

Family Involvement Activity



LUNAR STATION VACATION

Introduction

Is a lunar vacation a far-out adventure or a possible family vacation destination? To determine if this idea is possible, space agencies need to know the amount of required supplies (food, oxygen, and water) consumed by the average family per day in space. In this activity you and your child work together to calculate the amount of required supplies for your family to take a one-week vacation to a lunar base.

Read the following article and complete the worksheet to find out how much your family will be taking on its lunar vacation.



Background

While we can't book a lunar station vacation yet, the idea of a family vacation on the moon may be closer than most people think. NASA is working toward making space travel possible for the general public. Second generation reusable launch vehicles can make space travel less expensive and safer. NASA is researching whether shuttles could be replaced by space transport vehicles that can carry passengers. By 2025 vehicles could be 100 times less expensive and 10,000 times safer than today's shuttles.



The first space tourist, Dennis Tito, paid \$20 million in 2001 for an eight-day trip to the International Space Station aboard the Russian Soyuz-U booster. Tito's flight showed the world that space tourism can and will happen. In years to come, science fiction-themed hotels, spas, retreats, and conference centers may populate low-Earth orbit and maybe even the moon. Recently, a survey of the general public showed 42 percent were interested in a space vacation. In the United States 42 percent would equate to roughly 126,000,000 people. Perhaps someday you and your family will vacation at the lunar station!

Materials

- Worksheet
- Pencil or pen

LUNAR STATION VACATION WORKSHEET

Situation

Space agencies around the world are considering offering family vacation trips to their lunar base. The amount of required supplies (food, air and water) consumed by the average person per day in space has been estimated (see table to the right). Using the information provided below, calculate the amount of required supplies that would be needed for your family to take a one-week vacation to the lunar base.

Average Person Daily Requirements

Food: 750 grams (dry weight)
Oxygen: 836 grams
Water: 3,000 grams (drinking & food prep)
 18,000 grams (non-drinking uses)

There are 1,000 grams in a kilogram

How many people in your family are making the trip? _____

Total Amount for Each Person (multiply amount x 7 days)	Total Amount for Your Family (multiply weekly amounts x the number of people)
Food _____ grams per week	Food for family _____ grams
Oxygen _____ grams per week	Oxygen for family _____ grams
Water _____ grams per week	Water for family _____ grams

Total _____ grams divided by 1,000 grams per kilogram

Equals _____ kilograms for your family for the week.