

MOON Survival Scenario

You are a member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. However, due to mechanical difficulties, your ship was forced to land at a spot some 200 miles from the rendezvous point. During reentry and landing, much of the equipment aboard was damaged and, since survival depends on reaching the mother ship, the most critical items available must be chosen for the 200-mile trip. Below are listed the 15 items left intact and undamaged after the landing. Your task is to rank order them in terms of their importance for your crew in allowing them to reach the rendezvous point. Place the number 1 by the most important item, then number 2 by the second most important, and so on through number 15 for the least important.

Your Ranking	ITEMS	NASA Ranking
	Box of matches	
	Food concentrate	
	50 feet of nylon rope	
	Parachute silk	
	Portable hearing unit	
	Two .45 caliber pistols	
	One case of dehydrated milk	
	Two 100 lb. tanks of oxygen	
	Stellar map	
	Self-inflating life raft	
	Magnetic compass	
	5 gallons of water	
	Signal flares	
	First aid kits, including injection needle	
	Solar-powered FM receiver-transmitter	

Answers to the Survival on the Moon Exercise

Items	NASA Ranking	NASA's Reasoning
Box of matches	15	Virtually worthless- there's no oxygen on the moon to sustain combustion
Food concentrate	4	Efficient means of suppling energy requirements
50 feet of nylon rope	6	Useful in scaling cliffs and tying injured together
Parachute silk	8	Protection from the sun's ray
Portable heating unit	13	Not needed unless on the dark side of moon
Two .45 caliber pistols	11	Possible means of self-propulsion
One case of dehydrated milk	12	Bulkier duplication of food concentrate
Two 100 lb. tanks of oxygen	1	Most pressing survival need (weight is not a factor since gravity is one-sixth of the Earth's- each tank would only weigh about 17 lbs. on the moon)
Stellar map	3	Primary means of navigation- star patterns appear essentially identical on the moon as on Earth
Self-inflating life raft	9	bottle in military raft may be used for propulsion
Magnetic compass	14	The magnetic field on the moon is not polarized, so it's worthless for navigation
5 gallons of water	2	Needed for replacement of tremendous liquid loss on the light side
Signal flares	10	Use as distress signal when the mother ship is sighted
First aid kit, including injection needle	7	Needles connected to vials of vitamins, medicines, etc. will fit special aperture in NASA space suit
Solar-powered FM receiver-transmitter	5	For communication with mother ship (but FM requires line-of-sight transmission and can only be used over short ranges)