

Mayday Exercise

NB it is essential that the Trainer is very familiar with the full contents of the game in order to ensure that it runs smoothly.

Trainer's Notes: This exercise is designed to bring together all the points discussed about effective team working. In particular it highlights: -

- Leadership
- Communications
- Handling Information
- Problem Solving
- Application and Commitment to Task
- Dealing with People outside the Team
- Objective setting
- Planning
- Flexibility
- Coping Under Pressure

HO15 is the background information the group needs and HO16 describes their task. HO17 is the solution that should obviously only be given out after the exercise is complete.

The exercise can be run in either one or two groups, depending on how you feel the group would benefit. The following are guidelines depending on the option chosen.

One group

Trainer's note: The benefit of running this exercise with one large group i.e. 8 members and above is that it can easily identify the problems which can occur with large teams i.e. The risk of no communication between some members of the group, some members of the group not joining in and also some members just taking orders from the other members without questioning them.

To run the game with one group the trainer can stay in the same room as the rest of the group, however in order to obtain the Trainer's attention to request information the relevant call sign must be used. (By staying in the same room it is easier for the Trainer to bring in their observations on how the exercise went).

NB To make it more readily identifiable when a group member is contacting you by radio it may be useful for 2 telephones to be used (even if unconnected!). Then when one of the groups wants to speak to you they have to pick up the telephone to talk. Another idea is to use walkie-talkies.

Two groups

There are several variations with running the game with 2 groups (It is recommended that a minimum number of 8 people are required to run it with two groups)

Option 1: Put the two groups in separate rooms. When the radio operators want to ask a question they approach the facilitator who gives them the relevant information. (You may still wish to insist that an answer to their instructions or response to their commands will only be given by using the relevant call sign.

NB To ensure that the relevant information is always given to the appropriate group, it may be an idea for the trainer to keep two copies of the background information and tick off each piece of information when given to each group.

Option 2: Have the two groups and the facilitator in the same room, and run as per option 1. (A very large room would be required to avoid 'eavesdropping').

Option 3: Ensure that the facilitator and the groups have access to a telephone each; with the facilitator sat in a separate room. The radio operator could telephone the facilitator for information. (It may still also be advisable for 2 sets of information to be in front of the facilitator to avoid forgetting to which group certain information has been given.

(Break for tea/coffee as convenient)

Team and Individual Action Planning

This session should be run as the trainer thinks best. One idea is to split the group into pairs or threes and discuss HO11 Review and Ideas to Action and add to it as appropriate.

This session could be finished off by ending on a question and answer session with the facilitator on any aspect to deal with teamwork.

Trainer's Guidelines Exercise

'Mayday' - HO15

Duration: 1 hour 45 minutes

The facilitator should explain that this exercise is to put into practice what has been discussed already about the effectiveness of teams.

On flipchart, write and talk through the administration as follows: -

Mayday

Phase 1:	Process information Elect leader and radio operator	Duration 20 minutes
Phase 2	Check objectives Process information	Duration 5 minutes
Phase 3:	Complete exercise	Duration: 1 hour
Phase 4:	Review	Duration 20 minutes

Phase 1

Decide whether to have one or two groups. Explain that you would prefer to respond to a call sign. Explain the use of the terms 'Over' and 'Over and out¹' when communicating and that you will only talk to the designated radio operator. Suggest that they relay information promptly when given to the radio operator.

Phase 2

Hand out supplementary brief

Phase 3

Await calls from groups and give information as appropriate from the clipsheets.

Phase 4

If any group has solved the problem, get them to talk through their solution. If not, the facilitator should provide the answer.

Ask the group how they performed in:-

COMMUNICATION
PLANNING
LEADERSHIP
TEAMWORK

- Information gathering – open questions
- Visibility of information
- Decision making
- Involvement of group members
- How the group was organised

Mayday

Purpose

To improve the group's approach to planning and problem solving.

Situation

Your group are members of a scientific and survey team situated at Base Camp on Ballent Island just off the East Coast of Greenland.

Other Information

Base camp is very well equipped with good workshop facilities, not only for the heavy equipment like the snow-cat and generators, but also for all the scientific and other equipment. The surgery is well equipped for emergency minor treatment and has small emergency cylinders of oxygen. These would normally be charged from the bulk supply cylinders weighing about 200lbs each. **Base camp call sign - 'Base Camp 1'.**

There is a snow-cat held at base that can carry eight people at an average speed of 20 mph under good conditions. Unfortunately it suffered damage in a recent mishap, and even if worked on continuously will take a further 20 hours to repair.

You know there is an American icebreaker (the USS Kennedy) operating in the area, position not known. Radio contact was recently made with the ship. **Call sign - 'Ice Breaker!'**

An American Air Force C130 rescue aircraft patrols the coast regularly. Paramedics are normally carried aboard this aircraft. Call sign - **'Air Rescue 1'.**

This aircraft comes from a base some 1300 miles from Ballent Island.

Weather Information

As might be expected, the weather can be very severe at times and temperature can drop to minus 90°C.

At present the weather is minus 20°C.

Blizzards lasting a week or more are not uncommon, and if severe, nothing can move at all. However, even in bad weather, breaks often occur lasting hours or even days, when the wind drops and visibility becomes excellent.

Weather conditions can vary between north and south of the island due to the range of mountains crossing it.

Terrain

Mountains go up to almost 5000 feet and create dangerous air currents for any aircraft. Chances of survival in an air crash in these mountains would be almost nil.

Murdock Pass (max. height 900ft.) offers smooth going for sledge and snow-cat.

South of the mountains the going is excellent except for the crevasse areas which are very dangerous. There are excellent landmarks between Base camp, the Dog Training camp and Murdock Pass.

North of the mountains, the ground conditions are very good for the first 110 miles, but difficult after that 'Devil's Teeth' and 'Samson Rocks' are only passable to sledges with the aid of aluminium bridges. Maps are required for travel in this area and going is very slow for the snow-cat.

The trail from Murdock Pass to the Weather station is good and well marked.

Sea ice is very thick around the north coast but in the south it is far less thick. It stretches about 150 miles from the coast.

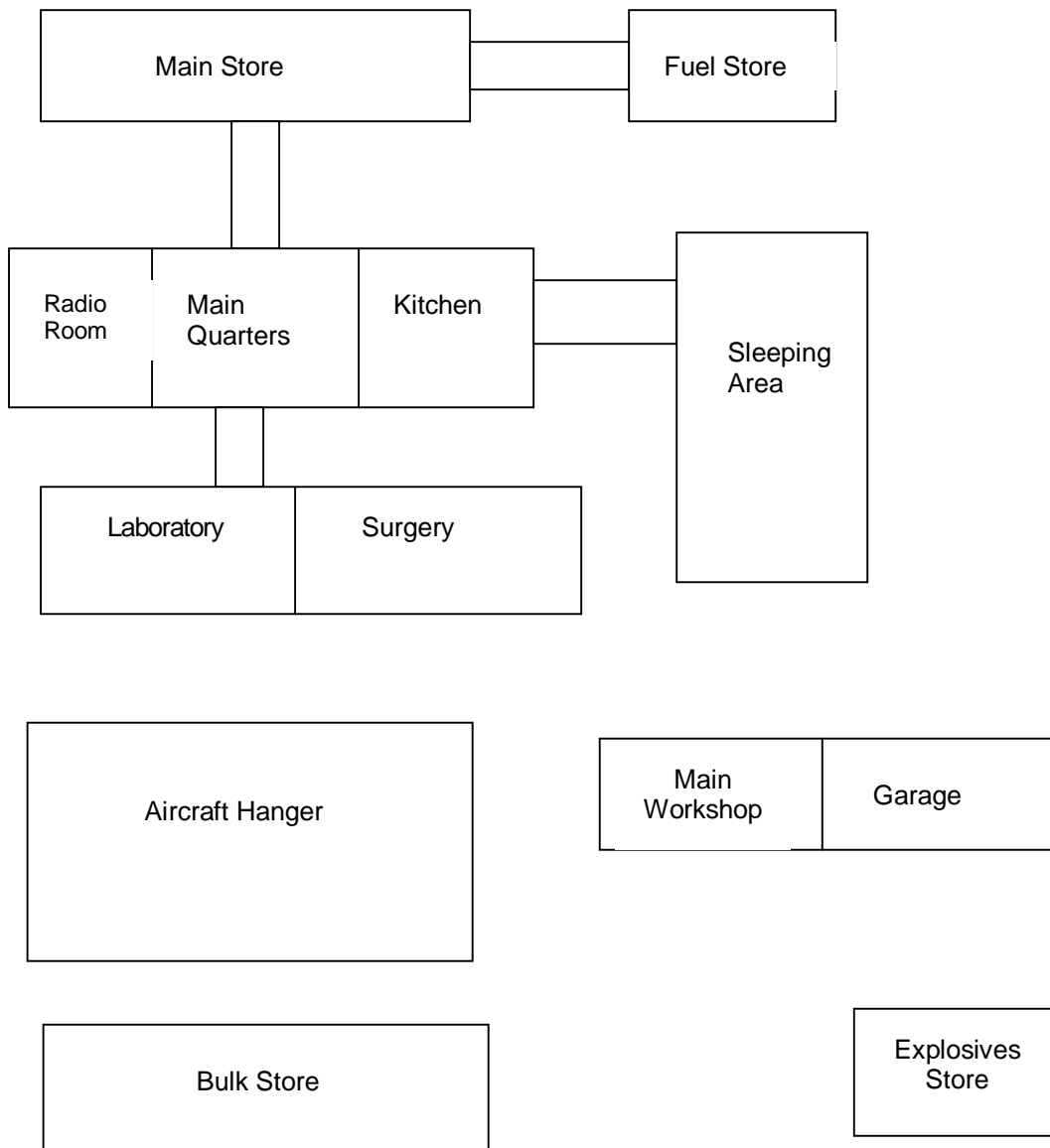
Base Helicopter

1. Requires 40 minutes to prepare and get airborne. Preparation can only be carried out by the pilot.
2. Does not fly in winds over 30 mph or visibility less than 1 mile.
3. The route north for the helicopter is normally through Murdock Pass but good visibility is essential with cloud base at least 4000 feet, as quite violent air currents are experienced in the Pass.
4. The aircraft is serviceable, but the pilot, who is also the expedition doctor, is out on a training exercise. However, he can be contacted by radio. **Call sign- 'Medico 1'.**

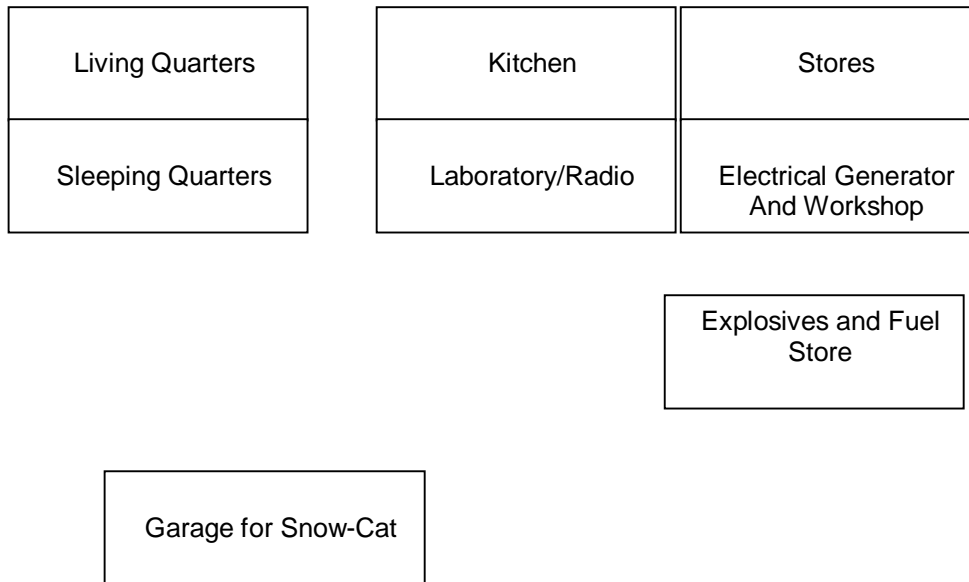
Helicopter Data

Maximum operating height	5000miles
Maximum distance without re-fuelling	550 feet
Cruising speed	140 mph
Maximum payload	Pilot and 1 sitting passenger + 2 stretcher cases or Pilot and 500lbs of supplies

Base Camp Layout



North Bay Station: General Layout



Dog Training Camp

Call sign 'Dog Train 1'

This is a small out-station where members of the expedition go for training in handling the dog teams.

Sven Larsen, the instructor, is an ex-hunter, very experienced in handling dog sledges and an expert on survival in the Arctic.

The two men at present receiving instruction are reasonably competent in handling the dog teams but require the instructor with them on long journeys, say over 40 miles.

The out-station is well equipped with food for dogs and humans plus sleeping bags, skins, rugs, tents, working equipment, etc. for the 4 and 5 day training exercises the men undertake away from camp.

Other equipment includes skis, snowshoes and aluminium crevasse bridges.

There are 40 sledge dogs, but a dog team consists of ten dogs

Weather Station

Call sign-'Weather!'

This is a fairly large comfortable and well-equipped station with ample stocks of food, for dogs and humans, plus spare accommodation and emergency supplies of bedding, clothing, etc. (Visitors can be stranded here for days in bad weather).

Equipment includes first aid kit, spare skis and snowshoes and a small man-pulled sledge.

Tools, spares for radio, spare weather measuring instruments, fuel for the helicopter, cylinders of oxygen and gas cylinders for emergency heating are also held. There is a powerful radio transmitter used for sending out weather reports daily. Two men are on duty at this station and always "on call" by the radio in case of urgent requests for weather information.

There is a helicopter landing area that has to be marked out by ground markers or flares, and facilities for hand refuelling the helicopter. There are also facilities for picketing the aircraft in bad weather.

North Bay Station

Call sign -'North Bay 1'

This station is used mainly for gathering scientific information and carrying out geological studies.

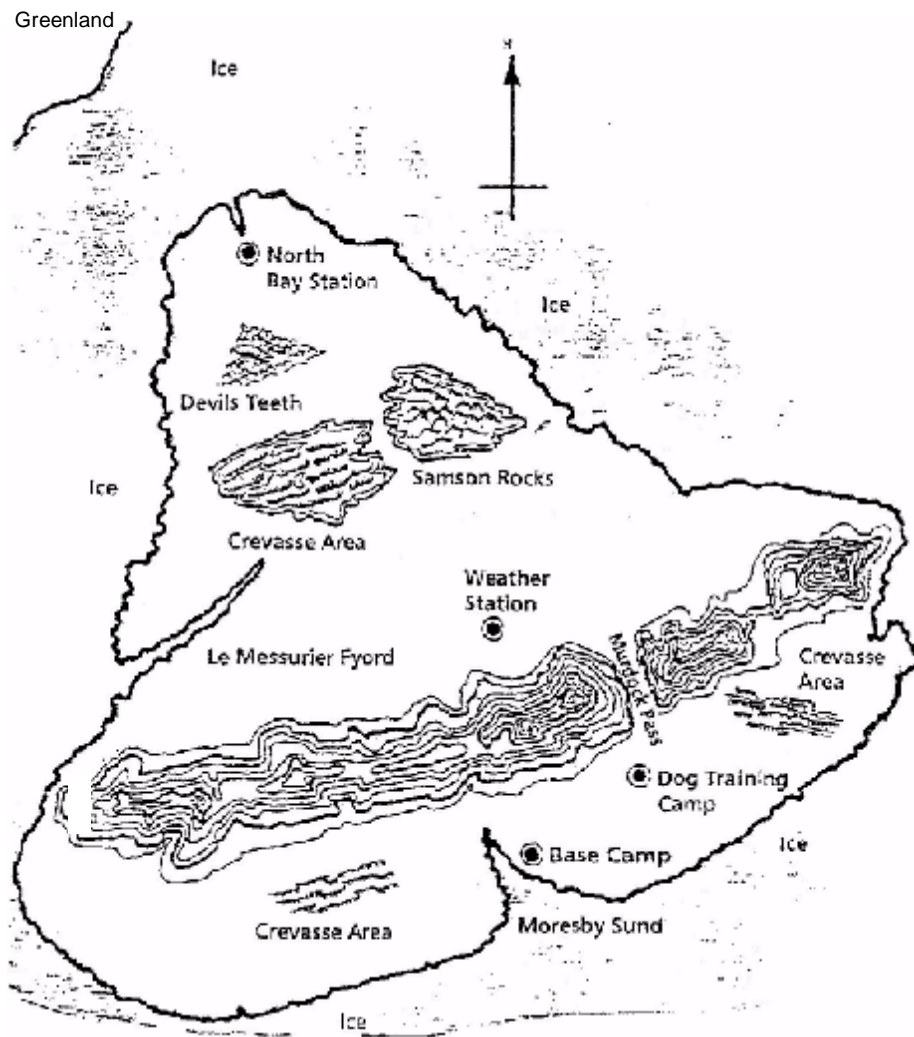
It is staffed by four scientists.

Normally there are good stocks of food and general supplies including:

- Gas bottles for emergency heating and cooking
- Clothing, skis, snow-shoes
- Emergency stocks of dog food
- First aid kit
- Radio markers and flares for helicopter landing area
- Rifles and ammunition
- Tools
- Books and maps
- Fuel for snow-cat

Journeys away from the station are normally made by snow-cat that is similar to that held at base. There is a helicopter landing area that has to be marked out by ground marker or flares.

Ballent Island



0 10 20 30 40 50 100 150
Scale in Miles

Mayday

Purpose

To improve the group's approach to planning and problem solving.

Objectives

1. To generate a plan which will deal with the situation as effectively as possible, making the best use of available resources.
2. To give any necessary instructions to the people concerned within one hour to enable your plan to be carried out.

Situation

Your radio operator has just picked up a 'Mayday' message from your colleagues at North Bay station. All he heard was 'Mayday, Mayday...terrible explosion...fire ...help us' then silence. Your operator has not been able to re-establish any sort of contact. Weather conditions are not good at present where you are: heavy driving snow, visibility 400 yards, winds gusting to 45 mph.

Dawn has just broken and about 18 hours of daylight can be expected at this time of the year, in fact, it never really gets dark.

Mayday Exercise - Solution

1. Weather information gives a four hour window.
2. Recall medico (who will fly north to NBS and shuttle injured and paramedic to weather station).
3. Get Air Rescue to do low pass over NBS to assess situation (and eventually drop paramedic).
4. Get dogs to prepare and go to the weather station (they will shuttle on 3 sledges all from weather station to base camp).
5. Get Ice Breaker to come to south of island (he has hospital facilities).

Extra Trainer's Notes for Mayday Exercise

Weather Station

Call sign -'Weather 1'

1. At present north of mountains and North Bay station clear of cloud and snow - wind 5-10mph from east.
2. Weather south of mountains is clearing Base Camp should be pretty clear in 1 1/2 hours and cloud base 4,000ft to 5,000ft.

If asked - Further snow and low cloud is expected to move into south in about 4 hours. Cloud base could be down to 1,000ft or less and visibility less than half a mile. This could last for 18-20 hours.

If asked- As usual mountains will tend to hold back weather, but some snow, low cloud and winds gusting 30 - 45 mph with poor visibility expected in maximum 1 0 - 1 2 hours. North of mountains as well.

If asked - Can confirm that stocks held include:-

1. Tools
2. Oxygen (can top-up small cylinders)
3. Helicopter fuel - 500 gallons
4. Spare skis, snow shoes
5. Dog food

Dog Training

Call Sign-'Dog Train 1'

1. Dog-sleigh trainer is Sven Larsen.
2. Two trainees and dogs are fit.
3. Can be loaded and away in 1 hour.
4. All casualties can be carried on three sledges.
5. Trainee drivers will slow things down but going easy so should cope.
6. If dog food supplies at Weather Station, can travel lighter and faster.
7. Time to reach Weather Station - 3 1/2 hours.
8. Time to reach North Bay - 2 1/2 days in emergency but dogs would need 48 hours to recover.
9. Dog camp to base 2 1/4 hours.
10. Would want to know what to take.

Paramedic

Call sign - '**Paramedic**'

1. Nearly everything destroyed in fire and explosion.
2. Living quarters all that is left by damaged; can be patched up a bit, but could probably not cope with bad weather.
3. No light or heat from camp sources, no food or first aid from camp sources.
4. Cannot use snow-cat sensibly as maps all destroyed.
5. In his opinion 4 injured are in need of medical attention and must be in hospital environment in 24 hours if to survive.
6. Injuries - shock, concussion, burns, some broken bones, cuts.

Explosion and fumes have caused respiratory problems. Oxygen needed of which he has a limited supply.

7. Appears one man dragged others out into living quarters before collapsing himself.

Note: Paramedic can call base 13 minutes after instructions given to rescue aircraft to drop him.

8. Emergency kit dropped from aircraft includes:-
 - (a) Comprehensive first aid kit and stretchers
 - (b) Tent
 - (c) Portable heater, 10 hours duration
 - (d) Food and water
 - (e) Medicines
 - (f) Tools
 - (g) Transceiver
 - (h) Emergency lighting
 - (i) Cooking equipment
 - (j) Arctic clothing
 - (k) Survival sleeping bags and thermal blankets
 - (l) Oxygen

Ice Breaker

Ice Breaker 'USS Kennedy' 5000 Tons

Call sign - '**Ice Breaker 1**'

1. Ship master's name - Scott Tempest.
2. Present position 500 nautical miles to east.
3. Has good medical facilities, small operating theatre and sick bay.
4. Carries small helicopter (pilot plus one stretcher case).

Helicopter has no radar - controlled by ship's radar.

Helicopter restricted to range of 25 miles from ship.

5. Latest reports indicate ice to north of Ballent Island, could cause problems and should allow 4 days to get to North Bay. However, south indications are much better and estimate could be off Moresby Sound in 20 - 24 hours.

Medico 1

Doctor/Pilot

Call sign - '**Medico 1**'

1. Will take one hour to return to base (he is on skis to the west).
2. Helicopter needs 40 minutes to prepare and get airborne.
3. Requires minimum one-mile visibility and 4000-foot cloud base to go through Murdock Pass.
4. If cloud base 3000 feet or lower cannot go through Pass.
5. Cannot go in this weather anyway.
6. Will want to know about injuries to staff at North Bay.
7. At start of exercise he is to the west of Base Camp.

Note: Approximately 2 % hours Base Camp to North Bay through Pass.
Approximately 50 minutes Base Camp to Weather Station.

Air Rescue

American Air Force - Rescue Aircraft Call

sign - 'Air Rescue 1'

1. Crew of 8, one paramedic, normally 2 but injury reduces to 1.
2. Airborne lifeboat carried.
3. Emergency pack which can be parachuted down:-

Contents: -

Tent

First-aid kit, splints, stretchers, medicine

Emergency heater and lighting

Emergency oxygen

Radio

Skis, snow shoes, clothing

Survival type sleeping bags, thermal blankets

Food - self heating

Tools

4. Present position 12 nautical miles from North Bay station, can be over this in 3 minutes.
5. Cannot land anywhere on Island as it has never been surveyed for this purpose.
6. Paramedic carries emergency first-aid pack and walkie-talkie.
7. Air Rescue 1 can relay messages or base can wait till paramedic can get radio from pack. Could call back 10 minutes after dropping paramedic.
8. If asked, can do a low pass over the station. Would then call back to report - Looks bad, about 80% destroyed, the rest damaged. No sign of people.
9. Cannot stay more than 30 minutes over disaster area owing to shortage of fuel.
10. Could get back to his base, refuel, pick up more emergency supplies and do another air drop in about 9 hours.
11. They must guarantee the safety of paramedic if you are asked to drop him at disaster area.