

NBC and NSF launch 'Science of NHL Hockey'

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Nashville Predators goaltender Pekka Rinne helps with science education during a shoot for the "Science of NHL Hockey." Credit: NBC Sports Group

NBC News' educational arm, NBC Learn, and the NBC Sports Group recently teamed up with the National Hockey League (NHL) and National Science Foundation (NSF) to release "Science of NHL Hockey"--an informative 10-part video series exploring the science behind the fastest game on ice.

Made especially for students and teachers to use in the classroom, the videos will be aligned to lesson plans and national state education standards, and are available to the public cost-free on NBCLearn.com, NBCSports.com and Science360.gov. NBC News' Lester Holt narrates the series. NBCUniversal will distribute the videos across several platforms.

The "[Science](#) of NHL [Hockey](#)" videos will debut during NBC Sports Network's all-encompassing coverage of the 2012 NHL All-Star Weekend from Ottawa January 26-29, including a select number of videos airing throughout the Honda SuperSkills Competition on Saturday, January 28, from 7-9:30 p.m. ET. The NHL will feature the videos on NHL.com, NHL Network in the United States and Canada and in a number of arenas throughout the league. The series will also appear in retail venues across the country, on [American Airlines](#) in-flight entertainment and on NBC's affiliate stations.

This collaboration between NBC Learn, NBC Sports and NSF uses the universal appeal of hockey to drive an understanding of complicated scientific concepts. Students and teachers see how the principles of science enable players to perform actions such as quickly stopping on ice, passing the puck to a teammate, shooting a slap shot and making a great save.

The science is broken down by capturing the athletes' movements with a state-of-the-art, high-speed Phantom camera, which has the ability to capture movement at rates of up to 10,000 frames per second. These dynamic visuals allow for frame-by-frame illustrations of specific scientific principles such as Newton's Three Laws of Motion, kinematics and velocity. Other video episodes analyze the hockey science behind reflexes and reaction time, statistics, vectors, linear motion, geometry and more.

NBC Sports Group oversaw the Phantom video shoot in September 2011 during the yearly media tour sponsored by the NHL and its players association. NBC Sports Group also provided research and technical support throughout the project.

Current NHL players who participated in the video series include:

- Jaroslav Halak, Goaltender, St. Louis Blues
- Erik Johnson, Defenseman, Colorado Avalanche
- Brenden Morrow, Left Wing, Dallas Stars
- Matt Moulson, Left Wing, New York Islanders
- Pekka Rinne, Goaltender, Nashville Predators

In each video, an NSF-supported scientist explains a selected scientific principle, while NHL athletes describe how the principle applies to their respective positions. Series scientists supported by NSF are: Edward Burger, Williams College; Irene Fonseca, Carnegie Mellon; Jim Gates, University of Maryland; Robert Gehrz, University of Minnesota; and Patricia Shewokis, Drexel University. The videos also include actual game footage provided by the NHL, and the lesson plans that accompany the videos will be provided by the National Science Teachers Association.

"Science of NHL Hockey" follows in the footsteps of the "Science of NFL Football" and "Science of the Olympic Winter Games" collections, which are part of an ongoing "Science of Sports" collaboration with the NSF that was awarded a 2010 Sports Emmy for "Outstanding New Approaches Sports Programming."

"Wayne Gretzky once said, 'The only way a kid is going to practice is if it's total fun for him ... and it was for me,'" said Morris Aizenman, Senior Scientist for NSF's Directorate for Mathematical and Physical Sciences. "'Science of NHL Hockey' is an NSF and NBC Learn project that continues our effort to make science total fun for students. We hope, after watching these videos that students will also want to learn and practice science."

"Building on the innovative partnership that NBC Learn has with NSF and NBC Sports, we are thrilled to expand the 'Science of Sports' franchise to include hockey," said Soraya Gage, Executive Producer of

NBC Learn. "These one-of-a-kind videos have set a new precedent for teaching science in the classroom, by literally breaking down concepts and illustrating their real life application through [sports](#)."

"The NHL is excited to partner with NBC and the National Science Foundation on this special project," said Charles Coplin, Executive Vice President of Content for the NHL. "Students, teachers and NHL fans everywhere will experience hockey in a unique way through the spectacular footage captured during filming with the players."

"It was exciting to be part of a unique project that utilizes hockey to help educate students on science and physics," said Brenden Morrow of the Dallas Stars. "It was fun to participate in and was very interesting. I learned a lot myself."

Provided by National Science Foundation

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