

Teamwork Exercise – notes for Educators

Notes: 15 items - #1 most important, #15 least

Issues to consider:

1. **Survival.** Short term or long term, you must survive.
 - a. Water. Humans cannot live long without fresh water. This is the highest priority, particularly in the tropics. You don't know whether or not the water on Henderson Island is fresh or not. It might be brackish (mixture of salt water and fresh water) which needs boiling.
 - b. Shelter. Exposure to the elements, whether sun or cold or rain is the next killer. Therefore shelter is vital.
 - c. Health. Avoid injury or disease. These will amplify the problems of survival.
 - d. Food. Humans can live and function for at least a week with no food. Important in the long term but not immediately vital except for morale.
 - e. Dry land is a far more hospitable place to survive than the open sea.
2. **Rescue.** The quicker you are rescued, the shorter the survival requirement.
 - a. Informing the outside world that you need help is a very high priority. The passage plan was notified to the authorities by the skipper, with an expected date of arrival at Pitcairn and the mainland. Then someone will look for you when you don't turn up. But you still need to let them know where you are and the quicker you do, the sooner rescue will be on its way.
 - b. If you are able to inform rescue services of your location, it is necessary to still be there when they arrive if they are to find you. Land does not move, a life raft does.
 - c. An island is much easier to find than a small life raft in a wide open sea.
 - d. A permanent fire smoking on an otherwise uninhabited island is far more noticeable than a brief flash of a flare which may only last up to one minute.
3. **Escape.** Even though you have notified the outside world of your intended cruise and even if you are able to make calls on the satellite telephone, it could be that you are afraid that resources are too low for extended survival. Then you must consider - as the final option - to escape.

- a. This will require sustainable transport over water for a distance of at least 200 km (you cannot get to Pitcairn “as the crow flies” – it depends on wind and current).
 - b. Survival on the journey will be harder than on land and may be less sustainable owing to limited resources.
 - c. Navigation involves establishing where you are, which way you are going and how fast you are doing so, taking into account wind and currents. Your skipper, the only professional on board, drowned when the boat went down.
4. Experts suggest that if there is fresh water on the island, you are more likely to survive longer on dry land with fresh water. The existence of fresh water suggests there will be other forms of life: fruit, vegetables and even animals.
 5. If you get in the life-raft, you could encounter bad weather and sink, especially if heavy with food and water and people, with a risk of puncturing the raft. Big container ships may not notice small life-rafts, even if they let off distress flares – there might not be anyone on watch. Then you run out of food and water, get into a big storm at sea, and then die...

The items for survival and expert ranking (Answers)

Compass - #12 – Might be useful to find your way back, through dense vegetation in land but only useful in the life-raft if propelled and following a chart track.

Sextant #15 useless as no-one except skipper knew how to use it.

Satellite phone - #3 – as soon as someone knows what has happened to you, help can be on the way, reducing the required length of time for survival. The phone may soon run out of charge, so it will need to be used intermittently and sparingly but until it does you can phone everyone you can think of and tell them you are on the island – it will provide rescue services with the co-ordinates of where you are – but these will be no good if you go sailing off in the life-raft.

Matches - #5 – to make a fire to provide a beacon for alerting rescuers, to keep warm if necessary and to cook, therefore sterilising food or distilling impurities from water. Rubbing sticks together does not work with damp tropical vegetation or soft sun-bleached driftwood from the beach. No good if on the life-raft! Then is a fire hazard and can sink the life-raft and all on board.

Canvas awning/rope - #2 – after fresh water, shelter is the next priority. The awning will protect from the sun as an initial shelter. It may also be used for collecting fresh water in tropical rainstorms, even when in a life raft.

First Aid Kit - #9 – may be needed to prevent infection of cuts, scratches, bites etc. or to treat more serious injuries if they occur. Will include sunscreen.

Small sharp knife #10 – comes with the fish hooks as mostly for gutting fish. Is useful for many tasks but you already have the hatchet. Used for cutting canvas and rope to make a shelter, and cutting up food, gutting fish etc. Dangerous on a life raft unless the blade is protected as it may accidentally puncture the raft.

Charts of South Pacific - #14 – see compass and sextant – only useful if sailing away with a means of propulsion (sail?) and a way of estimating course and speed.

Food on board #4 – whether you decide to stay on the island or go in the life-raft, you will need food. You don't know if there is food on the island or how long you will be there, so the more the better, if only for morale initially. There is a limit to how much you can carry in the life-raft – and tinned food is heavy.

Hatchet - #6 – used to cut up materials for building shelter and supplying the beacon with fresh, damp firewood (for smoke). Can also be used in place of a knife for other cutting tasks – not much use in the life raft.

Sailing boots - #7 – Very important to protect your feet from injury. You are on a coral reef and the land is sharp and jagged. Searching the island you may encounter sharp rocks, thorns or even snakes/biting ants. Also useful if fishing off the reef to protect feet from stings and bites, sea urchins and sharp coral. Could be used for bailing out water or storing rain water in a life raft.

Water in jerry-cans - #1 – there is fresh water on the island but you do not yet know if it is fresh, brackish, or polluted, so the jerry-cans are useful for immediate survival and in the longer term for carrying water. These jerry-cans are essential if you are sailing in the life-raft.

2hp outboard motor - #13 – if you are sailing in the life-raft, this won't be easy to mount or control. It won't last long as it will soon run out of fuel, but it might be used to manoeuvre into the path of a passing ship and arrest its attention.

Distress flares - #11 – used for locating you when someone is known to be searching for you. They may well not be noticed except in busy areas of shipping or if pre-alerted – you have told rescuers you are on the island. They don't last long so must be saved for use only when there is a likelihood of them being seen – essential if you want a passing ship to notice a life-raft in an open sea but it only increases the possibility and does not guarantee you being found.

Fishing hooks/knife - #10 – useful on island or the life-raft. Be careful about eating fish caught within the reef. The most commonly reported marine toxin disease in the world is Ciguatera, from eating contaminated reef fish such as barracuda, grouper and snapper. At least 50,000 people per year suffer from this. Fishing is best from the life raft or outside the reef. The small, sharp fishing knife may useful, but you already have the hatchet. Used for cutting rope and canvas to

make the shelter, cutting up food, gutting fish etc. Dangerous on a life raft unless the blade is protected with a cover as it may accidentally puncture the raft.

Waterproof clothes - #8 – same as #7(boots) – self-protection – whether you are on the island or on life-raft.

Other items commonly carried in a boat that might be considered:

EPIRB - locator beacon that will alert rescue services – it will have gone down with the boat so if you stay on the island the authorities will have this. The skipper may have activated it as a “mayday” signal before he went down with the boat.

Hats/sunscreen! Protection from the tropical sun. The waterproof clothes will have hoods. The first aid kit will contain sunscreen.

Rope. Useful for building shelters, making hammocks, carrying supplies, keeping stores off the ground away from pests, safety lines when fishing off the reef, lashing equipment into the life-raft (if necessary!), etc. The canvas awning comes with a long length of rope.

Notebook. Record events and keep a diary. Record messages passed over satellite phone. Playing cards – maintain morale! Can use books to make fire-lighters.