TAKE FLIGHT!

2024/25 EDUCATIONAL PROGRAMMING CATALOG

ROYAL AVIATION MUSEUM
OF WESTERN CANADA

OUR MISSION AND VISION

The new Royal Aviation Museum of Western Canada is a world-class facility filled with interactive experiences and inspirational storytelling.

OUR MISSION: Our dynamic programming serves to preserve and promote aviation stories in western and northern Canada while educating, entertaining, and inspiring young minds

OUR VISION: We will be an inspirational, world-class destination that tells the story of bush flying, Canadian aerospace, and aviation.

DEVELOPING OUR PROGRAMS

To develop our STEM (Science, Technology, Engineering and Math) courses, we engaged two of the brightest minds in Canadian STEM education: Maria Nickel, who works with Space Foundation International and the Houston Space Center and was a Canadian Space Agency Recruitment Program candidate; and Brian Ewenson, who has worked with the Canadian Space Agency and NASA's Space Shuttle Program and has presented on STEM topics to more than 250,000 people across North America.

WHY STEM? WHY BOOK WITH US?

For many students, the benefits of hands-on STEM programming at the RAMWC is a marked improvement in cognitive skill. They learn the importance of leadership and communication and how these can help them to achieve common goals.

STEM education has been proven to enhance the creativity levels in students who actively participate. Encouraging the use of technology, STEM helps students to become better innovators. Our Take Flight! programs use both STEM principles and history to inspire current students about the future.

The Royal Aviation Museum of Western Canada seeks to honour and commemorate the history of Indigenous Peoples and aviation in Western Canada while engaging with the complex history of travel, trade, and relationships in this place. We are committed to facilitating a safe space for reconciliation to occur.

The new home of the Royal Aviation Museum of Western Canada is located on Treaty 1 territory, the traditional territory of Anishinaabeg, Cree, Oji-Cree, Dakota, Lakota, and Dene Peoples, and the National Homeland of the Red River Métis.

We respect the Treaties that were made on these territories, we acknowledge the harms and mistakes of the past, and we dedicate ourselves to move forward in partnership with Indigenous communities in a spirit of reconciliation and collaboration.

TAKE FLIGHT! PROGRAMS

CURRICULUM-BASED STEM FOCUSED PROGRAMS

HOOP GLIDERS (GRADES 1-4)

How does an aircraft fly without an engine? Is that even possible? As STEM-gineers, students will design, construct, and test a Hoop Glider to explore the concepts of gravity, force, and motion, while discovering how changes in the design of an aircraft can create changes in its flight. A Schweizer Glider, suspended from our museum's ceiling as part of our Experience Flight exhibit, offers an up-close look at a glider aircraft responsible for decades of pilot training, meant to inspire the next generation of flyers.

STOPPING AND GOING (GRADE 2)

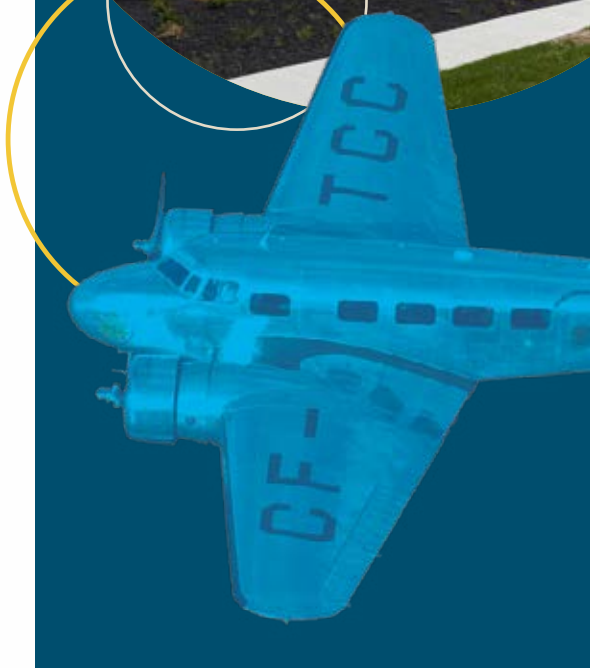
Young engineers will explore the position and motion of objects, including how wheels and axles help objects move. Our museum's Observation Lounge provides a big-picture look at arriving and departing aircraft, baggage carts, fuel trucks, and other vehicles that help airports operate every day. As a part of a design team, students will then build and test a model baggage cart to explore how motion is impacted by different shapes and surfaces. The accompanying museum tour provides insight into how different types of landing gear, such as skis for our Fairchild Super 71 bush plane, make aviation possible all over Western Canada.

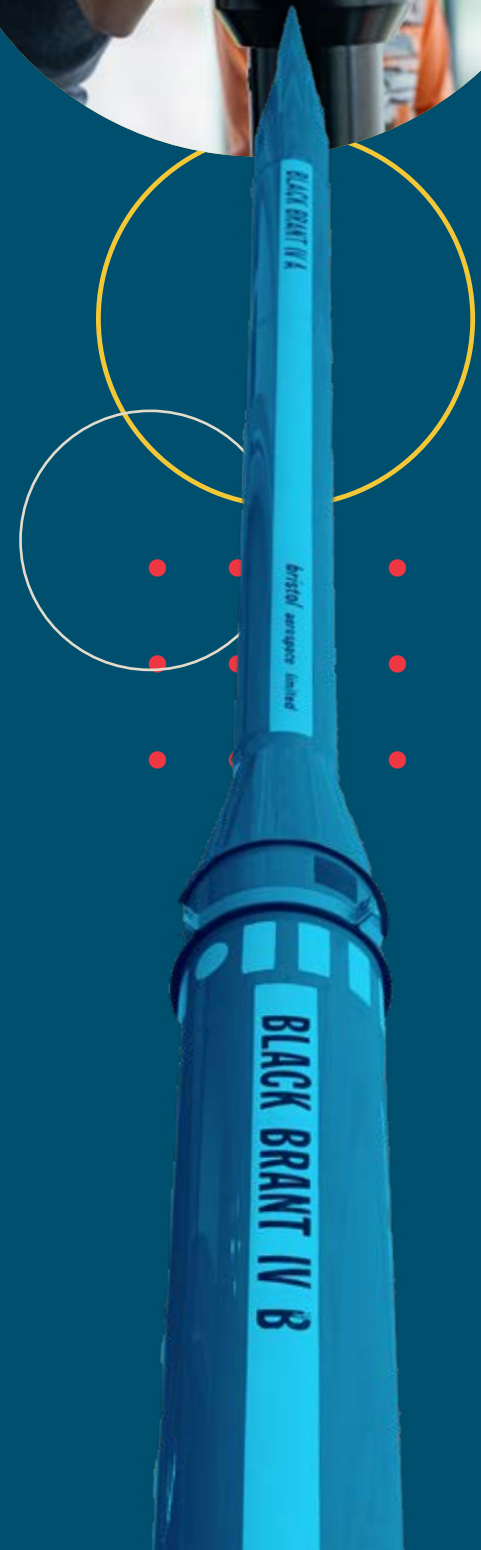
TOYS IN SPACE (GRADES 4-6)

What if astronauts wanted to play soccer on the International Space Station? In this engaging lesson, students learn about the physics of popular toys on Earth that allow them to operate as intended. Then, by testing various toys and applying scientific concepts after observing their motion, these junior scientists will investigate and predict to answer the question: Will these toys work in microgravity? Our museum's Black Brant rocket, viewed as part of our school tour, provides a Canadian connection for space exploration by highlighting the world's most effective sounding rocket, manufactured in Manitoba.

WHETHER THE WEATHER (GRADE 5)

Young meteorologists will discover how significant weather measurement is for aviation, learn about the different types of turbulence that aircraft might experience and how pilots deal with them, and visit our museum's Observation Lounge for an up-close look at our airport's runways and weather instruments in action. In engineering teams, they will then build anemometers which they can use to measure wind speed. Innovations such as skis used by our Fairchild Super 71 bush plane are encountered on the accompanying tour to reinforce how important a role weather plays in aviation.





UPDATED!

SCIENCE OF FLIGHT (GRADE 6)

Through exploration of our interactive Science of Flight exhibit, junior aviators will learn about the four forces of flight, Bernoulli's Principle, and how various lighter- and heavier-than-air aircraft fly through the air. They will investigate how airflow affects flight with our museum's Wind Tunnel, and will have the opportunity to sit in the pilot's seat of a Royal Canadian Air Force Beechcraft Musketeer training plane to see its controls in action for themselves.

SHIP THE CHIP (GRADES 6-9)

How are fragile objects transported around the world or even into space without being damaged? Students will work in teams as manufacturing engineers to build the smallest, lightest, and most cost-effective package possible in order to protect their cargo: a single fragile potato chip. The accompanying tour of our museum offers a comprehensive look at how flight improved transportation of mail, raw materials, and other cargo, as well as people, making sure to explore our Air Canada Vickers Viscount airliner, one of the largest aircraft in our museum!

INVISIBLE FORCES (GRADES 6-10)

Can other planets help us explore outer space? Students will discover how scientists and astronauts use gravity in space exploration, learning about Newton's Laws of Motion and the engineering process in order to test their own gravity assist devices in a challenging hands-on activity. The accompanying museum tour provides a thorough glimpse at the various forces all aircraft encounter in attempting to achieve flight, like the double wings of our Vickers Vedette boat plane replica, and the creative engineering that made it possible.

ORION TOUCHDOWN (GRADES 6-12)

How do astronauts return safely from their missions in space? In teams, junior engineers will design, construct, and test a model Orion capsule to protect astronauts during the splashdown of NASA's upcoming Artemis missions, viewing actual testing footage from NASA's Langley Research Centre to see this engineering in action. An up-close glimpse of our Black Brant Sounding Rocket on the accompanying museum tour reinforces the importance of design for spacecraft required to travel to the most extreme of destinations.

SAVE THE SUIT (GRADES 7-12)

How does a spacesuit protect an astronaut in space? Students will learn about the features of spacesuits that protect astronauts from damage on their space missions, both in and out of their spacecraft. Using scientific inquiry and the design process, students will work as engineering teams to design, construct and test a model spacesuit to protect astronaut Mark Whatney from micrometeorites. The accompanying museum tour provides up-close examples of all kinds of other protective gear from the history of flight in Western Canada, such as the ejection seat used by pilots of the CF-104 Starfighter jet. (Inspired by the 2015 film The Martian).

GREEN FUEL ROCKETS (GRADES 8-12)

It's not easy being green, but rocket scientists are working to make spaceflight more environmentally sustainable. Junior chemical engineers work in teams to choose solid and liquid components, such as vinegar and effervescent tablets, that they will then test in order to create a rocket propellant that maximizes thrust and minimizes environmental impact, with explosive results! The accompanying museum tour offers insight into how newer engines and fuels have contributed to the evolution of flight in Western Canada and beyond.

ROCKETRY - FINS & DISTANCE (GRADES 8-12)

Junior rocket scientists learn about the history and design of rockets, from the first fireworks to spacecraft that have taken humans to the edge of our atmosphere and beyond. Our Black Brant Sounding Rocket, standing on the main floor and nearly touching our museum's ceiling, serves as design inspiration and provides a local connection to space exploration. Using the engineering process, students will design, build, and test their own straw rockets to discover how drag affects acceleration and distance in order to answer the question: what design will fly the farthest?

CURRICULUM-CONNECTED SPECIAL INTEREST PROGRAMS

AIRPORTS AWAY (KINDERGARTEN - GRADE 1)

An exciting combination of fun dramatic role play and an up-close view of our airport runways in action from our museum's Observation Lounge enables junior aviators to discover what happens at airports around the world every day. Students will learn about different roles involved in air travel, important safety features of airports, and how airplanes navigate their way safely through the skies. Our accompanying museum tour will take them through our Air Canada Vickers Viscount airliner to see how air travel has changed and stayed the same over time.

DESIGNIACS (KINDERGARTEN - GRADE 12)

After exploring the different types of aircraft featured in our museum collection on the accompanying tour, junior engineers will use their new knowledge to creatively collaborate in order to design, build, and demonstrate aircraft made out of recyclable materials. By learning about how the features of different aircraft change to serve different purposes, students will decide whether their team's aircraft needs large wings like our Air Canada Vickers Viscount airliner, a powerful jet engine like our CF-104 Starfighter, alternate landing gear such as pontoons or skis like our Fairchild Super 71 bush plane, or maybe even tilting rotors like our Canadair CL-84 Dynavert!

TIME FLIES (GRADES 11-12)

NEW!!!

By exploring the fascinating stories featured in our museum's multimedia displays, junior historians will learn about the people, places, and planes that changed Western Canadian history, and discover how these stories still impact Canada and the world today. The accompanying tour will highlight the creative and daring accomplishments of engineers like Elsie McGill and pilots like Wilfred "Wop" May, and students will view unique aircraft like our museum's Froebe Helicopter, the first helicopter built in Canada, constructed in 1930s Manitoba by three brothers using spare tractor parts.

GRADE 2 AND UP

FULL DAY

10:00am-2:00pm, with two programs and guided tour of the museum, includes lunchroom and assorted activities.

HALF DAY

2 hours in length, includes a one-hour guided tour of the museum and one-hour of classroom activities.

KINDERGARTEN TO GRADE 1

HALF DAY

10:00am-12:00pm only, includes tour of the museum, a visit to the Galaxy Play Zone, and classroom activities.

PRICING

$12.00 per student for half day with one program.
$18.00 per student for full day with two programs.

There is no charge for adult staff on a 1/8 ratio, with the student rate for attending adults over that ratio.

1-on-1 aides and educational assistants attending with specific students come free of charge.

HOW TO BOOK?

1. To book a program, review our offered programs in our programming catalog or online.

2. Fill out the booking request form and send it to programs@royalaviationmuseum.com. The booking request form may be found online at https://royalaviationmuseum.com/education/school-programs-outreach/

3. You may fill out one form for multiple classes if they are all partaking in the same programming on the same day. If you would like to book different programming for more than one class, please send us individual request forms for each group.

4. Please note that this is only a request form and not a booking confirmation. Once your request form has been reviewed and confirmed, the STEM Education Administrator will email you a booking confirmation and invoice.

If you are interested in coming for a self-guided visit or for a private guided tour, please contact info@royalaviationmuseum.com or call (204) 786-5503.

If you are having any trouble, or have special inquiries for the booking, please contact our STEM Education Administrator at programs@royalaviationmuseum.com or call 204-786-0409.

FAQS

CAN WE STAY FOR LUNCH?

If groups would like to stay for lunch, they must reserve a lunch room prior to the day of their visit. This can be done when filling out the request form online or by contacting the STEM Education Administrator at programs@royalaviationmuseum.com

CAN WE STAY AFTER THE PROGRAMMING FOR EXPLORATION?

Admission through our educational programming is only valid until 30 minutes after the programming is completed. Groups have until then to explore on their own with adult supervision.

IS THE MUSEUM WHEEL CHAIR ACCESSIBLE?

Yes, we have an elevator available to access the second floor and we provide motorized scooters and wheelchairs free of charge if that's needed. We have universal bathrooms on both floors with lots of room as well.

WHAT TO EXPECT?

There is a museum parking lot for vehicles on the east side of the museum and a bus loop for busses to drop off students at the front of the museum.

Our School and Group Entrance door is on the east side of the building and one of our staff will meet you at that door. Students will then be taken upstairs to a secure classroom where they will leave jackets and backpacks.

The museum is still open to the public during the school's/group's visit. Please remind students to be respectful of the environment, to use their walking feet, inside voices and stay with the group.

We trust that your students will behave respectfully of the building, the artefacts, and the staff and volunteers. Students must stay behind exhibit barriers. The museum teaching staff is not responsible for lunchroom supervision or free time/scavenger hunt. This is each school's responsibility.

The Galaxy Play Zone is not part of the educational programming and is not to be used by students in grades 3 and up.

The week before your booking date a reminder email will be sent out to you.

POLICIES & PROCEDURES

ARRIVAL DROP OFF AND TIMING

- Please plan to arrive at least 5 minutes and no more than 15 minutes before your programming. Programs cannot be extended past your booked timeslot if your group arrives later or earlier than scheduled for.

SUPERVISORS

- Supervisors are responsible for group behaviour, not the museum educators.
- Minimum requirement of adults: 1 adult per 12 students (or a minimum of two adults per class, whichever is most). Failure to provide the required adult supervision on arrival may result in non-admission.

TIMING

- Full day visits: 10:00 am to 2:00 pm
- Half day visits: 10:00 am to 12:00 pm, 12:00 pm to 2:00 pm, or 1:00 pm to 3:00 pm
- If timing needs to be adjusted, please contact programs@royalaviationmuseum.com

PARKING

- There is a museum parking lot for vehicles on the east side of the museum and a bus loop for busses to drop off students at the front of the museum. If busses need to park for whatever reason, please contact programs@royalavaiationmuseum.com for parking arrangements.

LATE ARRIVALS

- Programs cannot be extended past your booked timeslot if your group arrives later or earlier than scheduled for. Late arrivals still require full payment. Program will be shortened according to the museum educator's discretion.
- Schools who do not show up the day of their booking must still pay full invoice.

VISITING THE LANDING ZONE BOUTIQUE

- If groups want to visit the boutique, they will have to do so before or after their programming. They must inform the STEM Education Administrator prior to their visit, and they may only visit in groups of 10 students or less accompanied by adult supervisor at a time.

CANCELLATIONS

- Cancellation policy: Cancellations made within two weeks of the programming date will be subject to a charge of 50% of the total fee. Cancellations made within one week of the programming date will be subject to 75% of the total fee.
- We will consider cancellations due to weather as exceptions.

LUNCHROOM FACILITIES

- Lunch space is available by arrangement only. Please contact the STEM Education Administrator prior to your visit to request a lunch room if you have not done so in your request form.
- Microwaves and refrigerators are not available at the museum.

PAYMENT

- Minimum payment: Groups with fewer than 20 students are welcome. Minimum charge of $240 for half day and $360 for full day programs.
- Payment is due the day of the visit.
- Your invoice is calculated based on the number of children confirmed prior to arrival. If you arrive with more children in your group than previously confirmed, your invoice will be adjusted to reflect actual numbers. If you arrive with fewer children than previously confirmed, no invoice adjustments will be made.
- The week prior to your visit, a reminder email will be sent out to you allowing you to update any numbers if needed. The invoice will then be finalized the Friday before your visit.
- We accept cheques (our preferred method of payment), card payments (credit card over the phone is accepted), and cash.

MEET OUR EDUCATORS

OUR THREE EDUCATORS ARE FULLY CERTIFIED EDUCATIONAL PROFESSIONALS WHO HAVE MANY YEARS' EXPERIENCE TEACHING IN WINNIPEG SCHOOL DIVISIONS.

CANDACE KOSTNA

Candace graduated from the University of Manitoba with a BEd degree. As a certified teacher, she has several years of classroom experience, primarily at the Early Years level. She also has experience teaching and developing programming in non-classroom settings. Now in her second year at the Royal Aviation Museum, Candace is excited and proud to inspire the next generation of aviators who visit our museum.

KRISTIN TRENCHARD

Kristin joined the Museum Educator team in Spring 2023. She graduated from The University of Winnipeg in 2013 with Bachelor of Arts & Bachelor of Education degrees. She has experience working with children from infant age all the way up to the high school level. Her specialty is teaching elementary aged students. Kristin has a passion for getting students engaged and excited about their learning. She is looking forward to another fantastic year at the museum and inspiring the future scientists of Canada!