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FOOTBALL SCORES BIG IN CLASSROOM

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Like many high schoolers, John Hagen's algebra students worry about passing.

But they also worry about rushing. And receiving. And scoring.

They've become miniature NFL coaches, tracking the performance of key players in their own fantasy football league. In the process, Hagen's previously math-resistant students have joined a growing number of kids who get a kick out of multiplying and dividing points and yards so they can see whose team came out on top.

"You don't really look at it as math that much because you're doing sports," student Jessica Zamora, 17, said.

Hagen started the fantasy league at the beginning of the year at Foothill High School, an alternative school in San Jose's East Side Union High School District. He figured it would help his students -- many of whom aren't shy about saying they don't like math -- to see fractions and equations in a new way.

"The whole goal is for students to make connections between math at school and math in the real world," said Dan Flockhart, a former Bay Area math teacher who developed the fantasy sports curriculum that Hagen uses.

The program is catching on: Hagen's class was filmed in October for a TV segment on fantasy football and math that is scheduled to air on ESPN's "Outside the Lines" Sunday, and more books in Flockhart's fantasy sports series are set for release this spring.

Using fantasy sports in the classroom was a natural step for Hagen, who had been playing fantasy baseball since 1990 and fantasy football for about six years. As a kid playing sports, he was the one teammates turned to when they wanted to know their batting average.

Flockhart was the same. "I would stand on first base and do the division right there," he said. In the 1990s, he started a fantasy football league in his classroom at St. Matthew's Episcopal Day School in San Mateo.

Within weeks, something weird started to happen: The kids who didn't always turn in their homework were suddenly showing up on Monday with their assignments done.

"The kids were more excited about doing the work that was related to fantasy football than doing the work that was straight out of the textbook," said Flockhart, who lives in Fortuna and teaches at College of the Redwoods.

So he started to make the fantasy football lessons mirror the textbook. He had his students make graphs to measure their team's performance, and he developed different equations that would reflect the concepts his students were learning.

The idea became Flockhart's thesis topic at Humboldt State University, and he finished the first draft of the book in 2004. "Fantasy Football and Mathematics" was officially released in August 2005, and his first print run sold out in five days.

Flockhart has since written books on fantasy baseball and fantasy basketball, and his publisher plans to release new editions of eight books -- a teacher's guide and a workbook for fantasy football, baseball, basketball and soccer -- in the spring.

Hagen found Flockhart's Web site before the start of the school year and set up a league based on his system. Each team had a budget of \$42 million and a list of values for each player -- with the big-name players such as Indianapolis Colts quarterback Peyton Manning and San Diego Chargers running back LaDainian Tomlinson costing the most.

"The only week that you need to know anything about football is the first week, when you pick your

players," Hagen said. To even the playing field, Hagen gave each of his three classes the "Tiki Barber Test": The handful of students who could correctly identify Barber as the star running back for the New York Giants were named team captains.

Some picked players from their favorite teams: Alex Arias, 17, snagged Frank Gore, the running back for his favorite San Francisco 49er. Jessica said her team didn't know much about the different players, so "we saw the ones who cost more and said, 'We're getting those,' " she said.

Each week, the students calculate their team's points using a formula that crunches the rushing, receiving and passing yards, field goals and extra points down into one score for the week. There are more than 100 equations in Flockhart's book, each focusing on a different math concept -- fractions, exponents, factorials. A touchdown can be worth the square root of 144, he said, or 10 to the third power, depending on what concept the teachers focus on.

Hagen said his students have taken to the program -- even when he ditched the easier equation they'd been using early on in favor of one with fractions.

Maybe, Alex suggested, that's because playing fantasy football doesn't feel like math.

"It's better than math," he said. "You really don't pay attention to the numbers -- it's just yardage."