**Teacher's Guide: Space Centre Scavenger Hunt**

**Audience**: Grade 1
**Objectives:** To explore and observe various aspects of space and astronomy in a fun and engaging way.

**Curricular competencies:**

- Demonstrate curiosity and a sense of wonder about the world.
- Make and record observations.
- Compare observations with predictions through discussion.
- Communicate observations and ideas using oral or written language, drawing, or role-play.

**Preparation:**

- Before starting the scavenger hunt, divide students into groups of 3 – 4. This will provide an opportunity for students to work collaboratively with their peers.
- Depending on students' reading levels, groups may require an adult to assist (read out questions/instructions).
- To ensure students stay on task, give a time limit of approximately 30 minutes. Some groups may not be able to complete all the questions (complete in class at another time).
- Assign each group to start at a different section. This will help limit crowding at some of the stations. Once completed, they can move on to the next section. This activity does not need to be completed in chronological order.

**Classroom follow-up:**

- In class ask the students to share their findings, observations, and ideas. Refer to the answer key for sample answers.
- Debrief questions you could ask:
    - "What did you like most about this activity?"
    - "What is one interesting thing you learned?"
    - "Would you want to go to space? If yes, what do you need to do to prepare for it? Where would your destination be? What would you do there?"

Group members: _____

# Space Centre Scavenger Hunt

Welcome to the Cosmic Courtyard at H.R. MacMillan Space Centre! **Your mission** is to travel to space and head for Mars. Follow the steps below to complete your mission. Have fun!

## Preparation

Find the **spacesuit** and take a picture in it. Why do you think astronauts need a spacesuit? Tell someone what you think.

Find some **astronaut food.** What do you notice about the packaging? Does the food look good? Share your ideas with someone. What would **you** like to eat in space? Write it down below.

_____

## Leaving Earth

Find the **giant J-2 engine.** There were 6 of these engines on the Saturn V rocket. One J-2 engine weighs as much as 9 grizzly bears! So heavy!

Find the model of the **Saturn V rocket.** Look at the engines at the bottom of the rocket. How many engines do you see on the model? _____ These are F-1 engines – much bigger than the giant J-2 engines.

How many **rockets** you can find in the Cosmic Courtyard. **Draw a picture** of your favourite rocket in the space below.

## In Space

Find the **ISS (International Space Station) cabin**. Stand on the disk and press the buttons. Stare at the dots for 20 seconds. How do you feel? Share your thoughts with someone.

Find a **model of the ISS.** (Hint: Look up!) Notice that the wing-like structures are solar panels. What do you think they are for? Share your thoughts with someone.

## On the Moon

Find the **piece of the Moon.** What colour is it? _____

Find the big **meteorite**. How heavy is it? _____ kilograms. This is as heavy as a small dog!

Look at the picture of the Moon behind the meteorite. Why do you think it has so many holes, called craters? Write your thoughts below or share your thoughts with someone.

_____

Find the **small meteorites.** Notice the different shapes, sizes, and textures. **Draw your favourite one** in the space below. Don't forget to include its name!

Find the **cosmic rays machine**. It detects invisible particles. Alpha particles leave a short, fat trail. How many Alpha particles can you count in 30 seconds? _____

## On Mars

Find **the planet Mars**. How do you know it's Mars? _____

Find the rover **Sojourner** (it is in a case). Compare Sojourner to the picture of the rover Curiosity. What is the same and what is different? Share your ideas with your group.

Try exploring Mars with the **Mars Explorer game**.

Look for the **Alien Encounters game.** Follow the prompts and **draw a picture** of your favourite alien.

Group members: _____

# Scavenger Hunt Answer Key

## Preparation

Find the **spacesuit** and take a picture in it. Why do astronauts need a spacesuit? Tell someone what you think.

*Spacesuits are worn to protect astronauts from radiation, dust, debris, and extreme temperatures. It also provides oxygen and monitors their vitals.*

Find some **astronaut food.** What do you notice about the packaging? Does it look good? Share your ideas with someone. What would **you** like to eat in space? Write it down below.

*Astronaut food is often vacuum–sealed, lightweight, freeze-dried, and simple.*

## Leaving Earth

Find the **giant J-2 engine.** There were 6 of these engines on the Saturn V rocket. One J-2 engine weighs as much as 9 grizzly bears! So heavy!

Find the model of the **Saturn V rocket.** Look at the engines at the bottom of the rocket. How many engines do you see on the model? ____*5*___ These are F-1 engines – much bigger than the giant J-2 engines.

How many **rockets** you can find in the Cosmic Courtyard. **Draw a picture** of your favourite rocket in the space below. *4*

## In Space

Find the **ISS (International Space Station) cabin**. Stand on the disk and press the buttons. Stare at the dots for 20 seconds. How do you feel? Share your thoughts with someone.

*Dizzy, nauseous, disoriented, weird, or nothing at all?*

Find a **model of the ISS.** (Hint: Look up!) **Draw what you see** in the space below. Notice that the wing-like structures are solar panels. What do you think they are for?

*The solar panels are used for energy for the space station.*

**On the Moon**

Find the **piece of the Moon.** What colour is it?

*Black*

Find the big **meteorite**. How heavy is it? 13 kilograms. (This is as heavy as a small dog!) Now, look at the picture of the Moon behind it. Why do you think it has so many holes? Write your thoughts below.

*Due to meteorite impacts.*

Find the **small meteorites.** Notice the different shapes, sizes, and textures. **Draw your favourite one** in the space below. Don't forget to include its name!

*Moldavites – seaweed-coloured green stones, has many ridges*
*Octahedrites – cut, polished, and etched slice*
*Tektites – darker stones, rod-shaped*

Find the **cosmic rays machine**. It detects invisible particles. Alpha particles leave a short, fat trail. How many can of those can you count in 30 seconds?

**On Mars**

Find **the planet Mars**. How do you know it's Mars?

*It's red!*

Find the rover **Sojourner** (it is in a case). Compare Sojourner to the picture of the rover Curiosity. What is the same and what is different? Share your ideas with your group.

*Sojourner was the very first Mars rover. It is very simple compared to Curiosity and much smaller. The most obvious feature on Sojourner is the solar panel on its 'back'. The solar panels provided energy for the rover. Sojourner has fewer instruments than Curiosity and doesn't have 'arms' to extend its reach.*

Try exploring Mars with the **Mars Explorer simulation**.

Look for the **Alien Encounters game.** Follow the prompts and **draw a picture** of your favourite alien.