Everyone looks forward to a family vacation, no matter how close or far away from home it may be. But have you ever taken a family vacation to a different planet?

One of the first things you might notice on a vacation is how different it is from home — and Mars is MUCH different from Earth. The Martian day is 40 minutes longer; its year about twice as long as ours. The temperatures are extreme and the atmosphere has less pressure and oxygen than what we are used to on Earth. You will rely on your spacecraft and technology to provide you with a safe, habitable environment on your trip out and back, as well as on the surface.

How do we know all of this? Scientists have explored Mars for decades using probes, orbiters, and rovers. You’ll get to see some of these spacecraft on your vacation to Mars. The data gathered during these missions has helped us understand Mars better, which is crucial to future exploration missions.

PLANNING YOUR VACATION
What do you think it would take to plan a trip to Mars? One of the most important parts of a successful vacation is the planning. You will be gone for more than two years on your trip to Mars. Make a list of what personal items you are taking with you, but plan wisely. Space and mass is limited! Each family member gets a box 1 meter high by 1 meter wide by 1 meter long to put personal items in. The total mass cannot exceed 1kg. Things to consider:

- Will all of your items fit in your box?
- Do the items together weigh less than 1kg?
- Are there items you can share with family members to save space or weight?
- Did you pick items that can’t be used in space (cell phone coverage is non-existent!)?

THE JOURNEY
Once you’ve planned your trip, you want to make sure that your transportation is ready to go. Before you leave for Mars, explore the spacecraft that will get you to Mars and back: Orion and the habitation module. They are your home for your journey: [https://www.generationbeyondinschool.com/interactives/mission/#/mission-01-00](https://www.generationbeyondinschool.com/interactives/mission/#/mission-01-00)

EXPLORING MARS - YOUR ITINERARY
Time to explore Mars! Download Lockheed Martin’s Mars Walk or Mars Walk VR app onto your phone*. Explore the surface of the planet and take screenshots of your favorite locations (note: you will have to remove the VR eye glasses to take screenshots). You have enough time to make at least five stops on the surface.

*IPhone, IPad, and iPod touch require iOS 10.0 or later; Android requires 4.4 and up. A cardboard VR device or VR eye glasses are required for the VR version.

Stop #1, Chryse Planitia and Viking:
Go to Chryse Planitia to find Viking, the first U.S. spacecraft to land safely on the surface of Mars. Both Viking spacecraft touched down in 1976 and took high-resolution images of the Martian surface, collected data to help scientists understand Mars’ atmosphere and surface, and ran experiments to look for any evidence of life.

Stop #2, Gale Crater and Curiosity Mars Science Laboratory:
NASA’s Curiosity rover landed on Mars in 2012 and has been carrying out research to determine if microbes could have ever been able to live on Mars.

Stop #3, Elysium Planitia and InSight:
Look in Elysium Planitia for the InSight lander. It is designed to help scientists study the interior of Mars so they can understand how Mars has changed through time.

Additional Stops, Family Choice:
There are still many stops on Mars to explore. As a family, decide where you want to go next. Additional points of interest are the Northern Plains Crater and Curiosity’s heat shield and back shell that were both ejected during landing.
FAMILY VACATION PHOTO ALBUM
One of the best ways to preserve memories of family vacations is with a photo album. Combine the screen-shots you took on your vacation with your favorite photo editing software or app (and your favorite family photos from Earth-based trips) to show what your trip looked like. Or, if you are unable to download your screenshots, print the images on the following pages. Cut them out and glue them into a scrapbook. Don’t forget to describe what was happening in each photo. Finally, add decorations using markers, colored pencils, or stickers, and you will have an amazing souvenir to preserve the memories of your family trip.

FOR MORE INFORMATION
- Mars Science Laboratory/Curiosity Rover Mission Information
- Viking 1 and Viking 2 Mission Information
- InSight Mission Information
SCRAPBOOK PHOTOS