

# Decision Making



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# Agenda

- Definition of decision making.
- Reasons for difficult decisions.
- Components of decision-making
- Why “making”; not “taking”?
- Decision making procedure.
- Six thinking hats.

# Definition

- Decision making is the study of *identifying and choosing alternatives* based on the values and preferences of the decision maker.
- Decision making is the process of sufficiently *reducing uncertainty and doubt about alternatives* to allow a reasonable choice to be made from among them.



# Reasons for Difficult Decisions

- **Uncertainty** - Many facts may not be known.
- **Complexity** - You have to consider many interrelated factors.
- **High-risk consequences** - The impact of the decision may be significant.
- **Alternatives** - Each has its own set of uncertainties and consequences.
- **Interpersonal issues** - It can be difficult to predict how other people will react.

# Why “*Making*”; not “*Taking*”?



# Approaches to Decisions

- **Autocratic:** “*I decide*”



- **Democratic:** “*One person, one vote*”



- **Consultative:** “*I decide with input from you*”



- **Consensus:** “*We decide*”



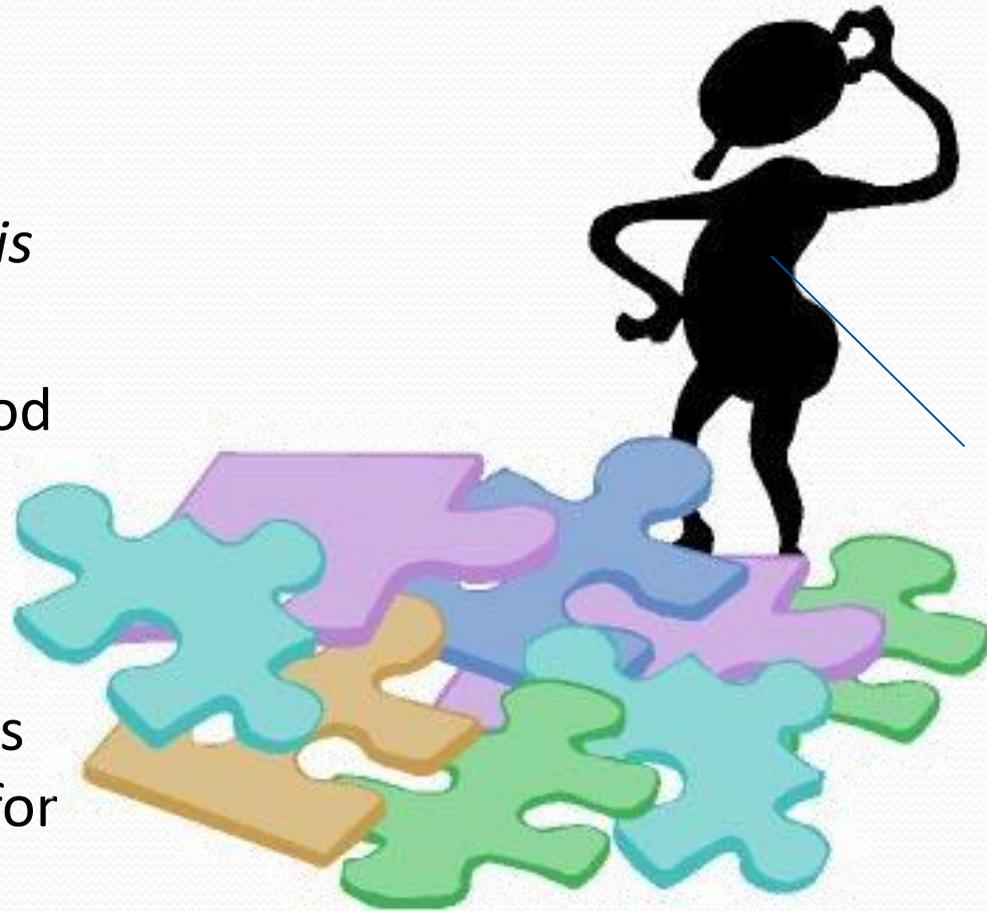
# Components of decision-making

1. An issue, situation or problem.
2. Alternative actions, options or possible decisions.
3. Consequences of each alternative.
4. Feelings associated with the consequences.
5. Values underlying each potential decision, and possible conflict.

# Decision Making Procedure

## 1. Define the idea or problem:

- *“A well stated problem is half solved”.*
- A decision is only as good as the definition of the problem.
- The right cure for the wrong problem is just as bad as the wrong cure for the right problem.



# Decision Making Procedure (Cont'd)

## 2. Develop alternatives:

- Alternatives are possible courses of action that can satisfy a need or solve a problem.
- Reduction of the number of alternatives is preferable because it is easier to choose among few alternatives.
- Get help (Brainstorming session).



# Decision Making Procedure (Cont'd)

## 3. Collect, interpret, and evaluate information about each alternative:

- Policies, procedures, rules, own experience, records, discussion with people, ...etc.
- Effective evaluation of alternatives involves looking ***objectively*** at the pros and cons of each one.



Alternative	Pros	Cons
A		
B		
C		

**Alternative**

**Pros**

**Cons**

**A**

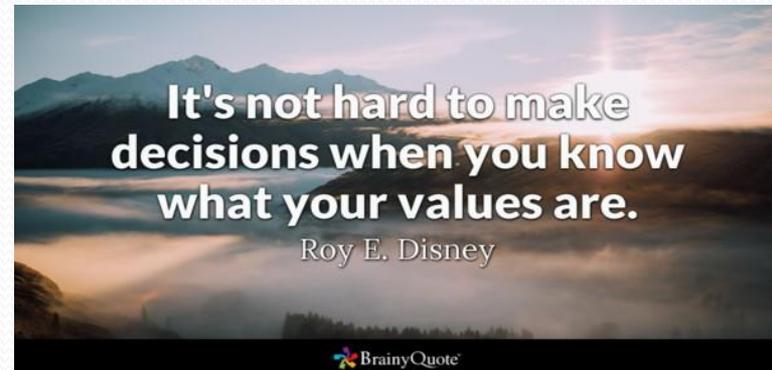
**B**

**C**

# Decision Making Procedure (Cont'd)

## 4. Select the preferred alternative:

- Pick the alternative you think is the most desirable for all concerned from an **objective, ethical, and practical** point of view.
- Selecting the preferred alternative involves cost/benefit analysis and risk analysis.



# Cost/Benefit Analysis

- Estimation of the cost of each alternative in terms of human, physical, and financial resources.
- Estimation of the expected benefit(s).
- Comparison of the two and selection of the one with the greatest payoff.



# Risk Analysis

- Risk is the possibility of defeat, disadvantage, injury, or loss.
- Prudent decision makers try to minimize the risk by effectively forecasting outcomes and considering all variables.

Impact ↑

**Risk Analysis Matrix**

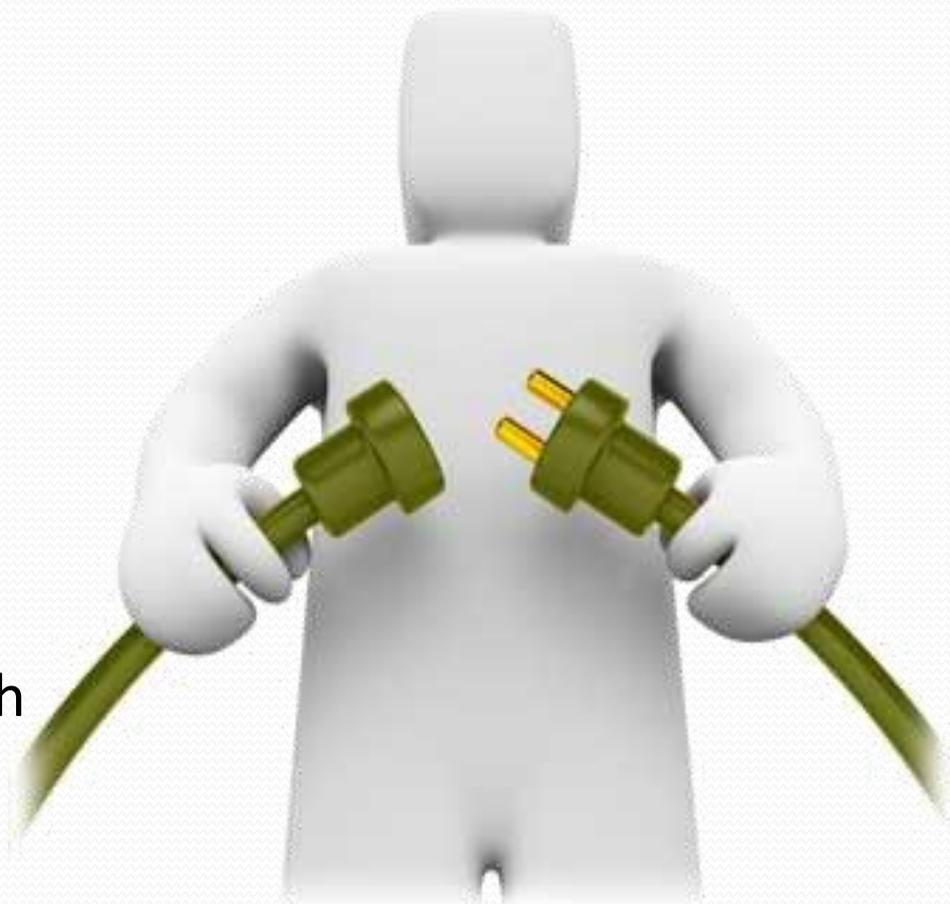
Contingency Risks	Major Risks
Minor Risks	High Incidence Risks

→  
Probability

# Decision Making Procedure (Cont'd)

## 5. Implement the decision:

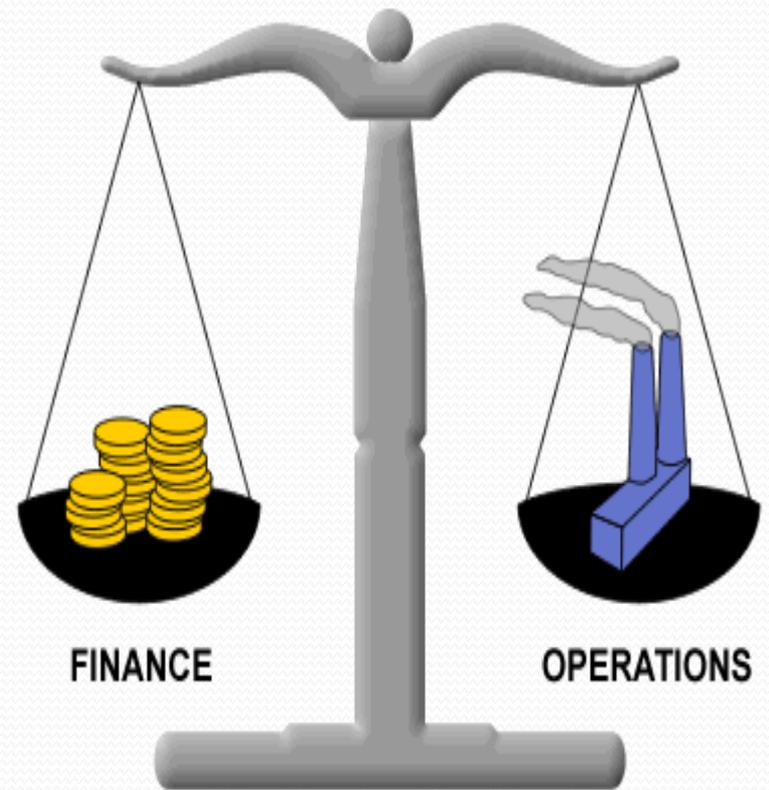
- Effective decision making does not stop when you choose from among alternatives.
- The decision must be put into operation.
- You must face and deal with people who may not like your choice.



# Decision Making Procedure (Cont'd)

## 6. Follow-up, evaluate, and make changes if needed:

- This step determines whether the implementation of the decision is proceeding smoothly and achieving the desired results.
- If not, and the decision can be changed or modified, it should be.
- If it can't be changed, then you ***“live with it”*** and try to make it succeed.



**Follow up**

**Implement the decision**

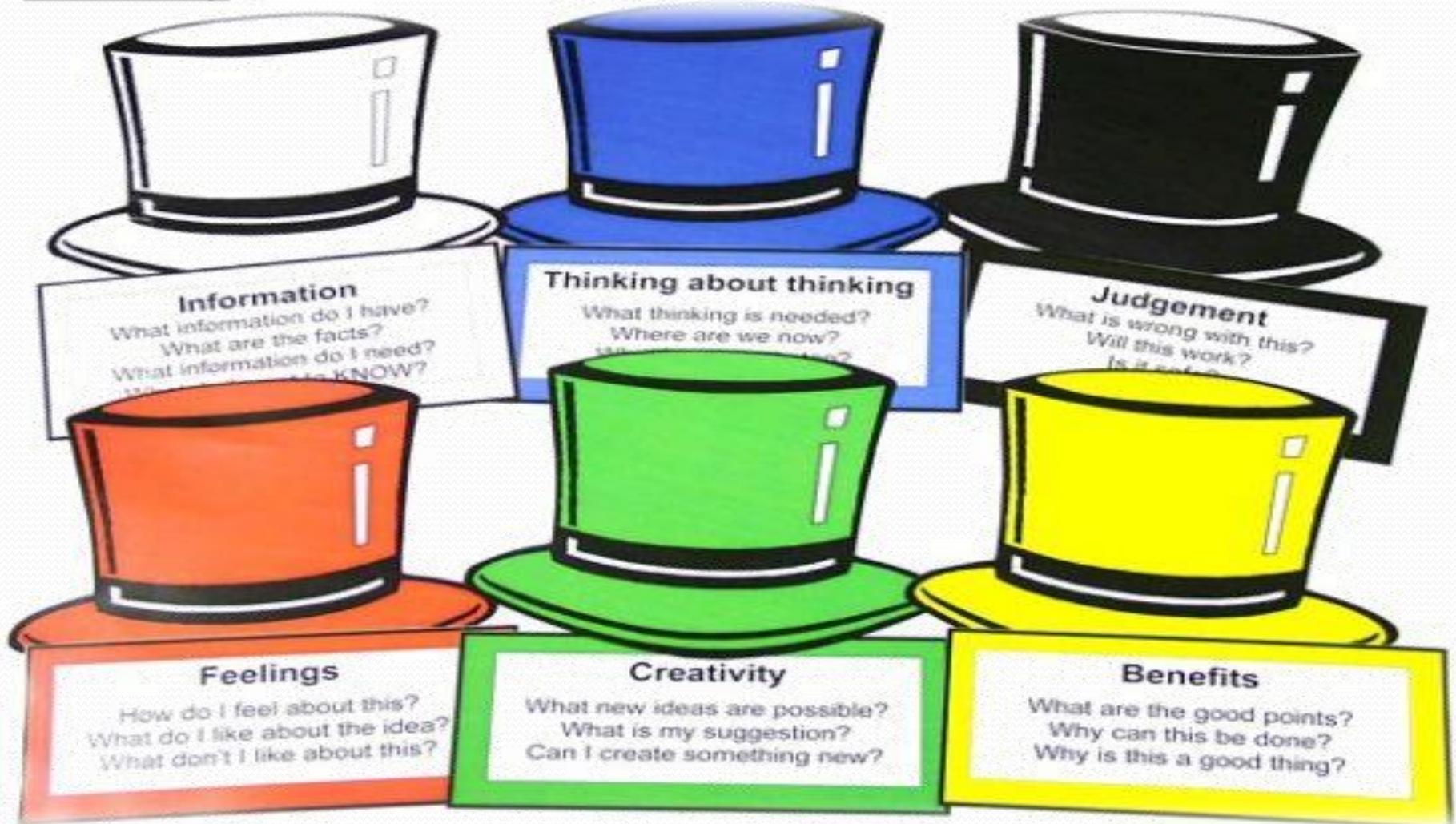
**Choose an alternative**

**Assess the alternatives**

**Develop alternatives**

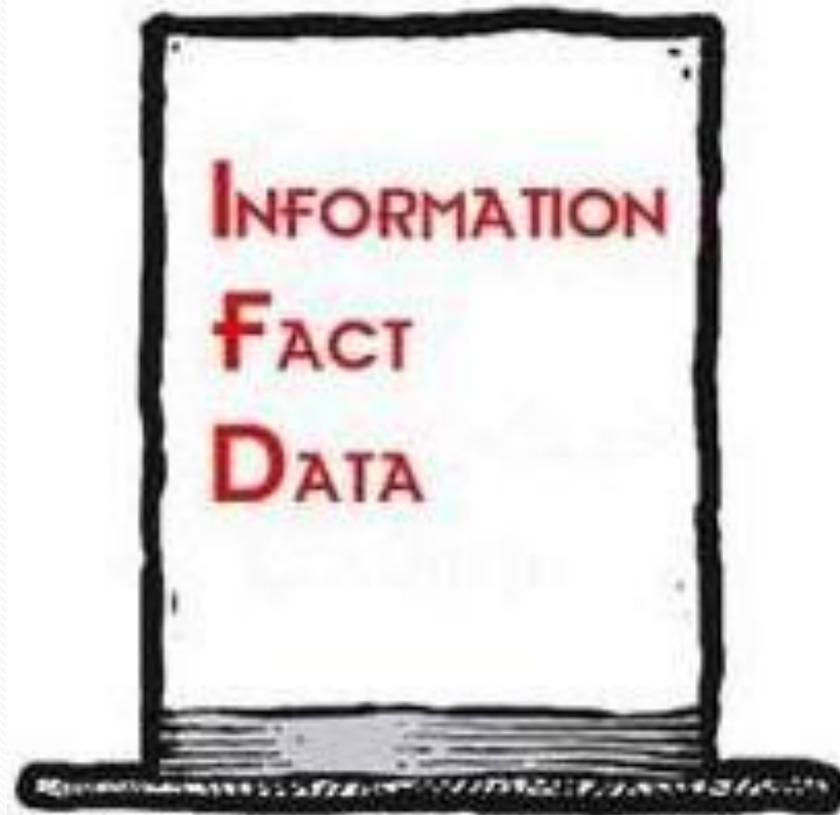
**Define the problem**

# Looking at the Decision from All Points of View: *THE SIX THINKING HATS* (EDWARD DE BONO)



# THE WHITE HAT

Here you focus on the data available. Look at the information you have, and see what you can learn from it.



# THE RED HAT

Wearing the red hat, you look at the decision using intuition, gut reaction, and emotion. Also try to think how other people will react emotionally.



# THE BLACK HAT

Look at things pessimistically, cautiously and defensively. Try to see why ideas and approaches might not work.



# THE YELLOW HAT

The yellow hat helps you to think positively. It is the optimistic viewpoint that helps you to see all the benefits of the decision and the value in it.



# THE GREEN HAT

It stands for creativity. This is where you can develop creative solutions to a problem. It is a freewheeling way of thinking.



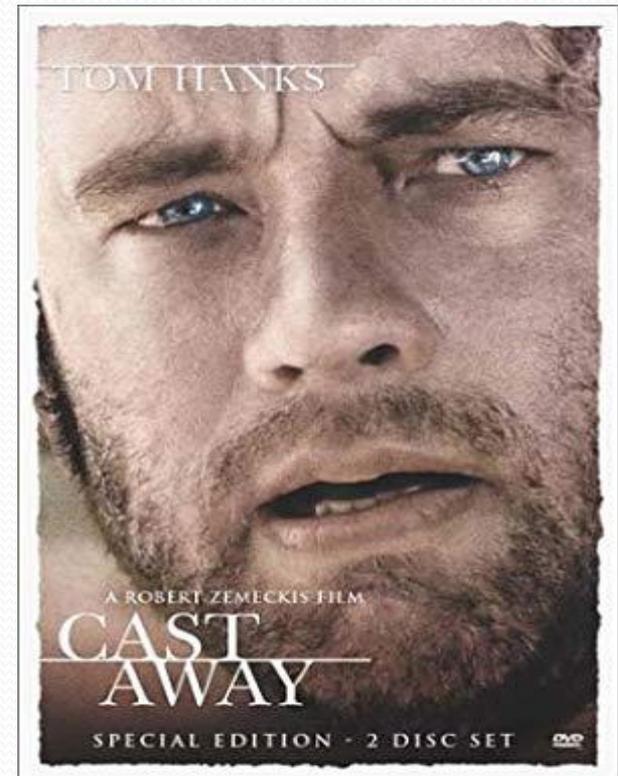
# THE BLUE HAT

It stands for process control. This is the hat worn by people chairing meetings. In technical terms, the blue hat is concerned with meta-cognition.



# Task

- **Lost at Sea Individual Worksheet**



# Instructions

- You are adrift on a private yacht in the South Pacific. As a consequence of a fire of unknown origin, much of the yacht and its contents have been destroyed. The yacht is now slowly sinking. Your location is unclear because the destruction of critical navigational equipment and because you and your crew were distracted trying to bring the fire under control. Your best estimate is that you are approximately 1000 miles south-southwest of the nearest land.
- Below is a list of fifteen items that are intact and undamaged after the fire. In addition to these articles, you have a serviceable rubber life raft with oars and large enough to carry you, the crew, and all of the items listed below. The total contents of all survivors' pockets are a package of cigarettes, several books of matches and five one-dollar bills.
- Your task is to rank the fifteen items below in terms of their importance. Place the number 1 by the most important item, the number 2 next to the next most important item, and so on through number 15, the least important.

-----Sextant



\_\_\_\_\_ Shaving mirror



\_\_\_\_\_ Five-gallon can of water



\_\_\_\_\_ Mosquito netting



\_\_\_\_\_ One case of U.S. Army C rations



\_\_\_\_\_ Maps of the Pacific Ocean



\_\_\_\_\_ Seat cushion (approved flotation device)



\_\_\_\_\_ Two-gallon can of oil-gas mixture



\_\_\_\_\_ Small transistor radio



\_\_\_\_\_ Shark repellent



\_\_\_\_\_ Twenty square feet of opaque plastic



\_\_\_\_\_ One quart of 160-proof Puerto Rican rum



\_\_\_\_\_ Fifteen feet of nylon rope



\_\_\_\_\_ Two boxes of chocolate bars



\_\_\_\_\_ Fishing kit





LostatSea1.WKB.doc

# Correct ranking

Sextant	15
Shaving mirror	1
Five-gallon can of water	3
Mosquito netting	14
One case of U.S. Army C rations	4
Maps of Pacific Ocean	13
Seat cushion	9
Two-gallon can of oil-gas mix	2
Small transistor radio	12
Shark repellent	10
20 feet of opaque plastic	5
One quart of rum	11
15 feet of nylon rope	8
2 boxes of chocolate bars	6
Fishing kit	

## Now read out the "correct" order, collated by the experts at the US Coast Guard (from most to least important):

1. Shaving mirror. (One of your most powerful tools, because you can use it to signal your location by reflecting the sun.)
2. Can of petrol. (Again, potentially vital for signalling as petrol floats on water and can be lit by your matches.)
3. Water container. (Essential for collecting water to restore your lost fluids.)
4. One case of U.S. Army C rations (Emergency rations). (Valuable for basic food intake.)
5. Plastic sheet. (Could be used for shelter, or to collect rainwater.)
6. Chocolate bars. (A handy food supply.)
7. Fishing rod. (Potentially useful, but there is no guarantee that you're able to catch fish. Could also feasibly double as a tent pole.)
8. Rope. (Handy for tying equipment together, but not necessarily vital for survival.)
9. Floating seat or cushion. (Useful as a life preserver.)
10. Shark repellent. (Potentially important when in the water.)
11. Bottle of rum. (Could be useful as an antiseptic for treating injuries, but will only dehydrate you if you drink it.)
12. Radio. (Chances are that you're out of range of any signal, anyway.)
13. Sea chart. (Worthless without navigational equipment.)
14. Mosquito net. (Assuming that you've been shipwrecked in the Atlantic, where there are no mosquitoes, this is pretty much useless.)
15. Sextant. (Impractical without relevant tables or a chronometer.)

T H A N K

The word 'THANK' is rendered in large, bold, green-outlined letters. Each letter contains a photograph of people in various poses and outfits. The 'T' shows a person lying on their back and another standing. The 'H' shows two people standing side-by-side. The 'A' shows two people leaning against each other. The 'N' shows two people standing together. The 'K' shows two people standing together.

Y O U S O

The word 'YOU SO' is rendered in large, bold, green-outlined letters. Each letter contains a photograph of people. The 'Y' shows two people standing with arms raised. The 'O' shows two people leaning against each other. The 'U' shows two people standing side-by-side. The 'S' shows two people in dynamic poses. The 'O' shows two people leaning against each other.

M V C H !

The word 'MVCH!' is rendered in large, bold, green-outlined letters. Each letter contains a photograph of people. The 'M' shows two people standing side-by-side. The 'V' shows two people leaning against each other. The 'C' shows a person in a dynamic pose. The 'H' shows two people standing side-by-side. The '!' is a solid red exclamation mark.