

Inquiry into Inventions & Inventors

Through individual research, classroom lessons, and hands-on activities that combined scientific inquiry, problem-solving skills, and the creative process, students at Independent Day School-Corbett Campus explored the impact of inventions and inventors on society.



Third and fourth grade students at Independent Day School-Corbett Campus began their unit of study about inventors and inventions by creating something useful from a bag of miscellaneous items.

June 13, 2011 (TAMPA, Fla.) – For third and fourth grade students at Independent Day School-Corbett Campus, an International Baccalaureate unit of inquiry into “How the World Works” began with the timeless question, “How do you get a square peg to fit into a round hole?”

To launch a unit of study on inventions and inventors and how they have made a difference on society, teachers shared clips from the film *Apollo 13*. Students paid close attention to the classic scene where, using only spare materials aboard the space craft, NASA engineers devised a solution that allowed square air cleaners to be used in round receptacles to alleviate the buildup of carbon dioxide endangering the astronauts.

Students then simulated the NASA task. Working in small teams, they created original designs with specific purposes. Using miscellaneous items such as boxes, PVC pipe, insulated tubing, and water bottles, they created inventions such as a mini mailer, solar powered cookers, a water-powered fan, and a shoe recycler.

IDS third and fourth grade teachers designed the academic unit to enable students to explore several IB lines of inquiry: significant people and their contributions in the fields of communications and technology; how devices impact a society; and how human activity affects the need for technological adaptations.

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Participating in a variety of hands-on activities at the Museum of Science and Industry gave students the opportunity to delve into inventions and the connection to science more deeply.

Grounded in science, the unit incorporated all academic disciplines, in addition to life skills such as cooperation, collaboration and communication. Students researched inventors and their inventions, including how inventions help people and how they change over time, and produced presentations and reports. Classroom lessons led to a partnership between IDS teachers and the Museum of Science and Industry (MOSI) to create a memorable, end-of-the-year experience at the museum.

“The purpose of the trip to MOSI was to give students the opportunity to delve into inventions and the connection to science more deeply,” said teacher Ann Cashen.

During the trip, students related knowledge gained in the classroom to meaningful learning experiences by exploring topics such as prototypes and trial and error through hands-on activities.

For example, student teams created models of three-story houses designed to withstand the power of an earthquake, and tested their prototypes on a machine that simulated an earthquake’s force. They applied the concepts of potential and kinetic energy to design marble roller coasters. And in pairs, they employed the process of trial and error to produce robotic cars that could transport cargo.

The highlight of the MOSI experience was a presentation by local teenage inventor Hunter Morera. Morera had been selected to be part of the second season of the Discovery Channel’s show *Pitchmen* for his invention, the ‘Cinch Wrench.’ He showed IDS students his prototype, discussed the process of trial and error to create it, and talked about protecting one’s intellectual property, both ideas and inventions, via Google patents.

“Seeing a ‘regular kid’ who had invented something and was successful with it was very inspiring for the students,” said Cashen. “It helped them make that critical connection between learning in the classroom and putting that knowledge into action in the real world.”

Founded in 1968, Independent Day School-Corbett Campus is a fully accredited, nonsectarian private school located on Orange Grove Drive in northwest Hillsborough County with over 500 students from PreK3 through 8th grade. At IDS, all children experience the International Baccalaureate Programme in a highly academic and nurturing environment focused on excellence and excitement in learning. IDS-CC has become recognized as an exemplary school with over 6,500 visitors observing and learning from IDS-CC teachers. For more information, visit www.idsyas.com or contact the Admissions Office at 813-961-3087 for a personal tour.

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