

Madoc students

BY Maureen Nolasco, SA Editor & Sheila Lightfoot-Pringle, Contributing Writer

Catch the Spirit

How the project began

In 2004, Liza Allan, currently an Educational Assistant at Madoc Public School, was involved in a history assignment with a group of students at Stirling Senior School that "weren't terribly interested in explorers. Then we read page 18 of the text (Canada Revisited Gr7) which informed us about present day explorers, astronauts. I thought, wouldn't it be neat to have students meet a present day explorer?" Research led Liza to the ARISS website. Now a page in a textbook is literally coming to life for these Madoc students!

Rob Allan, Teacher at Centre Hastings Secondary School and husband of Liza, is the Head of the Technology school at CHSS. In his transportation unit, he teaches rocketry. Liza borrowed Rob's solid fuel rockets and a Grade 6 teacher at Stirling Senior, Mr. Calbery, allowed the class to shoot them off in the school yard. What followed was a field trip for Mr. Calbery's class to the Ottawa and Trenton Air Museum. "It was quite an inspiration, says Liza."

"When I brought up the idea of talking to astronauts thru the ARISS program, Rob was all for it. Then, I had an even crazier idea, inviting an astronaut to the school as a precursor to contact. How many students can say they have talked to a figure in Canadian history, Astronaut Chris Hadfield, as well as communicating with orbiting astronauts in space?"

On October 26 as part of the student's preparation for contact via amateur radio on November 20th, Chris Hadfield presented to Madoc students. The gym was packed as Chris guided the audience through his various pictures and experiences working as an Astronaut and those of being the first Canadian to do a space walk.

"I was amazed to see him in person and shake his hand. I met a

celebrity who has done something amazing to change the world and outer space!" –Sara MacNeil, Grade 7

Says Allan, "This is something these kids will remember for the rest of their lives. Such an event will bring the pictures kids see in their science and history books come to life in a big, big way."

Communication Day

Students at Madoc Public School and Centre Hastings Secondary School, at Centre Hastings Secondary School in Madoc, make a connection with the International Space Station crew Expedition 14 using amateur radio.

Madoc students are the only ones in North America to make this once-in-a-lifetime connection.

The Allan's have been working with NASA to arrange this special one-on-one meeting via radio between students and the astronauts who work on the space station. Students researched Expedition 14 and learned techniques for communicating by amateur radio.

The technology aspect for such a project is huge.

"Kids need to know that astronauts are mechanics, construction workers, plumbers, welders, tradesmen, says Liza. My husband Rob teaches the trades. It's where the jobs are."

The set-up (on the roof of the CHSS) took 3 hours and 4 men, Peter Hodgson, technology teacher Rob Allan and his two Ham Radio colleagues, Dave Ward and Tim Pekkonen.

Contact is made possible through ARISS – Amateur Radio on the International Space Station. ARISS arranges amateur radio contact between astronauts and school children providing valuable learning opportunities for young people by introducing them to communications technology. ARISS provided what is called a tele-bridge contact to a museum in Germany, a school in France and a direct contact in Madoc - the only three contacts/countries scheduled by NASA for Expedition 14.

Steve and Lori McFarlane are ARISS Mentors from Ottawa. They, along with their colleague, Claude, delivered (from Ottawa) the necessary hardware for the contact.

The technical department was vital to the success of this project. Astronauts have to know the trades. Transportation, construction, manufacturing, communication and technology design are part of an astronaut's role in building and maintaining the ISS.

Right on Schedule

With T minus 10 minutes until contact with the International Space Station (ISS), the staff and students at Centre Hastings Secondary School in Madoc are anxious.

At 11:27 a.m. on November 20, 2006, the gymnasium is packed. There is word from Germany that their contact with the space station was successful. The excitement is mounting.

At T minus 6 minutes until contact, the ISS is right over Vancouver. The students can track its orbit on the big screen at the front of the gym. It is a little dot in the centre of a 30,000 km radius circle, traveling westward over North America.

At T minus 2 minutes, the room is blasted with about 10 seconds of ear-piercing static through the speaker system. Dave Ward, from the Quinte Amateur Radio Club, begins the conversation, "NA1SS...VE3UR..... NA1SS...VE3UR"

Right on schedule, Captain Michael Lopez-Alegria replies from the ISS and there is no time for introductions. The ARISS students have 21 questions and only 10 minutes of good signal.

"With each supply shipment to the ISS sending more water from Earth, we are taking away a precious resource," starts Rebecca Bremner, grade 10. "A colony on the moon would need lots of water which would be obtained from our finite supply on Earth. Will this water be returned or is it lost forever?"

Capt. Lopez-Alegria informs Rebecca that they don't use much water in space and they are able to recycle their own condensation and perspiration for their water supply. This is good news as Rebecca is very concerned about the environment.

"With business tycoons like Richard Branson looking to expand their companies into the cosmos via commercialized space travel, has it now been decided that space travel is to become a routine commercial practice?" asks Graham Wilcox, grade 12.

Commander L-A replies that he expects trips to the space station to soon be marketed the way the airline industry was in the last century.

Graham is also excited about the possibility of extra terrestrial life and he wants to know what Commander L-A thinks. He is not disappointed with the answer. "I am convinced there is life other than human in the universe."

Graham excited about having had the opportunity to talk an astronaut in space says, "I still can't get over I just did that." "That was so cool."

The students were particularly interested in the SPHERES (Synchronized Position Hold Engage Re-orient Experimental Satellite) aboard the ISS, small droids which are very similar to the battle droids featured in Star Wars or to Tamagotchis.



(Back row, L to R): Rob Allen, head of the Technology Department at Centre Hastings Secondary School; Tess Reid; Chelsea Freeman; astronaut Col. Chris A. Hadfield; Graham Wilcox; Liza Allan, Educational Assistant at Madoc Public School. (front row, L to R): Liana Andrew; Takira Francis; Landen Kruger; Sara MacNeil (slightly behind Landen); Megan Webb (shorter girl out front, bangs); Rebecca Bremner (taller, hair back); Sabrina Reid.

"I must confess, Megan, I have no idea what a Tamagotchi is," Commander L-A concedes following Megan's question. He does report that the SPHERES are fun to watch, but do not make good pets.

"Are all astronauts that calm under pressure?" asks Liana Andrews, grade 10.

"Of course we are," Commander L-A confirms. He adds that they are trained to work under pressure.

Liana is not as confident in her ability to stay calm if she became an astronaut. She says it is weird to think that she is one of only a few people will ever get the opportunity to talk to an astronaut.

"I didn't think it was going to be as big as it was," she says.

Rebecca agrees. "It's something that doesn't hit you until it happens."

Takira Francis, grade 6, who was concerned about germs aboard the space station, says, "I wrote like three pages about why I wanted to be a part of this," she says.

"I used to think it was all fake," Takira says of space exploration. But, now she aspires to work aboard the space station.

And, how does she feel about being part of history in the making?

"It's inspiring. It feels like I'm so popular."

Commander L.A. goes on to answer questions about playing the piano in space, the shelf life of Russian bread, hygiene and culture shock. In the end, the school shouted "73 to the I.S.S.!" – radio jargon for "Best regards".



Student questions, responses, additional photos and various links available at www.school-advocate.ca.

THE TRANSMISSION WAS SUCCESSFUL!

An mp3 file is posted on the Hastings and Prince Edward District School Board home page at: www.hpedsb.on.ca. To listen to the broadcast click on: Discovery Reflector Stream (mp3, 1.76MB)