

NBA MATH HOOPS PROGRAM PROFILE



NBA Math Hoops is a basketball-themed board game in which students “draft” NBA and WNBA players, play in pairs to race against the clock, and solve problems by applying their knowledge and skill of operations with whole numbers and rational numbers. Students “shoot free throws” for additional points, where the likelihood of making the shot is based on the real-life accuracy of the professional player they have drafted.

The game is geared toward students in grades 3–8 or any student who needs to bolster their operations and estimation skills. Additionally, through the team-building aspects of the game, opportunities to participate in local and national tournaments, and a supportive atmosphere, students develop important social-emotional skills.

In what ways does participating in NBA Math Hoops influence student and teacher math learning and enjoyment?

NBA Math Hoops is collaborative and competitive and helps students gain fluency with operations while also fostering social-emotional competencies. The game is also flexible; math teachers, physical education teachers, and after-school providers are among the types of adults who shared positive experiences coaching NBA Math Hoops. NBA Math Hoops was originally designed as a physical board game, but the organization also created an online version where students can play against peers online or engage in solo practice.

The game teaches you for a lifetime, not a moment. Everyone can do it, regardless of ability.

NBA MATH HOOPS COACH

This is a product of the Overdeck Family Foundation funded Math ReEngagement Project that profiled innovative math programs that can be used outside the school day. WestEd conducted high-level studies of each program by administering student and teacher surveys and organizing observations and/or teacher interviews. Learn more about this work and view other profiles at: [WestEd.org/MathReEngage](https://www.wested.org/MathReEngage).

Students in grades 3–8 may not be interested in practicing their math facts in a traditional way, but the interactive, fast-paced nature of the game lets students have fun while they cement their fluency with numeric operations. The NBA Math Hoops game is paired with a curriculum in which teachers are provided lesson plans on sportsmanship and fair play, which many coaches have reported contributes to a positive classroom environment.

I like how you have different roles to play and you have to work together for the multiplication. And I like that there's math included, but they make it fun because it's a game as well.

NBA MATH HOOPS STUDENT

NBA Math Hoops promotes social–emotional learning and strategic thinking while emphasizing math fundamentals.

NBA Math Hoops pits pairs of students against one another, so students have an opportunity to compete, but they are also supporting a teammate. This feature of the game, coupled with NBA Math Hoops' curriculum, means students learn how to encourage their partners and to win and lose with grace. One student described what she liked about Math Hoops by saying, "It creates companionship, and you make new friends and can be a leader."

Students who use NBA Math Hoops report making friends, enjoying math, and feeling proud of their learning.

NBA Math Hoops holds a tournament every year (with an online tournament during the 2020/21 and 2021/22 school years due to the COVID-19 pandemic) in which top players from across the country can face off against one another. These tournaments provide students with an incentive to do their best, and they give them an opportunity to meet new friends. The NBA Math Hoops organization also makes these trips

exciting for students by flying them (with their teachers and caregivers) to the tournaments, teaching them about the mathematical aspects of basketball (such as accounting and team management), and introducing them to representatives from NBA and WNBA teams. Students relish these opportunities; they shared during a focus group that they were happy and excited to participate.

Attendance has improved. Behavior has definitely improved and their math scores have improved. They wanted to come to school because of what we do.

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Beyond these special events, normal gameplay excites students, and they value its role in their skill development. Students said NBA Math Hoops helped them, increased their knowledge, and improved their skills. One added, "The things I like are math, friends, and writing [on the score sheet]." Another added that he went from liking math to "like-liking" math to loving it, all through his Math Hoops experiences.

NBA Math Hoops coaches see increased math fluency and sportsmanship in their students.

It helped kids get to know each other better, and interact with students they probably wouldn't have. They became more comfortable. Also, here in Philly, the sportsmanship in our city is very intense. I found students in the school yard would start to say 'Hey, sportsmanship,' and use that language when they would do something unkind. They would call each other out, and if I was around, I would say, 'Hey, sportsmanship.' We had that shared language. I saw them carry that outside the classroom.

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Coaches and students consistently report high levels of satisfaction and enjoyment with the game, which is supported by the observation data of NBA Math Hoops events. These findings are consistent with survey data collected previously from NBA Math Hoops educators, who reported that playing the game promoted teamwork among students and also made math more relevant and accessible.

It gave my kids belonging and connectedness. They can do the math. Now I can communicate with you, and I know my math facts. We saw we had commonality.

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Competitive kids become more supportive, all kinds of kids join. On the flip side, it turns the quieter kids to have a more competitive nature. You've seen the quiet kids get louder, more excited, and kids who are trying to win calm it down, provide support to other kids.

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Implications and Next Steps

NBA Math Hoops offers students important opportunities to learn mathematical content through play using a context that interests them. Programs like this—that help students build important mathematical and interpersonal skills and that infuse math learning with joy—are valuable for student development. As students gain confidence in their math skills and practice demonstrating positive interpersonal behaviors, the rewards for teachers and students alike will only increase.

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