

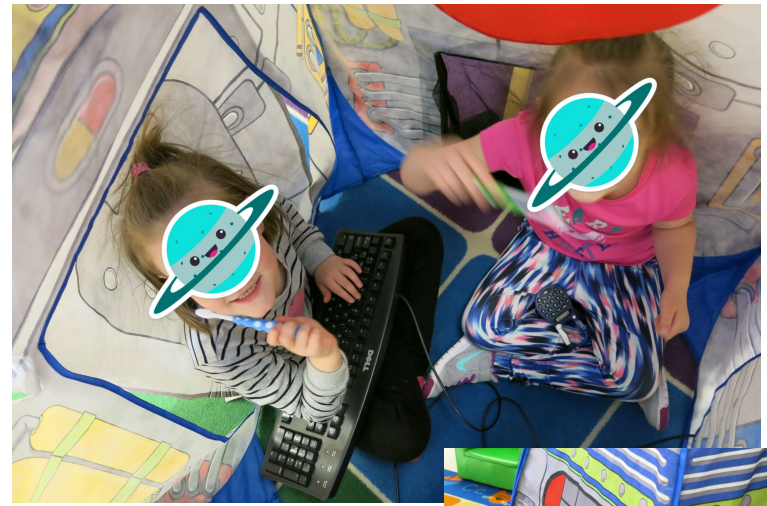
Kindergarten Space Inquiry

Wonder, Explore, Play, Investigate, Create, Represent, & Reflect

Learning Through Play

“Let’s pretend we are lost in space!” exclaimed an excited Kindergartener to a classmate.

“Okay! I am going to be Chris Hadfield.” This was only one of the conversations overheard at the dramatic play space centre during our exciting space inquiry. Play allows children to imagine and act out scenarios, make sense of their world and practice skills and knowledge they have learned. They are also developing their language and social skills.



Inquiry in Kindergarten

Our Kindergarten program embraces inquiry based learning. Instead of set themes, learning is based on topics of student driven interests. Although this means planning on the go for teachers and very often learning alongside their students, the experience is both engaging, motivating and rewarding. During inquiry a teacher's job is observing her students, creating invitations for learning based on observations of students' interests, building student capacity for asking questions and formulating their "I wonder statements", sustaining the inquiry through guidance of knowledge acquisition and perhaps introducing or assisting in the creation of engaging props for play. The teacher also matches up curricular outcomes, provides students with opportunities to represent their learning in various ways and aides in the reflection process.

Inquiry is...

“A way of learning that requires active engagement. The learner identifies what he already knows, asks intriguing questions about what he does not know, investigates the answers, constructs new understandings, and shares those understandings with others. Inquiry involves reading, writing, speaking and listening to learn. The entire process is permeated with reflection and critical thinking. The result of inquiry is not only deep learning about the inquiry question, but also the development of skills for independent learning.”

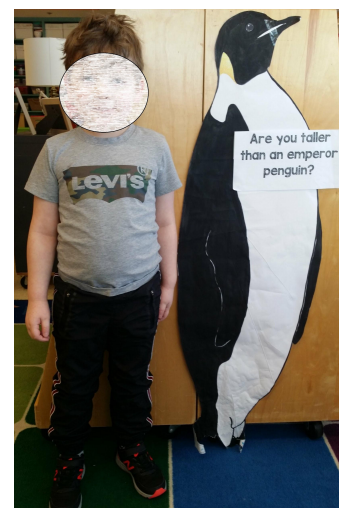
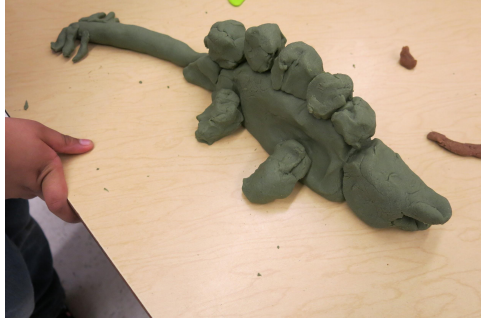
- Barbara Stripling, 2003

How an Inquiry is Sparked

Over the past 5 years of teaching Kindergarten, dinosaurs has been my only duplicate inquiry with kids... and well, what kid is not fascinated by these creatures? In my experience, inquiries can be sparked in many ways - imaginary play, books, pictures, student's experiences outside of school, a found object etc.

Previous Kindergarten inquiries have included: Plants, rainbows, dinosaurs, earthworms, endangered animals, marbles, bees, cacti, hermit crabs, bubbles, boats, veterinarians, dogs and cats, animals that are black and white, dominoes, and ladybugs.





Our Space Inquiry

Our space inquiry was sparked after reading the story “Penguinaut” by Marcie Colleen. Earlier this year we had engaged in a lengthy penguin inquiry. After reading this story they asked to see a video of a real rocket ship blasting off. Oh the “wonderments” about rocket ships and what life in space must be like that flowed from this. Such excitement! We also made a plan to build our own cardboard box rocket ship for our dramatic play centre.



Invitations for Learning

Not long after this day, I shared our space experience with our Division Technology Consultant, Shelley Merth. She was very quick to inform me of the upcoming live International Space Station space walk occurring later that week and provided me with the link. The students even asked to continue watching the broadcast at lunchtime. Later that day we watched a video on how to draw rockets.



LPSD Tech @TechLPSD · 1s
Kinders @RProadrillers watched the live stream @NASA space walk today which then turned into an impromptu lesson on gravity and an art session as well! 🚀 🧑‍🚀 Oh wow! Wanted to watch through lunchtime too! #science #engagement #STEAM





True STEAM experiences involve **two or more standards** from Science, Technology, Engineering, the Arts, and Math **to be taught and assessed in and through each other.**

At Rendell Park : STEAM Nation, Tech Force

In the Classroom: STEAM challenges incorporated into daily practice centres throughout the year. Inquiry projects - teacher tracks curricular outcomes achieved - integrates multiple subject areas.

Science



Tomatosphere / Building Rockets / Exploring with “Gadgets”

- Life Science: living things in our environment
- Physical Science: materials and objects
- Physical Science: observing forces and energy



Technology



Augmented Virtual Reality - 4D Space

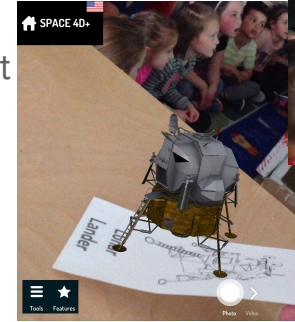
Live Space Walks - We watched Astronaut David Saint-Jacques' first space walk!

Chris Hadfield and other Astronauts' videos about life on the I.S.S.

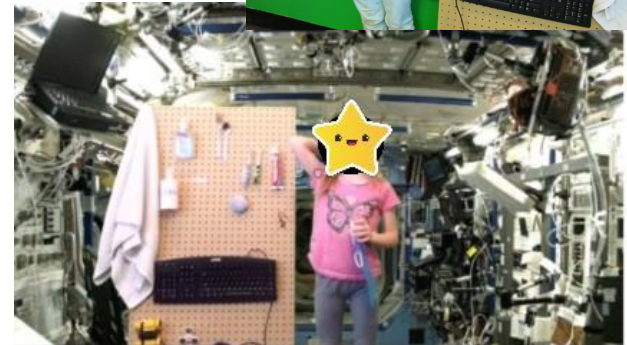
Virtual Reality - I.S.S. tour

Green Screen Video - representing learning with support from our grade 5 Rendell Park Tech Force students

Twitter - I am currently following CSA, NASA, Chris Hadfield, **Let's Talk Science**, **Tomatosphere** and more for Teacher professional development and information gathering.



let's talk
science



Engineering



We constructed a cardboard rocket ship and lunar rover out of boxes, paper, glue, tape, tin foil, and recycled materials. The students helped with the shape design ideas, colour and material choices, as well as, details such as a Canadian flag and windows. We discussed how to design and attach an Earth to the outside of the rocket so we could gaze through the window at it “just like Chris Hadfield did.”

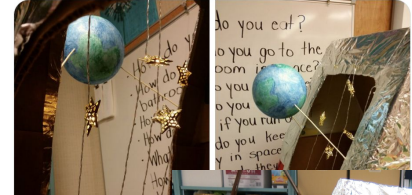
These have been wonderful props in our dramatic play centre and even made an appearance in our green screen video.

🔄 You Retweeted



Jody Brummund @JodyBr... · 6d ✓

We made it happen! Our Kinder Astronauts can now gaze outside our rocket ship at the spectacular view of the earth. Just like Astronaut Chris Hadfield did. [@TechLPD](#) Thanks for the inspiration and gadgets Mrs Merth!



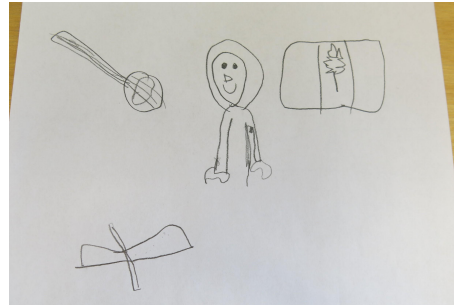
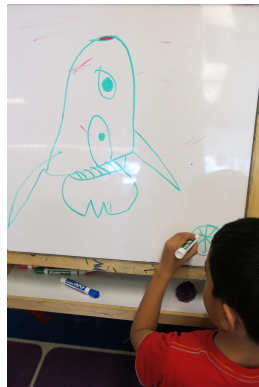
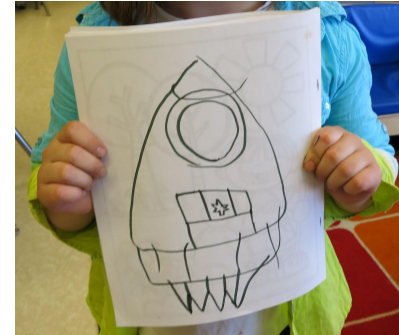
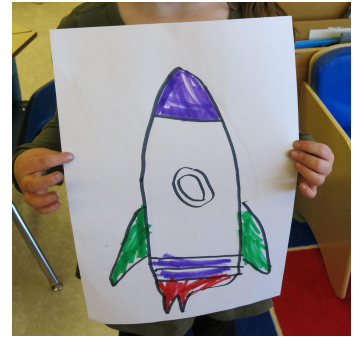
Arts



Art - directed drawing of rocket ships and astronauts on whiteboards led to more art exploration during free play centres. Painting Earths and the Canadian flag for the rocket ship.

Drama - dramatic play experiences during play centres and acting out parts in the green screen video

Music - Chris Hadfield's music video "Space Oddity" - the first music video made in space! Dance breaks to Koo Koo Kangaroo's "Slow Motion" and Go Noodle's "Hip Hop Astronaut"



Math



Number sense - for example: counting backwards from 10... blast off!

Shape and space - 2d and 3d shapes

Calculators added to the “gadget wall” led to creating “codes” needed to gain access to the rocket.

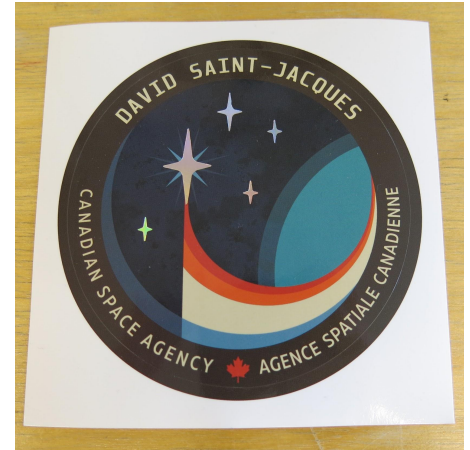


Other Curricular Links

Health - Develop healthy habits: in space! (brushing teeth, eating well, exercising, etc)

English Language Arts - read alouds, vocabulary building, class discussions, dramatic play, journal entries etc.

Social Studies - Describe the spatial relationships among people, places, and environments; Develop and demonstrate stewardship of the environment (using recycled materials to build with)



What's Next?

Space is such an expansive topic. We have focused on a small area. Only time and continued interest will tell where else this inquiry may lead us. Or, who knows, maybe a whole new inquiry will be sparked?!? There is always exciting learning going on in Kindergarten!

