



HOLT, RINEHART AND WINSTON
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**HOLT, RINEHART AND WINSTON PARTNERS WITH QUANTUM TO OFFER
ARTIFICIAL INTELLIGENCE TUTORS OVER THE INTERNET**

ORLANDO— Holt, Rinehart and Winston (HRW), a recognized leader in textbook publishing and online learning tools for secondary education, announced today that it has entered a long-term agreement with Quantum Simulations, Inc., a leading developer of artificial intelligence (AI) tutoring technologies. HRW will offer Quantum Intelligent Tutors for high school chemistry, high school physical science, high school integrated science and middle school physical science over the Internet. HRW and Quantum will showcase the tutors at the National Science Teacher Association (NSTA) Conference in San Diego, California, March 27-30, 2002, with plans to release the products for the fall school year.

The agreement with Quantum is part of HRW's strategic initiative to offer robust e-learning curricula along with textbooks, providing a complete, integrated multi-media learning experience for teachers and students. HRW will offer the Quantum Tutors on a subscription basis.

“Our market research shows that tutorial programs are the number one supplement requested by teachers,” states Ellen M. Standafer, Vice President of Science Product Development at Holt, Rinehart and Winston. “As states struggle with increasing graduation requirements in science, standards-based instruction and high stakes testing, teachers are looking for targeted solutions to ensure mastery of core concepts. The use of Quantum Intelligent Tutors will undoubtedly ensure proficiency in core skill areas such as writing formulas, balancing equations and understanding stoichiometric relationships. I have never seen a software product that compares

instructionally and pedagogically with the Quantum Intelligent Tutors and am especially pleased with how it dovetails with our program philosophies.”

“HRW is the first textbook publishing company to utilize AI technology for chemistry and physical science,” states Rebecca Renshaw, Executive Vice President and spokesperson for Quantum. “For the first time ever, students, teachers and schools will have a truly intelligent tutor embedded in the highest-quality online textbooks.”

“Our dialogue-driven technology takes HRW’s online learning to a level never available before,” adds Dr. Benny Johnson, President and CEO of Quantum and co-developer of the company’s patent-pending AI technology. “The Quantum Tutors actually converse with students, providing real-time feedback based on the students’ work entered into the software. The Tutors respond to student questions, give hints, show correct next steps and even explain why a step is correct or incorrect using scientific principles.”

Collaborative research conducted by Quantum and Duquesne University, the Pittsburgh Public Schools and the University of Kentucky indicates that students using Quantum Tutors show significantly improved achievement.

Holt, Rinehart and Winston is a leading publisher of textbooks and educational materials for grades six through 12. It is part of the Harcourt Education Group, America’s premier provider of instructional materials and standardized tests for grades K through 12. Other Harcourt Education companies include Harcourt School Publishers, Steck Vaughn, Rigby, Classroom Connect, Harcourt Trade and Harcourt Educational Measurement. Since July 2001, Harcourt Education has been a member of the Reed Elsevier plc group. For further information, please visit <http://www.hrw.com> or <http://www.harcourt.com>.

Quantum Simulations, Inc., based near Pittsburgh, Pennsylvania, is a business-to-business provider of artificial intelligence tutoring engines that power existing software, hardware and distance learning products, inspiring students from middle school through college to solve science problems. Satisfying an unmet need for on-demand tutoring, the software uses an interactive dialogue tool that challenges students to understand *why* an answer is correct, measurably improving comprehension and test performance. With funding from the U.S. Department of Education and the National Science Foundation, Quantum Tutoring Engines are

integrated with Web, wireless and CD-ROM learning products, providing a strong competitive edge for educational companies. For further information, please visit www.quantumsimulations.com.

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