

Name: _____

Period: _____

Date: _____

Mr. Hodder

NASA Consensus Exercise

Goal

Experience how group decisions are made and how groups can work together to solve a common problem. Become aware of group interaction and how to function better in a group setting.

Individual Decisions (this section is to be taken individually)

You are the member of a space crew originally scheduled to rendezvous with a mother ship on the lighted surface of the moon. Because of mechanical difficulties however your ship was forced to land at a spot some 500 kilometers from the rendezvous point. During the landing much of the ship and the equipment on board were damaged, and since survival depends on reaching the mother ship, the most critical items still available must be chosen for the 500-kilometer trip.

Below are listed the fifteen items left intact and undamaged after your landing. Your task is to rank them in order of their importance in allowing your crew to reach the rendezvous point. Place the number 1 by the most important item, the number 2 by the second most important item and so on through number 15, the least important.

- _____ Box of matches
- _____ Food concentrate
- _____ 25 meters of nylon rope
- _____ Parachute silk
- _____ Portable heating unit
- _____ Two .45 caliber pistols
- _____ One case of dehydrated milk
- _____ Two 50 kg tanks of oxygen
- _____ Map of the stars as seen from the moon
- _____ Self-inflating life raft
- _____ One magnetic compass
- _____ 10 liters of water
- _____ Signal Flares
- _____ First aid kit containing injection needles
- _____ Solar powered FM receiver/transmitter

Group Decision (this section to be completed as a small group, 2-4 students)
Try as a group to make each ranking one with which all group members can at least partially agree. On the group summary sheet first place the individual rankings made earlier by each group member. Then reach a decision as a group.

Some helpful guidelines to use in reaching a consensus.

1. Avoid arguing for your own individual judgments. Approach the task on the basis of logic.
2. Avoid changing your mind in order to reach agreement and eliminate conflict.
3. Avoid conflict-reducing techniques such as majority vote, averaging or trading in reaching decisions.
4. View differences in opinion as helpful rather than as a hindrance in decision-making.

Group Summary Sheet

Place the number 1 by the most important item, the number 2 by the second most important item and so on through number 15, the least important. After the line place the group consensus.

_____	Box of matches
_____	Food concentrate
_____	25 meters of nylon rope
_____	Parachute silk
_____	Portable heating unit
_____	Two .45 caliber pistols
_____	One case of dehydrated milk
_____	Two 50 kg tanks of oxygen
_____	Map of the stars as seen from the moon
_____	Self-inflating life raft
_____	One magnetic compass
_____	10 liters of water
_____	Signal Flares
_____	First aid kit containing injection needles
_____	Solar powered FM receiver/transmitter

NASA Consensus Exercise - Lost on the Moon Answers

Items	Ranking	Your Rank	Error	Group Rank	Error
Box of Matches	15				
Food Concentrate	4				
25 meters of nylon rope	6				
Parachute silk	8				
Portable heating unit	13				
Two .45 caliber pistols	11				
One case of dehydrated milk	12				
Two 50 kg tanks of oxygen	1				
Map of the stars as seen from the moon	3				
Self inflating life raft	9				
One magnetic compass	14				
10 liters of water	2				
Signal Flares	10				
First aid kit containing injection needles	7				
Solar powered FM receiver/transmitter	5				

Total _____ Total _____

Scoring for Individuals

0-25: Excellent

26-32: Good

33-45: Average

46-55: Fair

56-70: Poor

71-112: Very Poor

Reasoning Behind the Ranking

1. Two 50 kg tanks of oxygen - Oxygen is the most pressing survival need.
2. 10 liters of water - Replacement for liquid lost on lighted side of the moon.
3. Map of the stars as seen from the moon - Primary means of navigation.
4. Food concentrate - Efficient means of supplying energy requirements.
5. Solar powered FM receiver/transmitter - For communication with the mother ship.
6. 25 meters of nylon rope - Useful in scaling cliffs and tying injured together.
7. First aid kit containing injection needles - Needed for vitamins, medicine, etc., will fit into space suit.
8. Parachute silk - Protection from the sun's rays.
9. Self-inflating life raft - CO₂ bottle may be used for propulsion.
10. Signal Flares - Distress signal when mother ship is sighted.
11. Two .45 caliber pistols - Possible means of self-propulsion.
12. One case of dehydrated milk - Bulkier duplication of food concentration.
13. Portable heating unit - Not needed unless on the dark side of the moon.
14. One magnetic compass - Magnetic field on the moon is not polarized, worthless in navigation.
15. Box of matches - No oxygen on the moon to sustain flame rendering them useless.