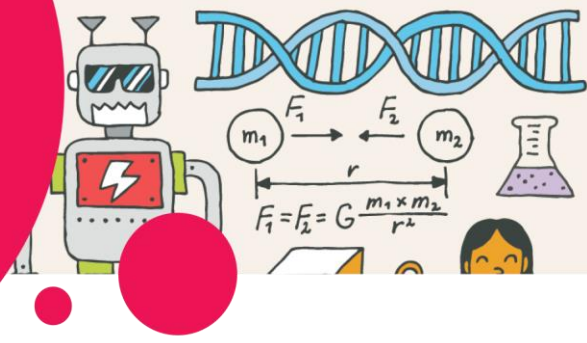# MUSEUM MISSION

Recommended for explorers ages 12+

Your mission — should you choose to accept it — is to explore the museum and gain as much knowledge as possible!

Studios

1
2
3
4

Lab

Lounge

Living Lab

Café

Event Hall

Hub

Demo Stage

Auditorium

Boutique

Admission

LED Canopy

Alcove

Entrance

Entrance

IngeniumCanada.org

Download the App

Exhibitions

Artifact Alley
Stroll through interactive displays and over 700 artifacts.

A Into the Great Outdoors
See how people use technology to get outdoors and experience Canada.

B Steam: A World in Motion
Explore a time when steam made Canada—and the world—go round.

C Sound by Design
Hear and see what happens when sound meets design.

D From Earth to Us
Explore how we transform natural resources to make the everyday things in our lives.

Crazy Kitchen +
Challenge your perceptions and experience illusions that play with your senses.

E Medical Sensations
Explore the world of medicine through the five senses.

F Hidden Worlds
Engage with microscopes, telescopes, and digital interactives to explore worlds beyond our reach.

G ZOOOM (ages 0-8)
A hands-on space where children can imagine, build, test, try...and try again!

H Wearable Tech
Discover a range of innovative technologies designed for the body.

I Technology in Our Lives
See the gadgets, tools, and appliances that shape our lives.

Exploratek
A tinkering space dedicated to learning by doing.

INTO THE GREAT OUTDOORS

Enjoying Winter

How do snowshoes stop you from sinking deep in the snow?

_____

On display, you will see Huron snowshoes, Ojibwe snowshoes, Yukon snowshoes, Bear Paw snowshoes and modified Bear Paw snowshoes.

Why are their shapes different from each other?

_____

_____

A

Freedom on Two Wheels

Starting in the 1880s, safety bicycles introduced ingenious design elements that we use to this day. Name threeelements which improved the bike:

1. _____

2. _____

3. _____

Pathways to Adventure

What was the cost of a convertible car in the late 1940s? _____

How long did it take Rosemary and her friends to drive from Vancouver to

Ottawa along the Trans-Canada Highway? _____

What distance did they travel? _____

In which decade did people start using planes to get to the outdoors?

_____

B

STEAM: A WORLD IN MOTION

Name the four locomotives on display:

1. _____

2. _____

3. _____

4. _____

What kind of engine do they use?

_____

How many kilometres of track were built across Canada between 1907 and 1956?

_____

How many immigrants came to Canada between 1900 and 1950?

_____

Almost all of them arrived using the power of _____.

C

SOUND BY DESIGN

Seeing Sound

Which controversial invention lead to the invention of the telephone?

_____

Who invented it? _____

Soundscape Design

Which Canadian composer coined the term, "soundscape"?

_____

Give an example of soundscape design:

_____

_____

C

Making Silence

Go to the Quiet Cube. Do you hear an echo? An anechoic chamber is built to eliminate echo and noise.

What is used to get rid of echoes in an anechoic chamber?

_____

Design Icons

The Grammy award was named after what? _____

Electronic Instruments

We can play it without ever touching it. What is this instrument?

_____

D

FROM EARTH TO US

Throughout the exhibition, you will
find white circles with green recycling
symbols. These contain information
on the recyclability of different
materials. While in this exhibition,
keep an eye out for these signs and
answer the questions below:

Material	Is it recyclable?	What percentage can be recycled?
Metal	_____	_____
Composites	_____	_____
Polymers	_____	_____
Ceramic	_____	_____
Plastic toys	_____	_____
Smartphone	_____	_____
Steel	_____	_____
Smart car	_____	_____
Toaster	_____	_____

D

Changing Climate, Changing World

What is global warming?

_____
_____
_____
_____

What is climate change?

_____
_____
_____
_____

How do scientists learn about past climates?

_____

Mining: Why we really Dig Earth!

Which raw materials do we mine to make the following?

Glass   →   _____

Plastic   →   _____

Structures   →   _____

Energy: How do we Power our Lives?

Which home appliances use the most energy?

Tablet	or	TV
Washer	or	Dryer
Heater	or	Portable fan

Which one uses the most energy of all? _____

What percentage of global hydroelectricity is produced in Canada?

_____

MEDICAL SENSATIONS

Touch

How are 3D printers used in medicine?

_____

_____

What were two uses of the Clay Anatomical Model?

_____

_____

Smell and Taste

A doctor's first clues about an illness often come from the smell of the patient's body. Associate the following smells to the disease:

a. Butcher shop	i. Diabetes
b. Fish	ii. Typhoid
c. Freshly-baked bread	iii. Liver failure
d. Nail polish remover	iv. Yellow Fever

At what angle is the slope of the Crazy Kitchen? _____

What three words does the sphere of letters in the *Out of the Shadows* artifact spell?

_____   _____   _____

F

HIDDEN WORLDS

Name three Ininew
constellations:

_____
_____
_____

Name three Ojibwe
constellations:

_____
_____
_____

Name three D(L)akota
constellations:

_____
_____
_____

Beyond Earth

What is the difference between a reflecting and a refracting telescope?

_____

_____

Magnificent Magnifiers

A simple microscope with a single lens can magnify up to 200 times.
What about a compound microscope? _____
What about an electron microscope? _____

H

WEARABLE TECH

Pet Projects

What information does the SeeHorse Biometric Monitor tell you about your horse?

_____

_____

Dogs have different characteristics that allow them to do things humans cannot. Rescue gear has been created for them to wear to help them do the following:
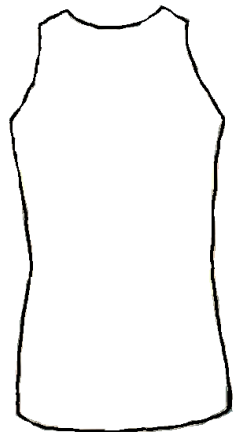
_____

_____

Suit Yourself

Find the unique apparel created by Inuit women. What is it called?

_____

Get Connected:

What is the purpose of the Hexoskin, the biometric suit?

_____

_____

Draw the location of the breathing sensors within the Hexoskin on the diagram.

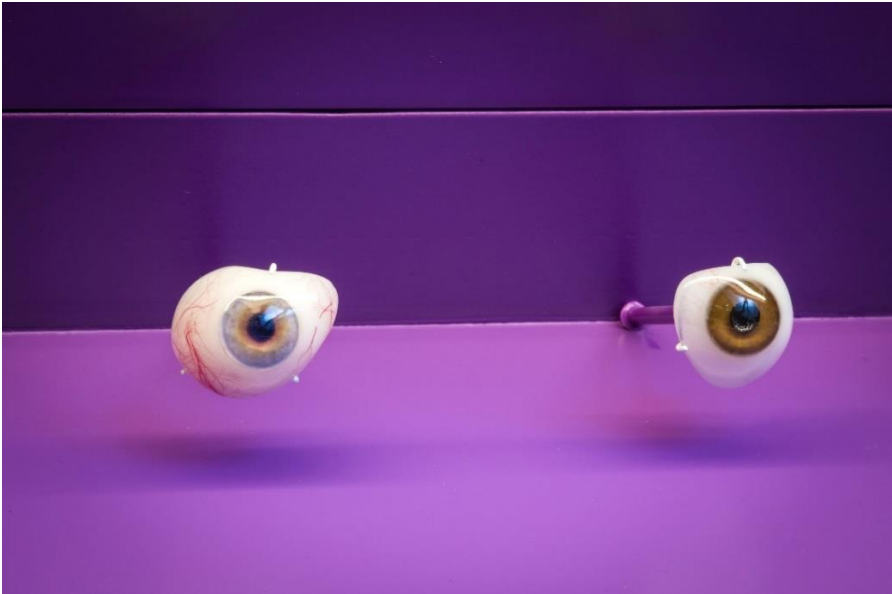What is the name of the Canadian Olympic champion wrestler from Ottawa who trained with this Hexoskin?

_____

Body Shop:

A regular heartbeat is essential for ensuring the body gets the oxygen and nutrients it needs. How does a pacemaker keep the heart beating in rhythm?

_____

_____

Ocular prostheses can be useful despite the fact that they do not provide sight. Name two uses for them.

_____

_____

TECHNOLOGY IN OUR LIVES

Consumer Culture:

What was the proportion of women in the paid labour force during wartime?

_____

How old were you when Kijiji was launched? _____

What was the main contributor of Canada's population growth in 1999?

_____

Name a household item that was once considered a luxury but is now a necessity. Do you agree?

_____

_____

The Weight of our Stuff:

In the work by artist HA Schult, what do the "trash people" represent?

_____

_____