Bedtime Math Mobile Apps

UPDATE! A new study led by University of Chicago psychologists and published in *Science* shows our Bedtime Math app **significantly boosts kids' math performance**. Read more about it here.

If you've been loving our daily math problem, now you can get all-you-can-eat Bedtime Math in full color on our **iPhone/iPad** or **Android** app! Click for the daily math problem, a surprise math problem, or any math problem in our archive, which you can browse to find your favorite topics. Hidden answers, swooshing stars and friendly sound effects make this the best math app for bedtime or anytime!

With an average rating of 4.75 stars on the App Store, we've reached the top 20 free education apps on iTunes, and were also rated the "Best Free App of the Day on iOS" by Top-Kid-Apps.com.

Click here to see our app on the Apple App Store
…and here it is on the Google Play Store

Harvard Family Research Project

www.hfrp.org

May 24, 2016

Q & A with Laura Overdeck of Bedtime Math: Helping Families and Children Cuddle Up to Math

Margaret Caspe

FINE Newsletter, Volume VIII, Issue 2
Formula for Success: Engaging Families in Early Math Learning

Voices From the Field

Bedtime Math is a nonprofit organization that strives to help kids love and appreciate math in their everyday lives. Bedtime Math provides families and children fun math stories and problems they can share together, and offers afterschool instructors and librarians a curriculum for running math clubs. HFRP recently caught up with Laura Overdeck, the founder of Bedtime Math, to learn more about her work.

Q: Tell us a little bit about the inspiration behind Bedtime Math.

A: People who are good at math, and who love math, think and talk about it and tinker with it everywhere, all the time—not just in school. Unfortunately, we live in a society that associates math with school. This is problematic, because math education in schools right now is limited. Schools often rely too heavily on work sheets instead of hands-on learning experiences. And learning in schools is not very personalized, so children who struggle with math early on often don't have opportunities to catch up. Math is also not very well integrated with other subjects. Because of this, students are learning math in isolation from other subjects and struggling to see its relevance to their lives. Until schools can do a better job with creating hands-on, personalized, and integrated math education, those of us outside of school have a role in making sure it happens. So,

in a rather unpremeditated way, my husband John and I began to tell math stories to our young children at night after we read them a book, and little by little, this grew into Bedtime Math.

Q: How does Bedtime Math work?

A: In essence, Bedtime Math is a series of daily math problems that are embedded within funny stories, riddles, or facts about the real world that families and children can share and solve together before bedtime. Families can access the problems by signing up for free daily emails, downloading the free Bedtime Math mobile app, or by simply going to the Bedtime Math website. We also have a series of books with many of the same problems. Each math story has three levels of challenge tailored to fit three approximate age groups: wee ones (2–5), little kids (6–8), and big kids (9 and older).

People often tell me, “I know to read to my kids, but it never occurred to me to do math with them.” Bedtime Math fills this void, and gives families a way to get involved in their kids’ math learning in a fun way. It’s important to emphasize that these problems are not quizzes or workbooks. Although we provide families with the answers, they are intended to be fun ideas to get families and children taking a journey to talking about logic and finding solutions. For example, we created a nationwide math activity for preschools and families to get involved in called March of the Stuffed Animals. We are asking children to bring their favorite stuffed animals to school and take a census of them. We want math to be something exciting to all students—everywhere, all the time—and for schools to be a partner to help get this idea out there.

Q: In addition to your Bedtime Math program that is focused on math in the home, you also have the Crazy 8s Club. Tell us about that.

A: We want kids to enjoy math and see it everywhere, even older kids who might have outgrown having a parent read to them at night. So Crazy 8s was started as an afterschool math enrichment program to get kids excited about math through hands-on fun activities. The program comes in a kit, and it is designed as a series of eight weekly one-hour workshops where students can get involved in everything from glow-in-the-dark geometry to toilet paper Olympics! We see it being used by afterschool providers and librarians in diverse economic settings and it’s all free—we just ask that in return providers promise not to use it during school hours.

Q: We know that data are important to your work. Can you talk about the types of data that you collect and what you are finding?

A: We're really excited here because researchers at the University of Chicago recently conducted a randomized control trial of our app and found that using the app increases math achievement among first graders across the school year. What was really exciting was that even using the app as little as once a week makes a difference. We also found that the app makes a difference especially for children whose parents have anxiety about math. We speculate that what Bedtime Math is doing is giving families and children comfort in talking about numbers and awareness of how math is in everything, and that, in turn, is changing the types of conversations that are happening in the home. Because remember: Our app is not about instruction about math per se. It just offers short math problems.

In addition to the external impact studies, we also collect data using a variety of metrics to help us improve what we do. We're always interested in the types of content that families and children are most likely to read—anything about vehicles, animals, and food is always a big hit—and we find that videos are a big draw. For Crazy 8s, we look at retention of kids across sessions and to understand from coaches what some of the challenges are to holding math clubs. Some of the most common challenges are finding space and working out scheduling.

Q: What recommendations would you offer families who want to get more engaged in their children's math learning?

A: It's so important that families have a mind-set that math is casual. It's something that happens as part of our everyday lives. For example, baking, carpentry, playing sports—they all involve mathematical reasoning, and it's important for parents to feel comfortable and empowered to talk about math as they use it every day.

I also think it is important for families to wait for children to struggle with math problems. We often tell the coaches in the Crazy 8s program that it is good to let kids wrangle with a question and try to derive their own solution. They need time to figure out why answers are what they are because that is what math is. If possible, parents can also take a step back and help connect what's happening in real life to things kids might come home with in school. For example, if you've just doubled the recipe you are baking with, you can specifically point out how this might relate to multiplying fractions on a work sheet.

Finally, and maybe most importantly: Don't say you hate math! You need to be aware of how you talk about math.

This resource is part of the May 2016 FINE Newsletter*. The* FINE Newsletter *shares the newest and best family engagement research and resources from Harvard Family Research Project and other field leaders. To access the archives of past issues, please visit www.hfrp.org/FINENewsletter. To subscribe to the* FINE Newsletter, please visit our subscription center.

© 2016 Presidents and Fellows of Harvard College
Published by Harvard Family Research Project