Grade 6: Geo Detectives VR
Virtual Field Trip Components

Video Introduction
This video introduces the virtual field trip.

Section 1: Up in Space!
In this section, students will be introduced to our solar system and the celestial bodies found in it. They will learn about the two types of planets in **Planet Preview** and tour the solar system using **Tourist in our Solar System** slideshow. The **Solar System Trek** worksheet can be filled out while touring the solar system or filled out after you finish the tour. Finally, to help students understand the enormity of our solar system and reinforce the information about the celestial bodies, they will have fun recreating the solar system using toilet paper with **Solar System Model**

- Educational Video: **Welcome to Our Solar System**
- Virtual Activity: **Tourist in Our Solar System**
- In-class Activity: **Solar System Model**

Section 2: All About Orbits
In this section, students will learn about the mechanics of our solar system and the planets within it. In **From Ancient Astronomers to Modern Times,** they will learn about the scientific process and how the model of our solar system changed over time. Using the **Orbit Trek** script and worksheet, students will learn how planets orbit the Sun in our solar system and how the Moon orbits Earth in **Exploring Orbits**. Students will use the **Solar System Scope** program to learn why some orbits in our solar system are faster than others. Finally, they will then get to simulate these orbits themselves by playing **Orbit Madness.**

- Educational Video: **Thinking about Orbits**
- Virtual/In-class Activity: **From Ancient Astronomers to Modern Minds**
- Virtual Activity: **Exploring Orbits with Solar System Scope**
- In-class Activity: **Orbit Madness!**

Section 3: Studying Space
In this section, students will learn about human exploration in space and the technology that makes it possible. In **Be The Canadarm**, students will build a simple simulation of the Canadarm and learn why this robotic arm is so important to the International Space Station. Afterwards, students will learn how spacecraft communicate information back to Earth in **Receive It**. They will then learn more about the International Space Station and envision their own ISS module in **ISS Designers**.

- Educational Video: **Space Age Technology**
- In-class Activity: **Be The Canadarm**
- Virtual Activity: **Receive It!**
- In-class Activity: **ISS Designers**

Section 4: Reading the Night Sky
In this section, students will learn about the Moon and stars as we see them in our night sky. In **Constellations and Asterisms,** they will discover how stars form patterns in the sky, which humans have used to tell stories and navigate our world. Next, students will get a chance to imagine some constellation stories of their own in **Stories in the Stars.** In **Once in a Blue Moon**, students will learn the science behind the phases of the Moon that we see from Earth.

- Educational Video: **Looking at the Night Sky**
- Virtual Activity: **Constellations and Asterisms**
- In-class Activity: **Stories in the Stars**
- Virtual/In-class Activity: **Once in a Blue Moon**

Conclusion Video
This video reviews all the material covered in the virtual field trip.

Curriculum Links

28.0 Demonstrate that specific terminology is used in science and technology contexts
29.0 Describe how evidence must be continually questioned in order to validate scientific knowledge
30.0 Describe the physical characteristics of the Sun, planets, and moons
31.0 Demonstrate how Earth's rotation causes the day and night cycle and how Earth's revolution causes the yearly cycle of seasons
32.0 Observe and explain how the relative positions of Earth, the Moon, and the Sun are responsible for various phenomena
32.1 Observe and explain how the relative positions of the Earth, Moon, and Sun are responsible for the Moon phases responsible for various phenomena
32.2 Observe and explain how the relative positions of Earth, Moon, and Sun are responsible for eclipses.
32.3 Observe and explain how the relative positions of Earth, the Moon, and the Sun are responsible for tides
33.0 Describe the physical characteristics of meteoroids, asteroids, and comets
34.0 Identify constellations in the night sky
36.0 Demonstrate and explain the importance of selecting appropriate processes for investigating scientific questions and solving technological problems
37.0 Describe scientific and technological achievements that are the result of contributions by people from around the world
38.0 Describe examples of improvements to the tools and techniques of scientific investigation that have led to new discoveries
39.0 Describe how astronauts are able to meet their basic needs in space
40.0 Describe instances where scientific ideas and discoveries have led to new inventions and applications
41.0 Provide examples of Canadians who have contributed to science and technology