



# imagine

AN ONTARIO SCIENCE CENTRE EXHIBITION

## WHAT DOES IT MEAN TO BE INNOVATIVE?

As humans we innovate to survive. It has driven the evolution of our civilization and the progress and quality of our everyday lives. Creating a culture of innovation will help us to survive and thrive as we meet new challenges – from environmental concerns to global conflicts. Whether your field is art or engineering – innovate, and you open exciting new pathways to explore.

Do you have what it takes to innovate?

- Are you a good observer?
- Do you ask the right questions?
- Are you willing to take risks?
- Where do you get your inspiration and do you inspire others?

You will soon find out as you open up your thinking, reflect on what you learn and create something new with IMAGINATE! – a multi-activity exhibition that introduces participants to the skills and attitudes that are part of the process of innovation.

**“You see things  
and say, ‘Why?’,  
but I dream  
things and say,  
‘Why not?’ ”**

George Bernard Shaw

**CHALLENGE  
YOURSELF  
RIGHT NOW!**

### Features

- 6000 sq. ft. (557 sq. m.) exhibition
- Flexible design to accommodate many types of display areas
- Multi-station interactive exhibits

### Rental Information

- Includes an installation and take-down crew from Ontario Science Centre
- Installation and take-down each require a maximum of 10 working days



**ONTARIO  
SCIENCE  
CENTRE**

# Imaginate explores five broad themes, each representing a possible pathway to innovation

## Dream Big

Innovation often occurs when a big dream or passion grips you and must be pursued. The history of aerodynamics is filled with those who dreamed big and often relentlessly followed those dreams. Exhibits with this theme highlight how ideas grow and how intense motivation can be a driving force for innovation.

Unique exhibits include:

### Paper Airplanes

Making an ordinary paper airplane can be an engaging experience. Try out different airplane designs. Which one flies further, more accurately? Build, test, observe and retool as many times as you need to perfect your design.

### Tumbling Dice

What sparks curiosity? What spurs you on to ask more? Place an object in a 12 foot vertical tube and watch it fly. Adjust the airflow in these tubes to control your object's ascent, descent and action within the tubes.

### So You Think You Can Fly

As a child did you ever just want to fly? Put on a pair of wings, flap your arms and compare your flapping rate to different birds. Step on our scale and see what your wingspan would need to be for you to be able to fly.

## Expect the Unexpected

Science is a process of questioning. Unexpected answers are not always recognized for their value. Keen observation and fresh eyes can often allow people to see beyond the obvious.

Unique exhibits include:

### Ferrofluid Experiences

What happens when a new pair of eyes looks at the same material? See how a fluid filled with tiny magnetic particles developed by NASA became a component of the auto and music industries. What would you do with this fluid?

### Interactive Projections

In this playful experience, just crossing the floor triggers a reaction wherever you walk. What are those various reactions? Where are the trigger points? Observe carefully and have fun testing and re-testing to find out!

### Materials Playground

Have you ever looked at something ordinary and thought of a way to make it extraordinary? Test out various properties of materials in this materials playground and see how nature has directly inspired many inventions.

## Collaborate or Compete

Colleagues or competitors can spur us to achieve more than we could on our own. Peer interaction and pressure can influence us to go in directions that we might otherwise ignore. This can have an impact on our ability to be innovative.

Unique exhibits include:

### Sound Panels

Is it just noise or is it 'music'? In this large room of sound and lights, you can create a musical masterpiece involving rhythm, light, pattern and emotion. Collaboration with others lets you work with each other's sounds.



### **Telltale Heart**

Experiences change when they are shared with others. Place your hands on a sensor bar that reads your heart rate. See how your heartbeat affects the behaviour of the large sculpture before you. Watch what happens as more people join in the experience.

### **Making Faces**

Do you have to work directly with someone for it to be called collaboration? In this experience, one face has many different contributors. Take a picture of your own face and choose from a fascinating video collection of other people's features to create a bizarre new image.



## **Try, Try and Try Again**

Innovation is neither quick nor easy. Nothing beats experience and perseverance when it comes to creating something. To be innovative, you need opportunities to create, test, tweak, re-test and even start over. In this series of experiences, patience and observation are key in investigating materials and their properties.

Unique exhibits include:

### **Gear Tree/Kinetic Sculptures**

How many different ways can you build on a single idea? Closer examination of gears and how they move objects at different speeds and in different directions will allow participants to see how simple inventions can lead to innovative outcomes.

### **Stop-Motion Animation**

Sometimes innovation requires patience and adaptation. In this experience, you can communicate ideas, stories and emotions by creating stop-motion animation videos. Respond to novel challenges by using unexpected materials and making minor changes along the way.



### **Friction Zone**

Many good innovations come from an understanding of the properties of the materials being used. By experimenting with the surface properties of a range of materials, you can discover which combinations yield the fastest or slowest run.

### **Stories of Innovators**

Perseverance and tenacity can be critical in reaching a breakthrough. Sometimes it is luck, a mistake or the influence of others. Throughout the hall you will experience the stories of innovators and learn the pathway to innovation that they took. Was their success simply luck or a long road filled with many small steps forward?

### **Create Something New**

What is it that makes someone spend hours working on something? Create a traditional item using non-traditional materials and discover the many possibilities of a space that is part tinkerer's workshop and part artist's studio.

## Look to the World

Whether we dwell in the frigid Arctic or the dense rain forest, we rely on innovative processes and the making of innovative products to survive in our various environments. Our common drive for food, shelter and water throughout the world demonstrate the diversity in innovation.

Unique exhibits include:

### Innovation Around the World

Explore creative problem-solving solutions from across the globe. Learn about low-tech, grassroots innovations that were driven by the basic human needs of food, water, shelter, energy and health. Take a Q Drum for a spin and pull a south-pointing cart, among other innovative devices.

### Question of the Day

Your opinion and those of others can sometimes influence the direction that an idea takes. This interactive exhibit asks visitors to express their opinions by answering a variety of playful questions. How do your answers compare with others?

Check the tabulated results at the back of the exhibit to see where you fit in.



## Evolution of Innovation

### Speech Synthesis

Voice synthesis and voice modification helped create a memorable experience for Science Centre visitors back in the 1970s. Since then, speech synthesis has evolved dramatically. Explore how far these technologies have come.

### 3D Evolution

The evolution of 3D is filled with examples of innovative behaviour – from stereoscopes to 3D glasses to 3D screens that can be viewed without glasses. Learn how the brain perceives 3D and experience some illusions that take spectacular advantage of this science.

For more information contact us directly or visit our website.

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