following pages, you'll find recommended items, with links to where we've found costs on sites like Amazon.com. These are only suggestions; in rare instances, such as the wordlock, there is a very specific item that must be purchased in order for a puzzle adventure to work correctly - we point that out in the pages that follow, so you can see the costs for those items.



PROJECTED COSTS FOR AN EVENT WITH 100 STUDENTS

PRINTING

The first cost focus is **printing**. This depends greatly on your printer costs – and printing must be done single-sided, so that kids can each work on one side of paper at a time.

Printing	If you had an event that had 100 kids, each of them would have 4 puzzles, plus extra papers for intro sheets and answer sheets. Plus some other extra puzzles as back-up, and other items printed out above, that's about 750 sheets of paper. We estimate a cost of \$0.12/sheet.	\$90.00
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GIVEAWAYS

The second area of focus for budgeting is the **giveaways**. Below is everything you'd need to source. We have included links to Amazon, as a convenience only and as a pricing benchmark. (Please note, prices below were accurate as of September 2017 and may have changed.)

Ice Cream	Two possibilities here – scoop your own, or buy from your district.	Scoop your own: \$35 per 3 gallon tub at Cash & Carry, 60 scoops per tub \$70 Buy pre-scooped from the district: \$1.50 each \$150
Bowls	4 oz paper cups , \$14.99 for 50	\$29.98
Spoons	Taster spoons , 150 count	\$10.00
Ice Cream Toppings	Anything that is allergy friendly! Perhaps Skittles, chocolate chips, sprinkles, and cake decorator sprinkles. Be sure to ask your students if they have any allergies.	\$60.00
Measured Topping Scoops	2 oz. scoops (half-fill them when giving out candy)	\$12.99
Ziploc Bags	Sandwich bags , for holding the toppings till the end	\$10.99
Police Badge Stickers	2 rolls of stickers	\$14.98



PROJECTED COSTS FOR AN EVENT WITH 100 STUDENTS

PROPS

The third area for costs is props. With a 100-kid event, you'll want to have 2 of each station, so we recommend getting 2 of several items below.

Wordlocks	2 word locks that have a four-letter combination and can spell "NINE"	\$16.00
Tool Boxes	It's important that the locking mechanism can fit the word lock shackle. This is a great example of an item you can probably source from your community, but if you have trouble finding one, this one is an example for \$18.	\$36.00
Police Hats	These police hats are \$8.00 (at time of writing), and would work well.	\$32 .00 for four
Lab Coats (optional)	While not required, they are effective for determining scientists from officers and detectives (and villains), these coats are \$15.	\$30.00
Optional additional costumes	There are several villains and detectives in the story. We recommend having those people dress up as they like, letting them know ahead of time that they'll be playing those roles and letting them have some fun with it.	No cost

Ultimately, many of the items on this page can be sourced from your community, or a thrift shop. But the first two are key for making one of the puzzle stations work correctly - particularly the wordlock.



NEXT STEPS

Ultimately, we want you to be successful, which is why we've made this part of the kit free – we want you to understand up front what's involved in putting together a Math Adventure Night, but we also want you to know that we've got your back. We have so much information and so many resources to share with you as part of the full kit.

That full kit includes the puzzles, the storyline and scripts, a meeting with our founder, templates, checklists, supply lists, and even videos to show parents how the puzzles work. All of that is \$295 – our introductory price as we work this year to build a loyal fan base.

It's as comprehensive as we can make it, without making it overwhelming. We've learned a lot in the last 10 years, and now we're ready to empower you to make this happen at your school, so that we can start making this happen at more schools, and keep developing more events at the same time. We hope you'll join us on this new endeavor.

Thank you for reading this far, and please let us know how we can help you!

-- David, Noelle & Scott
The Math Adventure Team



APPENDIX: SAMPLE INSTRUCTIONS FOR THE REGISTRATION ROLE

The instructions on the following pages are intended to show the breadth of instructions each role in the Staffing section will receive – we have many hard-won tips and tricks, and we'll be passing that along as part of the full kit.

The idea is, once someone signs up for a role, you'll be able to give them a few pages that succinctly explain what they're signing up for, and provide links to all the resources they could need and want to be successful.

We'll have articles and videos with additional help for many of these roles. We realize that some people on a committee like to forge their own path when they agree to adopt a role, while others like to keep to how things have been done before - and some work right between those two extremes.

So rather than prescribe the right path, we're going to provide everything we can think of, and let you and your team decide what's right for you.

A photograph showing several children sitting around a table, focused on a project. One child in the foreground is wearing a green wristband and is using a blue marker to write on a piece of paper. Another child is pointing at a large green sheet of paper that appears to be a map or a diagram. The scene is brightly lit, suggesting an indoor classroom or activity room setting.

REGISTRATION ROLE INSTRUCTIONS

1. Manage the registration list

Once the event is advertised, and parents understand what it is, you should start to see registrations pretty quickly - be ready. Have one person who is in charge of the registration list, or have a centralized list (a fileshare location). See more on that below.

As you get closer to event night, there are invariably some changes that come up – a child drops out, someone begs to come in. You’ll need to make sure you have one person who tracks these changes in one place – so that there’s one list where the information lives, and one person that people know to contact with these changes.

2. Develop a system for individual students and teams to register

Some parents will register their students as complete teams, while others will not have fully formed teams, and might register a partial teams. Yet others might register a single student, and ask you to create a team for them. So this will require some spreadsheet magic on your part! On our website, we’ll provide a sample spreadsheet to help with this process.

Paper Forms. On our website, we’ll provide a link to a template that you can use for the paper registration form. You’ll notice that there are fields for both teams and individuals – this is to help you start building lists of individuals who want to participate, but who haven’t found a group yet. We’ve found that many students really want to participate, but limiting the event to just teams limits the number of students who end up participating. That’s why we’ve learned to open it up to individual registrations too. It’s more work to create the teams, but so many more kids end up joining the fun. You’ll also notice that we have not explicitly added anything to this registration form about collecting money or selling tickets – this is intentional, since it’s up to you whether you want to make this event free, or sell tickets. You can adjust the template to meet your needs.

Online Forms. For online registration, the simplest – and free – way to do this is by creating an online form. Your own PTA website may have this functionality, or you can use something like Google Forms to create one. Just make sure that the information you collect mirrors the paper form above exactly, so that you can register both teams and individuals alike.

A photograph showing several children sitting at a table, focused on filling out a registration form. One child in the foreground is using a blue pen to write on the form. The table is covered with papers, including a large green sheet with a grid or map. The children are wearing casual clothing, and the scene is brightly lit, suggesting an indoor setting like a school or community center.

REGISTRATION ROLE INSTRUCTIONS

3. Help parents find and use that registration system, whether in paper form or online (or both)

Paper Form: We recommend making this available to your school community 6 weeks ahead of the event. You'll notice that it's got two pages – it's designed to be printed double-sided, so that information on the event is on one side, and the registration information can be filled out on the other. Make this available in your school's front office, and hand it out to students to take home.

Online Form: If you have a school website, PTSA website, or emails that go to the school community, add a link to the form there. If you need help writing the marketing copy (blurb), you can find pre-written notes in the Marketing Templates section of our website.

4. Create teams out of individual students and partial teams, so that there are teams of ~4 students each by grade level, come event night

Working in teams is one of the most rewarding parts of this Math Night. But building a team in the early stages of planning for the event can be intimidating to some kids and parents who aren't sure who to include on their team. Here are some guidelines that should help.

- **Teams at same grade level.** First off, it's very important that all kids on a team be at the same math level – puzzle packets will always be at the same level, so the kids doing them should be, too. While it's tempting to have siblings on the same team, this should only be done if those siblings are at the same math level or close in level.
- **Four kids to a team.** Each puzzle packet has four puzzle pages. If each team has four kids, each kid has one page to work on simultaneously, and an early finisher can help out someone else who might be having some trouble working out a problem. Then, the kids can put their pages together to see what solution or clue they've revealed after all their good work.
 - **Notes on teams of 3 and 5.** Sometimes, 4 isn't possible – either a kid drops out at the last second, or it was hard to build a team of 4. Other times, you have one too many and end up with 5. This is okay! While we strongly encourage teams to be 4 kids – there are 4 pages to each puzzle – 3 or 5 can work. Teams of 3 might find that they require a bit more time to finish each of the puzzle packets, or a parent can fill in as the 4th kid. Teams of 5 will need to have two kids buddy up on a puzzle. These are solvable problems.

(More on this topic on the next page.)

A photograph showing several children sitting around a table, focused on a project. One child in the foreground is wearing a green wristband and is writing on a piece of paper with a blue pen. Another child to the right is wearing a red jacket. They are looking at a large sheet of paper that appears to be a registration form or a project plan.

REGISTRATION ROLE INSTRUCTIONS

(Creating teams continued...)

- **When in doubt, ask your teacher!** Teachers are a great resource for helping to build a team among classmates. If a parent and student are trying to figure out how to build a team, asking their teacher can be a big help.
- **Create an individuals list.** It helps to have Registration build a “Looking for a Team” list of individuals who haven’t found a team yet. You can then build teams from that list as more individuals come in.

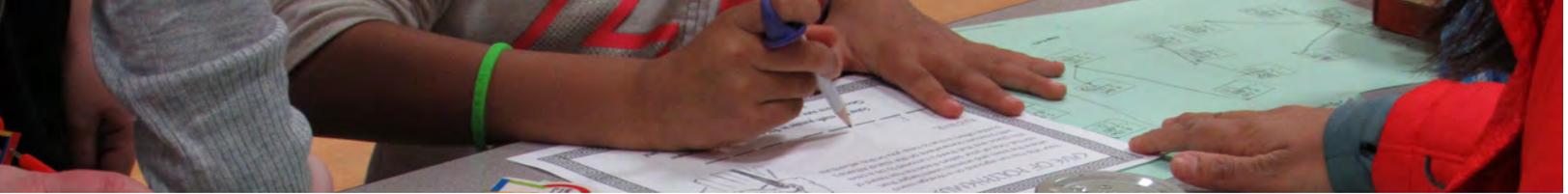
Make sure that your registration deadline is about 2 weeks prior to the event night, so that you have time to create teams from the incoming registrations. Team creation can be tricky – you might have to create a team of 2-3 students, for example, if that’s how the individuals play out. It may be tempting to create a team split between two grades, but you cannot combine their packets, so they’d need to all do the lower grade. All of this is doable – it’s just a matter of how the individuals come in. If you have one student extra, you can create a team of 5, we’ve done it. Just talk to the parents involved. For more information and tips on creating teams, see this web page ([Link to come](#)).

5. Communicate with those teams before the event

This communication takes several forms:

- Confirming the registration of a team once you’ve processed it
- Telling individuals what teams they’re on
- Working with existing teams to see if they’re okay having another individual on their team (if that situation arises)
- Working through payment issues as they arise (if applicable)
- Creating a list of email addresses that can be used by other groups, particularly the volunteer coordination roles
- Reconciling too-similar or exactly the same team names, and reaching out for alternatives
- Letting them know their table numbers before they arrive (you can assign these)
- Removing duplicate entries – sometimes two parents will register the same team
- Helping teams drum up volunteers, both coaches and the volunteer they need to provide

Keeping a clean list is critical – whoever does this role has to be dedicated to maintaining clean, fresh data that is always up-to-date.



REGISTRATION ROLE INSTRUCTIONS

6. Once lists are finalized, tell the team count to Purchasing, and the team count by level to Printing

As soon as you have a firm idea of how many kids are coming, letting the people know who are doing the buying of supplies and the printing of puzzles is key, so that they can start planning out their duties too.

7. Have a point person available the night of the event, so that when teams arrive, they know where they're sitting

By the night of the event, every kid who arrives should already know which team they're on - that will have happened via the communications mentioned in a prior step.

The night of the event, each team needs a table, and so each table needs to have a table number on it. Each team therefore needs to know what their table number is. This can be handled a couple of ways. You can either have a person sitting at a table that says "Registration," so that people can line up to find out which table they're at; or, if you don't have the manpower to do this, you can use the alternative below. Either way, you have to have a system where teams can be found, so that you can hand them their first puzzle packet - this is important so that you have an easy way to give them their first puzzle. (We don't recommend giving them their first puzzle when they arrive - the temptation to dig right in is just too great!)

Alternative: have a printed list of team names and table numbers. This would effectively be the same list that the person at the table above would have, but just posted on a wall or doorway near the entrance, or in a couple of locations. The real benefit of this idea is that it cuts down on the waiting line that always seems to crop up around the start time of the event.

In the full kit, additional resources would be provided here in the form of links to templates, articles, checklists, and videos. The full kit will be available in late October.

Make math fun for your school!

Math Adventure

Events combine

Puzzles + Theater + Teamwork + Rewards

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