EXHIBIT EXPLORATION GUIDE

Grade 6

Students: Please fill out this worksheet as you explore our exhibit halls.

LEVEL 4

Space Hall

Section A

Space Shuttle Model

Topic: Space

Located near the Space Hall entrance.

A1. Look closely at the Canadarm: the robotic arm of the space shuttle. Can you find a joint that looks like the shoulder of a human arm? How about an elbow or wrist? Draw the Canadarm and label the joints in the space provided below.

A2. What do you think the Canadarm was used for?

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Section B

Rocket Chair

Topic: Space

The rocket chair glides on an almost frictionless cushion of air. The effect is similar to moving in space. Because there is no friction, once the chair starts moving in a particular direction, it will not slow down unless another force is applied to stop or change its direction.

Try the chair yourself or observe someone else using it for two minutes.

B1. Which direction do the air jets need to blow in order to make the rocket chair move forward? Why?

B2. Why is it important for a space-walking astronaut to be attached with a line to the spacecraft?

Section C

Gravity Surfer

Topic: Space

C1. A spacecraft can use the gravity of a planet or moon to change its path and speed. This technique, known as “gravity assist,” is used to save time, money and fuel.

See how accurately you can launch the Cassini spacecraft to Saturn using gravity assist. What challenges did you face?

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Section D

Earth, Moon and Sun

Topic: Space

D1. How many times does the Moon circle Earth in one year?

D2. From Earth, the shape of the Moon appears to change. Why does this change in appearance happen?

D3. Watch closely and you will see eclipses. What happens during a solar eclipse?

D4. What happens during a lunar eclipse?

Section E

Moon, Mars and Meteorites

Topic: Space

E1. The display cases contain real rocks from the Moon, Mars and other parts of the solar system. Examine these rocks and record some of the features they have in common.

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Forest Lane

Section F

Nature Nook

Topic: Biodiversity

Look at the mural showing the four seasons. On the panel titled Press to Listen, listen to the four sounds, but do not lift the panels to identify them yet.

F1. Using the letters to the right, try to guess which sound comes from each type of animal. Write the matching letter below.

- **i.** Mammal _____
- **ii.** Amphibian _____
- **iii.** Bird _____
- **iv.** Insect _____

F2. Lift the panels to identify the sounds. Which ones do you think you might hear at night? (Hint: There are two.)

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Cohon Family Nature Escape

Outdoor area, open seasonally

Section G

Urban Forest

Topic: Biodiversity

G1. Look at the trees around you and select two different species. Using words and drawings, describe the characteristics of each tree. How are they the same, and how are they different?

Species 1

Species 2

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Weston Family Innovation Centre

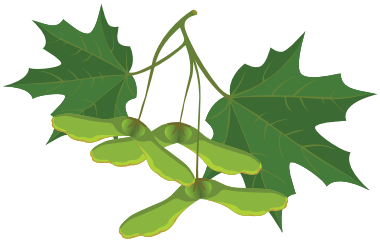
Section H

Vertical Wind Tunnel

Topic: Flight

H1. Cut and/or fold the paper so that it falls as slowly as possible from the column. You can follow the instructions provided or create an object of your own design. Then, draw the object and describe its path from the top of the column.

H2. How does the structure of a maple seed help the wind carry the seed through the air? See the image for reference.



H3. Does your flying object share any features in common with a maple seed? What are they?

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The Bruce Poon Tip Living Earth Hall

Section I

Frog Calls

Topic: Biodiversity

Press the buttons to hear the different frog calls.

I1. Which frog call sounds like the plucking of a rubber band?

I2. Which frog call sounds like the revving of a car engine?

I3. Have you heard any of these calls before? If yes, list them below:

I4. Can you mimic any of the frog calls? Choose one and start croaking! Which frog did you imitate?

My frog: _____

I5. Can your friend identify which frog you tried to imitate?

My friend's guess: _____

I6. What would happen if an invasive species drove one of these frog species out of an ecosystem?