

# Mars Rover Exhibit

*This was a writing contract I completed for NGX Interactive for use in a Mars Rover exhibit at the HR MacMillan Space Centre.*



*Image credit: NGX Interactive*

## Overall Concept

*I started this project by writing a creative concept document that worked within the client's parameters and educational goals. These are some of the initial ideas for the different "days" of the exhibit.*

### **Day 424 (Sol 411) | Topic: Rocks | Tool: Camera (Based on the Mastcam-Z)**

You're in an open environment on Mars. You cruise around a bit. After a few seconds a flash streaks across the sky and heads right towards you. It lands with a crash and your screen shakes. The crater starts smoking. You roll on over to it. When you arrive, you can't make out much because it's buried in debris. But you can make out a faint NASA or ESA logo. A glowing exclamation point icon on your HUD hovers over the wreckage. Once you're centered on the exclamation point, your HUD display changes to camera mode and you're prompted to push the joystick button. Doing so snaps a picture and begins the first challenge.

### **Day 871 (Sol 845) | Topic: Signs of Life and Minerals | Tool: Laser (Based on the SuperCam)**

As this day opens, you're sliding down a steep crater. Gravel is flying towards you. While you slide, you need to quickly move the joystick left and right to avoid crashing into rocky outcroppings. Finally, you land on the ground and tumble onto your back. The camera is facing the sky. You see the two moons of Mars, moving in opposite directions. Your HUD circles the moons and calculates your position based on where they are in the sky. Your rover then activates turtle protocol, where you wiggle back and forth until you get back onto your wheels. Once you do, you see another glowing exclamation point on a dark rocky section on the wall of the crater that you're inside of. When you center in, you are prompted to push the joystick and start up your laser. Once it's in the correct spot, it starts to visually "heat up." If you hold it long enough, it vaporizes that piece of rock, sending a visual representation of sound and heat waves back towards your screen. You enter the next challenge.

### **Day 3,219 (Sol 3,124) | Epilogue**

You power up but can't move. In the distance you see a little dome on the surface. The sun is setting blue. The dome's door opens, and the experience ends.

## **Research Document**

*Based on the concepts, I then completed in-depth research into the science behind Martian exploration (excerpted below), which informed visual design and my final in-game copy.*

### **Ancient River**

Find proof that water once flowed in this area.

### **Camera Tool**

The design and functionality of the proposed camera and arm is based on the Mars 2020 Rover's Mastcam-Z, which can see details as small as a house fly from 100 metres away, and the Rover's arm-mounted WATSON camera, which is designed to magnify the textures of rocks.

- <https://mars.nasa.gov/mars2020/mission/instruments/mastcam-z/>
- <https://mars.nasa.gov/mars2020/mission/rover/arm/>

### **Explore Mode**

Visitors will explore the top of a mountainous range. Textures related to dips in the ground and small mountain forms will be featured in this mode. Outcroppings, small piles of rocks, layered rock, "blueberries" and other geological formations will be visible, but not detailed.