Northwest Territories

HUNTER EDUCATION

Student Manual

Government of
Northwest Territories

MESSAGE FROM THE MINISTER

Responsible hunting in the Northwest Territories has been a way of life with a rich tradition and a code of ethical conduct that extends beyond hunting laws. The privilege to hunt carries with it a responsibility to other people, wildlife and the environment.

To ensure this rich tradition survives, today's hunters, whether Indigenous or non-Indigenous, must be guided by the wisdom of past generations. They must follow a code of conduct that has served hunters for centuries and show respect for wildlife, the environment, people and themselves.

The Government of the Northwest Territories Hunter Education Program is a continuation of these traditions. As new generations begin to hunt, we want to help ensure they are safe, respectful and responsible.

The program focuses on the four key areas of safe and responsible hunting, so hunters can learn how they can help ensure healthy wildlife populations offer harvesting opportunities now and into the future:

- Respect for wildlife
- Respect for the environment
- Respect for people
- Respect for self

The program was developed by the Department of Environment and Natural Resources (ENR) and a Hunter Education Working Group made up of community elders and hunters, and resident hunters. Input was also provided by Indigenous governments and agencies, and other stakeholders.

Thank you to everyone involved.

Honourable Robert C. McLeod
Minister of Environment and Natural Resources
Government of the Northwest Territories

Release of Liability, Waiver of Claims and Indemnity Agreement

Definition

"Material" is the Manual information and the accompanying presentation on wildlife conservation.

You acknowledge and accept that the Government of the Northwest Territories designated instructors or trainers may use photos taken during training on site to be used for future training.

In consideration of Government of the Northwest Territories allowing me to participate in Hunter Education, I hereby agree as follows:

1. To waive any and all claims that I have or may have in the future against the Government of the Northwest Territories and its employees, agents or contractors (hereafter referred to as GNWT) arising out of any aspect of my participation in hunter training.

2. To release the GNWT from any and all liability for loss, damage, expense or injury, including death, that I, or my next of kin may suffer from any circumstances whatsoever be liable to you or any person for any costs, losses, damage (whether direct, incidental, consequential, indirect or punitive) or expenses of whatever nature or kind arising or resulting directly or indirectly, whether in contract or in tort, or by prosecution, from reliance on the timeliness, correctness, accuracy or completeness of the information provided herein as a result of participation in hunter training.

3. To hold harmless and indemnify GNWT from any and all liability for any property damage or personal injury to any third party, resulting from my participation in rifle training; and

4. That this document shall be binding upon my heirs, next of kin, executors, administrators, assigns and representatives in the event of my death. In entering into this agreement, I am not relying on any oral or written representation or statements made by the GNWT with respect to the safety of hunting, other than what is set forth in these materials.

5. This agreement shall be governed by and interpreted in accordance with the laws of Northwest Territories. Any litigation involving the parties to this agreement shall be brought within Northwest Territories, Canada.

6. I acknowledge and accept that the GNWT may use photos taken during this trip to be used for future promotion.

Initial _____

Agreement

Initial _____

_____

Name of Participant

_____

Name of Witness

Department of Environment and Natural Resources
Government of Northwest Territories

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THE RESPONSIBLE HUNTER

Hunting in the Northwest Territories (NWT) has a long and honourable history. Indigenous peoples of the NWT are direct descendants of one of the oldest hunting cultures in North America. Hunting was also important to the lives of the early non-Indigenous settlers of the NWT. Everyone's survival was dependent on the knowledge and skills of the hunter.

Hunting remains a way of life for many people in the NWT. Their physical and spiritual well-being depends on hunting.

Hunting rights of Indigenous people in the NWT are based on this traditional use and are different than those of other hunters. Asserted or established Aboriginal and/or treaty rights are recognized by s. 35 of the *Constitution Act* 1982, the courts, the Government of the Northwest Territories (GNWT) and by the Government of Canada. The rights of Indigenous people are also determined by Land Claim Agreements within the NWT. The harvesting of wildlife resources by Indigenous peoples under the authority of those constitutionally protected rights and Land Claims Agreements is a respected component to the NWT's overarching resource management scheme.

People without asserted or established Aboriginal and/or treaty rights can hunt under an authorization from the *Wildlife Act*. They should read and understand thoroughly current hunting regulations of the *Wildlife Act* to ensure they respect the law.

To ensure the tradition of hunting survives, today's hunters, whether Indigenous or non-Indigenous, must be guided by the significant wisdom of past generations of hunters. They must be responsible and follow a code of conduct that has served hunters for centuries.

*A **code of conduct** is a set of rules or practices outlining the responsibilities and proper practices of an individual or group.*

The principal value of this code of conduct, and at the heart of the NWT Hunter Education Program, is the value of respect.

A responsible hunter shows respect for: wildlife, environment, people and self.

Figure 1: The Wheel of Respect

Experienced hunters have identified four key actions necessary for all respectful and responsible hunters:

RESPECT FOR WILDLIFE

To be a respectful and responsible hunter you should:
Learn about the wildlife you're going to hunt.

- Learn and practice good hunting skills.
- Not chase or harass wildlife.
- Make quick, humane kills.
- Track wounded animals and kill them respectfully.
- Not hit an animal with a stick. In the north, this is considered disrespectful. It is believed that this show of disrespect will stop the animals from returning.
- Only harvest the number of animals you need.
- Use as many parts of the animals as possible.
- Prevent parts you can eat from spoiling.

Photo by: GNWT – A.Krisch, ENR

RESPECT FOR ENVIRONMENT

As a respectful and responsible hunter you should:
Clean up kill sites. Keep them out of sight and away from areas people use, like trails and camps.

- Leave the land the way you found it.
- Pack your garbage out.
- Be careful with fire, even in the winter.
- Place the remains of land animals on land, not in water or on ice.

Photo by: GNWT – ENR

Photo by: GNWT – ENR

Photo by: GNWT – ENR

RESPECT FOR PEOPLE

As a respectful and responsible hunter you should:

- Share the meat of any animals you kill.
- Acknowledge the wisdom of others.
- Be aware of cultural differences.
- Obtain permission before hunting in another person's hunting area or using someone's property.
- Honour peoples' property rights (e.g. cabins, trap lines, land claims and private lands).
- Be careful and remember the safety of others when hunting.
- Handle firearms safely at all times.
- Never place a life, yours or others, in danger by forgetting to tell people where you plan on hunting and how long you plan to be gone.

Photo by: T. Macintosh

RESPECT FOR SELF

As a respectful and responsible hunter you should:

- Know how to take care of yourself on the land.
- Be prepared for an extended stay on the land, even if you only plan to be out for the day.
- Understand the limits of your knowledge and skills and stay within them.
- Keep learning new information and skills that will help you become a better and safer hunter.
- If possible, travel with a hunting partner.
- Never bring alcohol or illegal drugs on hunts.

New hunters must know how to behave when hunting and practice respectful and responsible hunting at all times.

TIME

Taking your time is important in every aspect of the hunt. This includes everything from preparing for your hunting trip to handling your meat after your hunt.

Slow down and take the time to:

- Learn about the wildlife and environment in your hunting area.
- Prepare for your hunt, making sure you have everything you need and that it is in good working condition.
- Observe your surroundings. Note the landscape, how wildlife use it, and how it changes during the seasons and the time of day.
- Select your animal and make accurate, clean kills.
- Prevent spoilage or wastage of wildlife.
- Share your harvest with others.
- Learn and understand applicable wildlife and environmental regulations.

*Most importantly, take time to **appreciate** the places where you hunt. Hunters in the Northwest Territories are hunting in some of the most pristine places in the world. Take time to reflect on how lucky you are to be out on the land.*

SUMMARY

The key actions listed in this module are examples of how to show respect for the environment, wildlife, people and yourself. All actions of the hunter should be guided by the Wheel of Respect.

The NWT Hunter Education Program will teach you the basic knowledge and skills you need to become a respectful and responsible hunter.

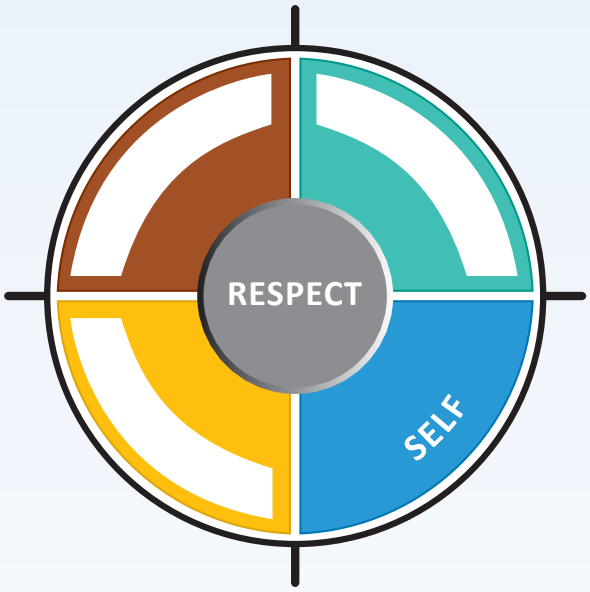
All of the learning that follows is based upon the value of respect and the actions outlined in Module 1.

Photo by: GNWT – B. Tracz, ENR

Module 1 Quiz

1) The core value of the NWT Hunter Education course is:
   - ☐ Don't waste meat.
   - ☐ Pack out your garbage.
   - ☐ Take whatever you can.
   - ☐ Respect.

2) Fill in the boxes to complete the Wheel of Respect below.



3) How can you show respect for wildlife?
   - ☐ Learn and practice good hunting skills.
   - ☐ Make quick, humane kills.
   - ☐ Harvest only the animals you need.
   - ☐ All of the above.

4) What parts of a caribou should you try to use?
   - ☐ The meat and internal organs.
   - ☐ The meat and hide.
   - ☐ As many as possible.

5) A respectful and responsible hunter shows respect for the environment by:
   - ☐ Leaving the land the way they found it.
   - ☐ Packing out their garbage.
   - ☐ Being careful with fire, even in the winter.
   - ☐ All of the above.

6) What is one way a hunter can show respect for people?
   - ☐ Become an HTC board member.
   - ☐ Take off their hat before entering the tent.
   - ☐ Share the meat from their kills.

7) Hunters show respect for self by:
   - ☐ Wearing a helmet.
   - ☐ Continuing to learn new knowledge and skills that make them a better hunter.
   - ☐ Posting their pictures on Facebook.

ECOLOGY

To be successful, hunters require specialized knowledge of the animals they hunt.

Hunters need to understand the animals' sensory strengths and weaknesses. Does the animal have a good or poor sense of sight, smell or hearing? Knowing this allows the hunter to choose the best technique to get close to the animal for a quick and humane kill.

In addition, the hunter needs to know what the animals need to survive and where these things are found at different times of the year.

Photo by: GNWT – D. Deware, ENR

They also need knowledge of the land and how animals use it to meet their needs. To be successful, hunters need to learn the locations of the animals' preferred habitat, the animals' daily travel routes and their migratory patterns.

Ecology (ih-kol-uh-jee) deals with the relationship of organisms to one another and to their physical environment.

The information in this Module comes from the combined experiences of hunters and scientists. This knowledge will help you to become a successful and responsible hunter.

This knowledge is best gained through experience by participating in hunts and spending time on the land.

HABITAT

Successful hunters understand the daily and seasonal habitat needs of the animals they are hunting and how habitats support wildlife.

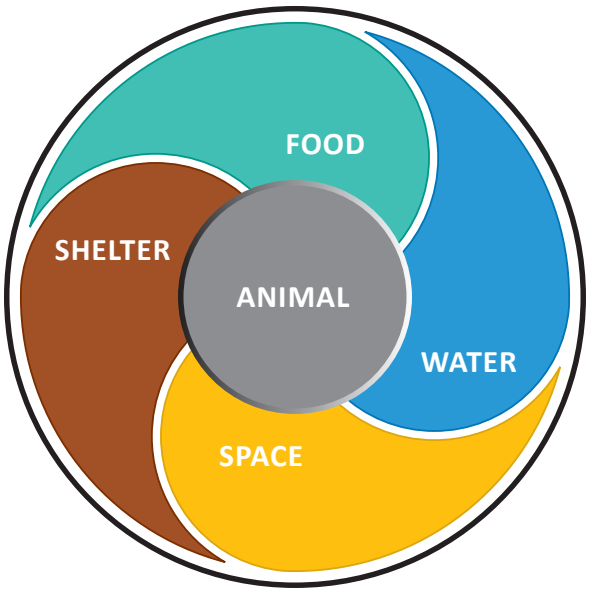
Habitats provide everything wildlife species need to survive.

All living things have basic habitat needs. Four of these are:

1. Food
2. Shelter
3. Water
4. Space

If any of these basic needs is in short supply, it limits the number of wildlife that can live in an area.

The fifth basic habitat need is the proper 'arrangement' of food, water, shelter and space.



Arrangement

Each species of animal has its own habitat requirements. For example, a lynx could have the right amount of food (e.g. hare, mice and ptarmigan), water (e.g. river and lake) and shelter (e.g. tree stumps and rock ledges). The lynx habitat would not have a suitable arrangement if it lacks enough space for this predator to establish its own territory.

FOOD

All animals need food to survive. Different wildlife species may need to eat very different types of plants or animals to survive.

The quantity (amount) and quality (value) of food available determines how many animals can live in the habitat or area. This is called 'carrying capacity'. Habitats with lots of good quality food may be able to support more animals if the animals' other habitat needs are met.

The quantity and quality of food available in an area changes from season to season. To survive, animals may have to switch to a different food type or move to where their preferred foods are. For many wildlife species, winter food shortage is the most important factor affecting their ability to survive in an area.

Photo by: GNWT – D. Allaire, ENR

SHELTER

Animals need shelter or cover to hide while resting, breeding, sleeping or eating. Shelter also provides escape and protection from predators and the weather.

Moose need trees or tall shrubs for cover while snowshoe hares like thick brush. Each wildlife species has its own shelter needs.

Proper shelter is an important part of each animal's daily and seasonal life cycle. If there is no shelter in an area, wildlife numbers will be low.

WATER

All animals need water. Many animals get most of their water from the food they eat, such as green plants. Others get most of their water by drinking from lakes, rivers, ponds and streams. During the winter, water may come from eating slush or snow.

Water is not only for drinking. During the hot summer days, large animals, like bears and moose, often go into water to cool off. For some animals, like beavers and ducks, water is the main part of their habitat.

Photo by: GNWT – D. Allaire, ENR

SPACE

Animals need space to survive. Over-crowding can result in too much competition for food. This may lead to starvation or quick spread of disease.

The need for space limits how many animals can live in an area even if there is enough food, water or shelter there.

Photo by: GNWT – R. Decker, ENR

ARRANGEMENT

The arrangement of food, shelter, water and space is important in figuring out how many animals can live in, and throughout, an area.

For many species of wildlife, the best habitat is an arrangement where two or more components meet or overlap with each other. These places are called 'edges'.

The best wildlife habitat has lots of edges so food, water and shelter are close to each other. Knowledgeable hunters find animals by hunting the edges.

Remember, each animal has its own specific habitat needs. What is good for one animal may not be good for another animal. Where an animal finds food in the spring may be different from where it finds food in the winter.

FACTORS THAT INFLUENCE WILDLIFE POPULATIONS

A wildlife population is a group of the same species of animals living in the same area at the same time.

Food, water, shelter, space and their arrangement are basic needs, and changes to any of these will determine how many animals can live in an area. The need in shortest supply is called the 'limiting factor'.

Photo by: GNWT – A. Gunn, ENR

For example, a habitat may have enough water, shelter and space to support 10 moose, but only have enough food for five. The limiting factor is food. A healthy moose population for the area will be limited to five.

The amount of food available in an area changes from season to season and year to year so the number of animals living in the area also changes.

Although there are many factors that influence wildlife populations, loss of habitat is often considered the greatest threat. Other factors that can limit population growth are:

- predation;
- weather;
- disease and parasites; and
- human activities.

PREDATION

Some wild animals eat plants and others eat animals. For example, in the NWT, caribou eat plants and wolves eat caribou.

Photo by: GNWT – M. Bly, ENR

Photo by: GNWT – D. Johnson, ENR

Any animal that eats another animal is called a predator. The animal a predator eats is called prey.

Most predators eat only a few specific prey species. Predator numbers are usually dependent on the number of prey available. In a single predator/prey relationship, the number of predators is directly tied to the availability of a single species of prey.

A good example of a single predator/prey relationship is the one that exists between the lynx and snowshoe hare. Any change in the snowshoe hare population, up or down, is quickly followed by a similar change in the lynx population.

A different predator/prey relationship exists between predators like wolves and their prey. Wolves hunt more than one type of prey. They hunt small mammals, caribou, moose, bison and muskox.

When a preferred prey population declines, the number of wolves decline. However, a decline in the wolf population will not be as bad because wolves can switch to other prey until their preferred prey population recovers.

WEATHER

Weather also influences the survival of wildlife populations in the Northwest Territories.

Weather affects food, water, shelter and other habitat components. Weather changes can decrease or increase wildlife populations.

Freezing rains or deep snow can make it difficult for animals like caribou and muskox to access food.

The energy spent finding food may be greater than the energy gained. The animals can become malnourished and may starve to death.

Mild winters with little snow can increase the chance of survival. Food is much easier to find and the animal requires less energy to get it.

Photo by: GNWT – J. Nagy, ENR

DISEASE AND PARASITES

Most wild animals in the NWT are healthy, but diseases and parasites can occur in any wildlife population.

A parasite is an organism that spends all, or part of, its life inside of and dependent on a host animal. It cannot survive without taking nutrients from another organism.

An example of a parasite is the warble fly. It spends the larval stage of its life feeding under the skin of caribou.

Photo by: GNWT – J. Adamczewski, ENR

Some parasites have little effect on their host animal. Others can cause the host serious problems and can lead to death.

A parasite can also carry a disease. Many diseases do not cause much stress to the animal. Some diseases, such as rabies, can quickly lead to the death of an infected animal. An infected population may decline significantly.

The effect of a disease or parasite is related to the level of stress experienced by the animal. Some habitat factors increase stress. These can be:

- loss of habitat;
- crowding; and
- over population.

If animals are stressed they may die and large declines in the population can occur.

Some diseases carried by animals can infect people, too. It is important hunters know what the signs of sickness are and how they can protect themselves and others. You will learn more about wildlife diseases in Module 6, The Hunt.

HUMAN ACTIVITIES

Habitat Loss

Human activities can change the quality or quantity of habitat available. These changes have a direct impact on the health and survival of wildlife populations.

Building roads, communities and other human developments typically removes habitat. This direct loss of habitat can limit the number and kinds of wildlife that can live in the immediate area.

Photo by: GNWT – A. Krisch, ENR

Disturbance

Sometimes human activity can cause wildlife to stop using an area even though it contains suitable habitat. For instance, noise from human development can cause some wildlife to avoid habitat they might normally use.

Habitat Change

Some human activities may modify habitat such that only some wildlife species use it. For example, deliberately set fires (prescribed burns) can be used to temporarily increase the amount of habitat preferred by some animals, such as bison or moose, but other animals may avoid these areas.

Photo by: GNWT – ENR

Access and Technologies

Access to wildlife in the Northwest Territories has increased in many ways. Development has created access routes along all-weather and winter roads, rights-of-ways, cut lines and other paths that cut into wildlife habitat.

Photo by: GNWT – S. Yuill, ENR

New or improved hunting technologies, such as snow machines, ATVs, 4-wheel drive trucks, boats and planes, have made travel into wildlife habitat much easier.

Modern equipment, like high-powered rifles, has made it easier for hunters to kill animals at long ranges.

Hunters need to be aware of the power of improved access and technologies, and use them responsibly to benefit the hunt, but not put increased pressure on wildlife populations.

Hunters must show respect for wildlife, the environment, people and themselves. This respect should guide all hunters in their use of new and improved technologies.

WILDLIFE MANAGEMENT

The primary goal of wildlife management is to maintain healthy wildlife populations and habitats by managing their use to meet the present and future needs of the people of the Northwest Territories.

To meet this goal, wildlife managers must use the best available scientific, traditional and local knowledge about wildlife and wildlife habitat as well as the basic principles of ecology and conservation.

The principles of ecology help wildlife managers understand the needs of animals. The principles of conservation provide managers with guidance on how people can use wildlife resources wisely.

Photo by: GNWT – J. Obst, ENR

WILDLIFE CONSERVATION PRINCIPLES

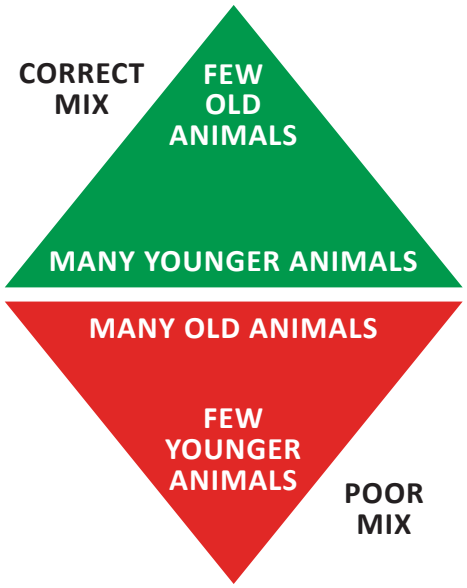
1. Protect Breeding Stock

Breeding stock is the combination of adult and young animals needed to sustain a population.

The life span of wild animals is short. Storms, starvation in the winter, disease, predation, hunting and accidents are constant threats to their survival.

It is important to have enough mature animals to produce new, young animals. It is also important to have enough young animals growing up to replace the mature animals as they die off.

If animals are being harvested or dying off faster than they can be replaced, the number of breeding animals will be reduced and the population will not be able to sustain its numbers.



Wildlife managers can use hunting regulations to help ensure a proper mix of young and old animals in a population. These regulations can restrict the harvest of certain animals in the population.

For example, under the NWT big game hunting regulations, no person is allowed to hunt a bear cub or bear that is accompanied by a cub.

Protecting cubs helps ensure they will grow up to be a stable part of the population. The protection of the breeding females improves the survival of the cubs and ensures there are females to breed in the future.

When wildlife populations are in decline, hunters may be restricted to only harvesting males until the wildlife population shows signs of recovery.

Hunting seasons, harvest limits, licence quotas and bag limits are other methods wildlife managers use to protect breeding stock.

Hunting laws and regulations will be discussed in greater detail in Module 3 of this course.

2. Harvest Wildlife Wisely

Seasons can be set so wildlife is harvested at a time of year when populations are at their highest and/or are not producing young.

Hunting seasons can also be set to prevent hunting when meat may be of poor quality, such as during the breeding season.

Regulations can set rules about the calibre of firearm used to hunt a specific wildlife species. This helps ensure humane kills, and prevents the wounding and potential loss of wounded animals.

Another way to use wildlife wisely is to not waste any edible parts of wildlife.

Respectful hunters make the most use of the animals they harvest.

Photo by: GNWT – ENR

Photo by: T. Macintosh

3. Preserving Animal/Habitat Relationships

Currently, there is an abundance of productive wildlife habitat in the Northwest Territories. However, in many parts of North America, habitat is rapidly decreasing.

Habitat management and conservation is one of the single greatest challenge facing the majority of wildlife managers in North America today.

Wildlife managers provide input and advice into land use planning and management programs to make sure suitable habitat is protected and maintained so wildlife can flourish.

Without protecting habitat, protecting individual animals becomes meaningless.

WHO MANAGES WILDLIFE IN THE NWT?

Migratory birds, such as ducks and geese, are managed under the *Migratory Birds Conventions Act.*

The Act is a treaty – signed by Canada, the United States and Mexico – to share management responsibilities for migratory birds. The Canadian Wildlife Service (CWS) of Environment and Climate Change Canada (ECCC) administers the Act in Canada.

Marine mammals in Canada are managed by the Department of Fisheries and Oceans Canada (DFO) under the *Fisheries Act* of Canada and the Marine Mammal Regulations. In the Inuvialuit Settlement Region, DFO administers the Act and Regulations with the Fisheries Joint Management Committee established under the *Inuvialuit Final Agreement* (IFA).

Photo by: D. Leonard, DFO

The Department of Environment and Natural Resources (ENR) manages all other wildlife in the Northwest Territories using the *Wildlife Act*.

Wildlife management or renewable resources boards (co-management boards) have been established as the main instruments of wildlife management in areas where land claims are settled in the NWT.

This means wildlife management responsibilities are shared between governments and traditional users. These boards allow for co-operative management and provide hunters direct involvement in wildlife management in land claim areas.

Interim Measures Agreements (IMAs) provide for the protection, management or use of land and resources before land claim agreements are settled.

One of the primary roles of the GNWT is to collect and provide information to co-management boards. The boards use scientific, traditional and local knowledge to make recommendations to the Minister of ENR on management decisions affecting wildlife within their respective settlement areas.

The GNWT develops management actions and wildlife legislation based on input, consultation and recommendations from the co-management boards.

The GNWT works with these boards to share information with communities, and participate in consultation and engagement sessions.

Photo by: GNWT – N. Larter, ENR

Community consultation is a critical part of the co-management system.

THE ROLE OF THE HUNTER

Hunters play a very important role in the management of wildlife in the Northwest Territories.

Hunters are typically the first to observe and note changes in wildlife populations and their habitat. As a hunter, you can participate in wildlife management and help sustain healthy populations by working with your local ENR office or co-management board to:

1. Report

- The types, numbers and condition of the animals you harvest.
- Diseased or sick wildlife you find.
- Conditions observed in the area that may affect wildlife and humans (e.g. pollution, habitat destruction, neglect of wildlife laws or travel conditions).

Often this information is given by stopping at hunter check stations.

Your observations are important. Reporting what you see can provide early signs of potential problems. Early detection can prevent problems from occurring.

2. Provide Samples from Harvested Animals

- Samples allow monitoring of wildlife health and population factors.
- Diseased samples provide specific information.
- Sometimes samples are required. Sometimes harvesters are compensated for sample submissions. Contact your local ENR office before you go hunting.

Providing biological samples helps wildlife managers track changes in the overall health of wildlife populations in the area.

Warning: Handling diseased animals and taking samples must be done with caution. ENR officers can provide you with sampling kits to take along on your hunts.

3. Control Harvest

- Take only what you need.
- Restrict your harvest levels when necessary.

While some harvest controls may be set by law, others are self-regulated. Only you know what you actually need and can use.

4. Complete Surveys

- Fill out questionnaires.
- Participate in surveys.

- There is a strong relationship between the density of the population and the number of animals seen per days hunted or the length of time it take a hunter to get an animal.

When this data is analyzed over a number of years, it can indicate if a population is increasing, decreasing or remaining stable.

5. Participate in Public Engagement and/or Consultation Meetings

- Watch for communications about public meetings.
- Attend meetings.
- Express your opinions.

SUMMARY

Although hunters and wildlife managers may use different terms to describe their ecological knowledge, both depend on understanding natural processes.

Both the hunter and wildlife manager rely heavily on observation skills. Both find success by learning about the natural world around them.

Hunters and wildlife managers have the same goals – to conserve wildlife populations and hunting opportunities today and for future generations.

Taking the time to learn and understand natural processes helps you become a successful and responsible hunter. Remember, the most knowledgeable hunters are normally the most successful hunters.

This knowledge and understanding helps you to show respect for the environment, wildlife, people and yourself.

Module 2 Quiz

1. ***Circle*** the five basic habitat needs that all living animals need to survive:

   Arrangement Carrying Capacity

   Shelter Limiting Factor Food

   Roads Space Water

2. Changes to habitat can influence wildlife populations. What else influences wildlife populations? ***Answer by completing the words below***:

   Pred _____

   Wea _____

   Dis _____ and Par _____

   Hum _____ Act _____

3. ***Mark the statement that best completes this statement***: Hunters need to be aware of the power of improved access and hunting technologies and use them:

   ☐ Only in the coldest part of the winter.

   ☐ Responsibly to benefit the hunt but not put increased pressures on wildlife populations.

   ☐ Carefully until they know how to use them.

   ☐ To benefit the hunt and maximize the number of animals that can be taken.

Indicate your answer by circling true or false in the following two questions.

4. The primary goal of wildlife management is to maintain healthy wildlife populations and habitats by managing their use to meet the present and future needs of the people.

   True or False

5. The hunter has a role in wildlife management.

   True or False

6. The basic principles of conservation provide managers with guidance on how to use wildlife wisely. ***Circle the three basic principles of conservation below***:

   Only scientific knowledge will be used.

   Protect breeding stock.

   Licences prevent over-harvest.

   Harvest wildlife wisely.

   No hunting on Sunday.

   Preserve animal/habitat relationships.

7. Hunters play a very important role in wildlife management in the NWT by ***(circle the correct answer)***:

   Reporting what they harvest.

   Providing samples.

   Controlling their harvest.

   Completing surveys.

   Participating in consultation meetings.

   All of the above.

HUNTING LAWS, ACTS AND REGULATIONS

The main purpose of hunting laws is to conserve healthy, viable populations of wildlife for present and future generations.

Hunting laws are not intended to make it difficult for the hunter, but rather to guide the hunter. Modern wildlife laws are inspired by the knowledge and understanding of wildlife and the natural processes at work (ecology).

Most traditional wildlife laws remain unwritten, although some people are documenting them. The principles of traditional wildlife laws are as relevant today as they were centuries ago.

Traditional wildlife laws are based on the fundamental values of respect for wildlife, the environment and people, including others and self. These laws govern hunter conduct.

Modern wildlife laws reflect the hunting values of past generations and set rules to address the needs of wildlife and people today.

The wisdom of past generations of hunters is the foundation for much of our modern wildlife laws.

Figure 2: The Wheel of Respect

TYPES OF HUNTERS IN THE NWT

There are various categories of hunters in the Northwest Territories:

- Asserted or established Aboriginal and/or treaty rights holders;
- general hunting licence holders; and
- licensed hunters.

Asserted or Established Aboriginal and/or Treaty Rights Holders

Hunting rights of Indigenous peoples in the NWT are based on traditional use and are different from those of licensed hunters. Hunting by many Indigenous people is controlled by Land Claim Agreements. Hunting by resident hunters may also be affected by Land Claim Agreements.

A person who has an asserted or established Aboriginal and/or treaty right to harvest wildlife in a particular area of the Northwest Territories does not require a licence or permit to exercise that right and is not required to pay a fee to do so.

Some Indigenous groups from outside of the Northwest Territories have hunting rights within the NWT.

If you have an asserted or established Aborginal and/or treaty right to harvest in an area, you must carry proper identification when you are harvesting to prove you have that right. You must show your identification if an officer asks to see it.

The type of identification required varies so be sure to check before you go hunting.

To hunt outside of the area where an asserted or established Aborginal and/or treaty rights holder has rights, the rights holder must have a general hunting licence.

A GHL allows asserted or established Aboriginal and/or treaty rights holders to harvest wildlife throughout the NWT. However, GHL holders must follow the rules of the land claim where they are hunting as well as the *Wildlife Act* and Regulations.

To be eligible for a GHL, a person must:
have an asserted or established Aboriginal and/or treaty right to harvest wildlife in the NWT; and

- be eligible to be a member of a prescribed Indigenous organization located in the NWT.

For more information on a GHL, please visit your local ENR office.

Licenced Hunters

Hunters who do not have asserted or established Aborginal and/or treaty rights to harvest in the NWT require a licence to hunt in the NWT.

There are four classes of hunting licences:
"**NWT Resident**" – A Canadian citizen or landed immigrant who has lived in the NWT continuously for one full year.

- "**Non-resident**" – A Canadian citizen or landed immigrant who has not lived in the NWT continuously for one full year.
- "**Non-resident alien**" means someone who is not a Canadian citizen or landed immigrant.
- **Special Harvester Licence (SHL)** – A special harvester licence (SHL) is for people who do not have asserted or established Aboriginal and/or treaty rights to harvest in the NWT, but are supporting an Indigenous family, living a subsistence lifestyle or, for some other reason, want to trap or harvest more than is allowed under a resident or non-resident hunting licence. You can only get an SHL if a local harvesting committee, band council or Métis local recommends your application. They can make recommendations about what, how and when an SHL holder can harvest. An SHL holder can only hunt in the area used by the local harvesting committee recommending their licence. All other conditions on the licence must be followed.

HUNTING LAWS WITHIN THE NWT

Today there are three main pieces of legislation governing hunting in the Northwest Territories:

- *Wildlife Act* and Regulations;
- *Fisheries Act* and Regulations; and
- *Migratory Bird Convention Act* and Migratory Bird Regulations.

- The primary purpose of these laws is to protect and conserve the resource. They spell out a range of matters, such as who can hunt what, where and when.

asserted or established Aboriginal and/or treaty rights are constitutionally protected and enshrined within these laws.

The following examples of these laws are general in nature; it is the responsibility of every hunter to learn how these laws apply to them.

Wildlife Act (2014) and Regulations

The development of the current *Wildlife Act* was guided by the knowledge of experienced hunters and reflects their values.

ENR administers and enforces the *Wildlife Act* and its Regulations.

The *Wildlife Act* and Regulations cover the hunting of birds and animals in the NWT.

Small game species include:

- hares (all species);
- marmots;
- woodchucks;
- ground hogs;
- porcupines;
- squirrels (all species); and
- ptarmigan and grouse.

Anyone who does not have an asserted or established Aboriginal and/or treaty rights to harvest in an area must have a GHL or licence to hunt small game. Resident and non-resident licence holders also need small game authorization.

Photo by: GNWT – D. Allaire, ENR

Small Game Authorizations

Some of the Land Claims Agreements include an exclusive right for beneficiaries to harvest fur-bearers in certain areas. This means that licenced hunters cannot harvest certain species without permission from the land claim organization and obtaining an SHL:

Ground squirrel, red squirrel, marmot and hare in the Inuvialuit Settlement Region.

- Ground squirrel, red squirrel and marmot in the Gwich'in Settlement Area.
- Red squirrel and marmot in the Sahtú Settlement Area.
- Woodchuck and red squirrel on Tłı̨chǫ lands.

Big game species include:

- bear (black, grizzly and polar);
- wood bison;
- barren-ground caribou;
- woodland and mountain caribou;
- mountain goat;
- Dall's sheep;
- moose;
- muskoxen;
- wolf; and
- wolverine.

Anyone without an asserted or established Aboriginal and/or treaty rights to harvest in an area needs a GHL or a hunting licence and wildlife tag(s) to hunt big game.

Photo by: GNWT – D. Cluff, ENR

Photo by: J. Polfus

Some big game species, such as polar bear, wood bison and muskox, are regulated under a quota. All hunters, including hunters with asserted or established Aboriginal and/or treaty rights, require a tag or authorization to hunt these species. Tags for quota species are allocated and administered by community hunters' and trappers' organizations, renewable resource councils or other identified Indigenous groups.

Photo by: GNWT – D. Downing, ENR

Photo by: GNWT – H. Sayine-Crawford, ENR

ENR publishes an annual *Summary of Hunting Regulations*, a condensed version of GNWT hunting laws pertaining to hunting in the NWT. It has information on seasons, bag limits and other laws relating to game species managed by the GNWT. Hunters can obtain copies of the summary from any ENR office or online at http://www.enr.gov.nt.ca.

Hunters are encouraged to speak with their local Renewable Resource Officer to learn how the *Wildlife Act* and Regulations apply to them.

Indigenous hunters should speak with representatives of their Indigenous governments or Renewable Resource Board to fully understand their hunting rights and responsibilities.

FISHERIES ACT AND REGULATIONS

The hunting of whales, walrus and seals in the NWT is managed under the Marine Mammal Regulations of the *Fisheries Act* of Canada.

DFO, working with the Fisheries Joint Management Committee, established under the Inuvialuit Final Agreement, administers the Marine Mammal Regulations in the NWT.

The marine mammals most commonly harvested in the NWT are beluga whales, and ringed and bearded seals. Beneficiaries of the IFA have first priority for the harvest of marine mammals within the Inuvialuit Settlement Region.

Hunters are encouraged to contact their nearest DFO office to learn how the Marine Mammal Regulations apply to them.

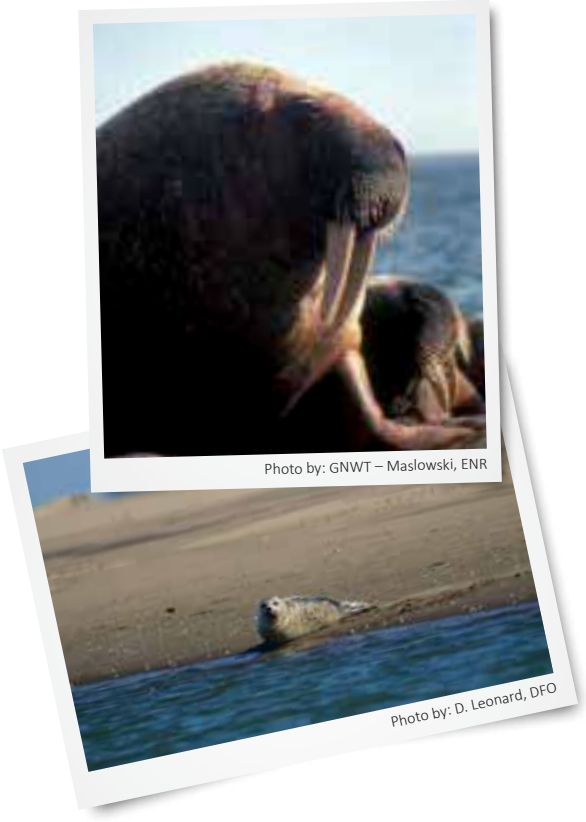


Photo by: GNWT – Maslowski, ENR

Photo by: D. Leonard, DFO

Migratory Bird Convention Act (MBCA) and Regulations

Canada seasonally hosts more than 500 species of migratory birds. Environment and Climate Change Canada develops and implements policies and legislation to ensure the protection of migratory birds, their eggs and their nests.

Non-Indigenous hunters must obtain a Migratory Game Bird Hunting Permit and a Habitat Conservation Stamp to hunt migratory birds (ducks, geese, coots, rails or snipes) in the NWT.

These are available online at https://www.permis-permits.ec.gc.ca/en/ or from any Canada Post office, and are valid in all provinces and territories.

Photo by: S. Cairns

Information on seasons, bag limits and fees is available online from the CWS, and are outlined in a brochure that can be obtained from a post office.

SUMMARY

Hunters must be respectful of others and observe the conservation laws and Regulations that are in place. Remember, the main purpose of wildlife laws is to conserve healthy, viable populations of wildlife for present and future generations.

Everyone should understand his or her responsibilities as a hunter. Every hunter should know the laws, modern and traditional, governing hunting in the NWT.

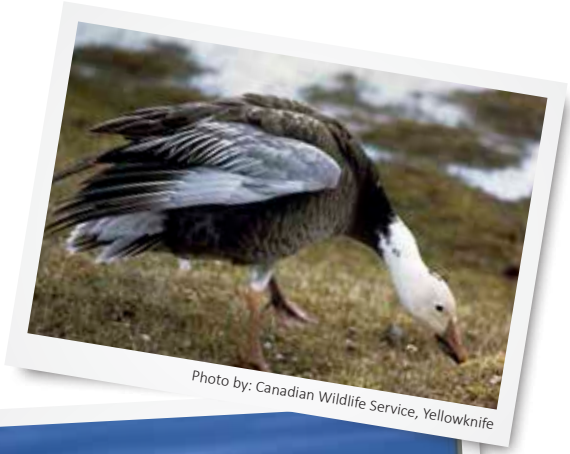


Photo by: Canadian Wildlife Service, Yellowknife

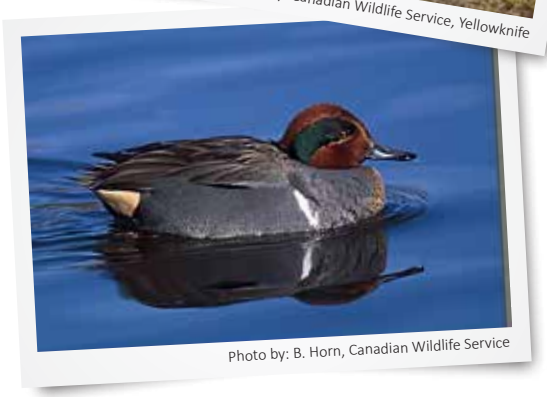


Photo by: B. Horn, Canadian Wildlife Service

Module 3 Quiz

1) Modern wildlife laws are grounded in traditional laws and both of these types of law are guided by the knowledge and understanding of:

- ☐ The NWT political system.
- ☐ Wildlife and the natural processes at work (ecology).
- ☐ Marine biology.

Complete the following statements by filling in the blanks.

2) The primary purpose of hunting laws is to _____ healthy, viable populations of wildlife for present and future generations.

3) The three main laws governing hunting in the NWT are:

_____ *Act* and Regulations

F _____ *Act* and Regulations

M _____ B _____ *Convention Act* and Regulations

4) The *Wildlife Act* and Regulations cover the hunting of small and big game species in the NWT.

True or False

5) Which hunters require tags to hunt big game species under quota?

- ☐ Resident hunters.
- ☐ Land claim beneficiaries.
- ☐ Non-resident hunters.
- ☐ All of the above.

6) ***Circle the three*** NWT species that are managed under the Marine Mammal Regulations (MMR).

Whales Fish Polar Bears

Walrus Seals Sea Horses

7) ***Fill in the blanks.*** The *Migratory Bird Convention Act* (MBCA) and Regulations ensure the protection of migratory birds, their e _____ , and n _____.

8) Who is responsible for implementing the *Migratory Bird Convention Act* and Regulations in the NWT?

- ☐ Land Claims Organizations.
- ☐ Environment and Climate Change Canada.
- ☐ Fisheries and Oceans.

HUNTING SKILLS

***Skill** – a talent or ability that comes from knowledge, training, practice and experience.*

So far you have learned:
The hunting values that guide responsible hunters and some of the things you can do to show respect.

- Ecology and wildlife management, and the hunter's role.
- The different laws that guide hunting.

To be a successful and responsible hunter you must also have the:

- ability to recognize the physical characteristics of the animals you hunt in all seasons;
- ability to recognize animal signs, such as tracks or scat;
- knowledge of basic anatomy (organs, muscle and skeleton) of the animals hunted;
- ability to properly place shots in vital organs for quick, one-shot kills; and
- ability to get close to an animal for a clear shot.

Photo by: T. Macintosh

WILDLIFE IDENTIFICATION

Learning to accurately identify wildlife and their signs is an enjoyable experience and a lifelong pursuit. This knowledge can increase a person's appreciation for the natural world around them.

Photo by: T. Macintosh

Photo by: T. Macintosh

Photo by: T. Macintosh

Most Canadians can recognize and differentiate between a caribou and a moose, a duck and a goose.

All hunters must be able to observe at a much greater level of detail to know differences within a species. For example, depending on the location, the hunter must be able to tell the difference between a barren-ground caribou and a woodland caribou or a reindeer.

If animals are moving through cover, quick and accurate identification may be difficult.

It can be very challenging to identify waterfowl while they are flying. Light and weather conditions can make waterfowl identification even more difficult.

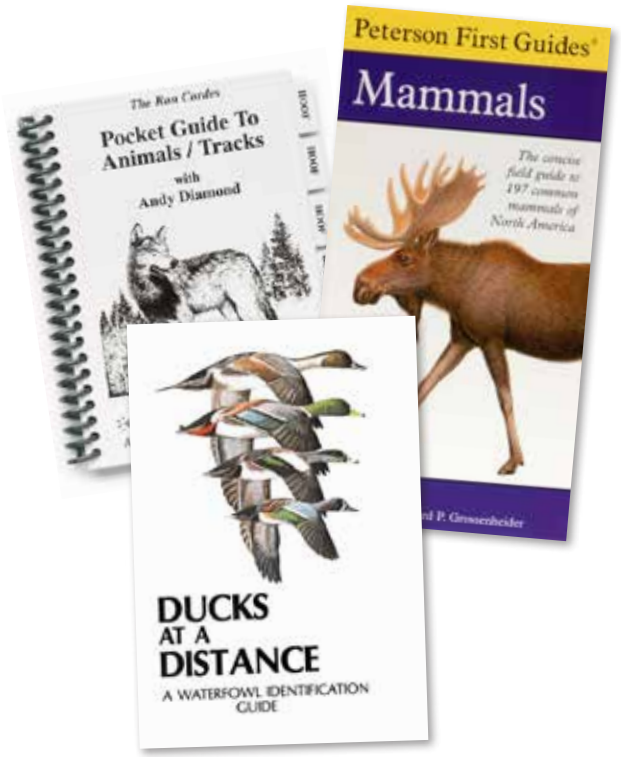
Sometimes hunters are restricted to hunting only males of a species or only adult animals. This means a hunter also needs to recognize the sexual and age characteristics of wildlife.

Shooting a female, or an immature or young animal, can have legal consequences. There are also ecological consequences. Over-harvest of females can cause wildlife populations to decline and prevent population recovery.

Practiced use of good binoculars can help hunters. Binoculars magnify objects and allow the hunter to see features of the animal. This allows you to identify animals at distances without disturbing them or giving away your position.

Do not use the telescopic sight on a firearm as a substitute for binoculars to identify wildlife or people.

What if you accidentally shoot the wrong animal? Report it to the nearest ENR office as soon as practical. Do not abandon your kill.



There are many excellent wildlife identification books, videos and websites available to help you learn how to accurately identify wildlife. Remember, books and videos cannot replace experience. Practice what you have learned and take every opportunity to travel with experienced and knowledgeable hunters.

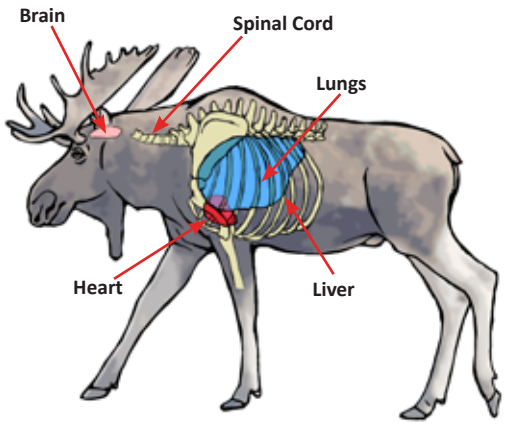
Module 8 of this manual contains basic wildlife identification information for wildlife commonly hunted in the NWT.


Photo by: T. Macintosh

VITAL TARGET AREAS

A responsible hunter stalks close to the hunted animal before shooting. Long distance or running shots should be avoided because the risk of wounding an animal is high.

A hunter must aim for vital organs like the heart, lungs, brain, spinal cord or liver. An accurate shot to any of these vital organs results in a quick, humane, one-shot kill.



Your shot should strike the heart/lung region of large animals. This is the largest target area on an animal and is most likely to result in a quick kill.

Whenever possible use a rest (snowmobile seat, log, ground, etc.) to support your firearm and help improve the accuracy of your shot.

Consider:
Moose, the largest deer in the world, is also one of the largest game animals hunted in the NWT. However, the vital organ targets on a moose are relatively small.

The spine, which the spinal cord passes through, is about the diametre of a soda pop can.

- The major arteries in the neck and body are about the diameter of an adult's little finger.

- The brain of a moose is about the size of a baseball and is covered by bone.

- The heart/lung vital area is about the size of a basketball. The heart sits low in the chest area and is about the size of an open human hand.

SHOT PLACEMENT FOR BIG GAME

Accurate shot placement depends on knowledge of animal anatomy and the ability to place the projectile or shot in the vital area. A hunter must take time to sight-in their firearm and regularly practice shooting at the distances appropriate for the animal that will be hunted.

The size of the vital organs varies between species and different sized individuals. However, the placement of vital organs in big game animal bodies is very similar.

While the **brain** is a vital organ, accurate shots to the head or neck of animals are very difficult because of the frequent movement of the head. The brain is also well protected by heavy bone. A close miss can cause non-fatal wounding.

- A neck shot may hit the esophagus or trachea and wound the animal. The animal could run away without leaving a blood trail and die a slow death.
- The large heart/lung is a relatively stationary target and easier to hit, and is best exposed when the animal is broadside to the hunter or slightly facing away. A shot from either angle will likely puncture both lungs and result in a quick, humane kill. If the bullet enters and exits through the ribs, meat loss will be minimal. This area is the most desirable shot.
- If only one lung is hit, the animal may travel a considerable distance before going down.
- An expandable bullet hitting high in the heart will cause the aorta, the main artery leaving the heart, to rupture. This cuts the blood supply to the animal's brain. The animal becomes unconscious in seconds. This is the most humane shot.
- **Warning:** A bullet striking only centimetres behind the heart may perforate or puncture the edges of the lungs, the front stomach and possibly the liver (on the right side). This may cause minimal internal bleeding and can make it hard to track the wounded animal.

Shots to be Avoided

Hits to the liver/spleen or gut area should be avoided. Hits to the liver and spleen may cause heavy bleeding, but the animal may still travel a considerable distance after being shot. This reduces a hunter's chances of recovering the animal.

Hits to the gut (stomach, rumen and intestines) are eventually fatal, but the animal will normally travel a long distance before it dies, reducing a hunter's chances of recovering the animal.

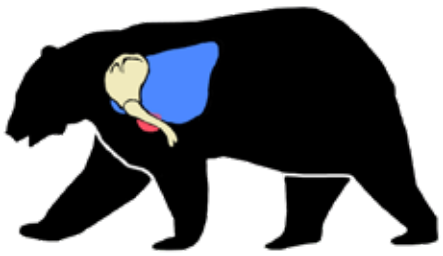
If an animal's body is obstructed from view, do not use the head position to guess the target area.

All hunters should avoid running shots.

Other Considerations

Hunters must be good shooters and consider the path the bullet will take to reach and exit the animal target. Bone and muscle in an animal influences the effectiveness of any shot.

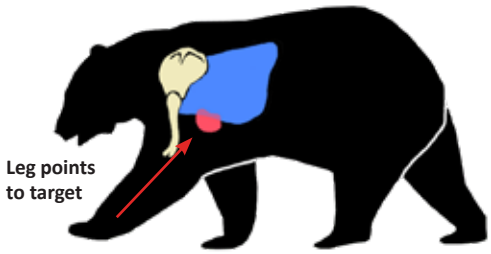
The portion of the front leg between the shoulder and the elbow of a moose, caribou or bear are large and very strong. A shot to the heart/lung area can be partially or totally blocked depending on the position of the animal's leg. A bullet striking the upper leg bone may be deflected and prevented from reaching the vital organs. It may only wound the animal.



Leg in the rearward position

A wise hunter waits for the animal to move its front leg fully forward for a clear shot at the heart/lung target area.

In a fully forward position, the lower part of the leg can act as a guide for the hunter's aim and result in a quick, humane one-shot kill.



Muscles are the largest proportion of edible parts of an animal. Any damage to the muscles reduces the usable amount of meat.

Bullets can unnecessarily damage the surrounding meat or muscles. Bullets can also hit the rumen and contaminate the surrounding meat.

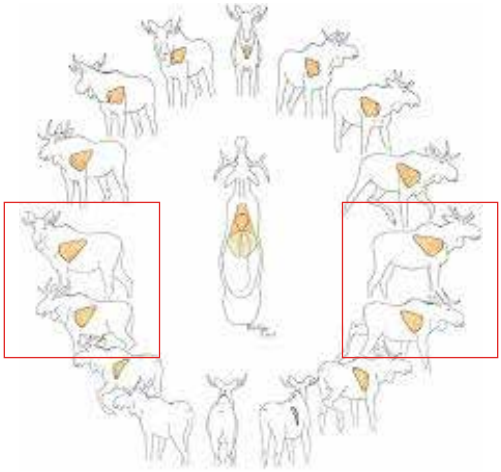
When an animal is shot several times, the muscles flood with lactic acid and adrenaline. This results in poor tasting meat.

Quick one-shot kills result in good tasting meat and less wastage.

The location of edible organs and cuts of meat will be discussed in the Module 6, The Hunt.

WHEN TO SHOOT

The heart/lung vital target area of a moose changes in size and shape at different angles. The more the moose faces towards or away from the hunter, the smaller the target area. Hunters must be mindful that as the size of the target area shrinks so does the chance of making a clean kill.



Changing target views – ideal target, broadside or quartering way

Hunters are encouraged to wait for the animal to turn broadside, when the largest heart/lung target area is available. However, there will be times when the hunter may have to shoot when the animal is in less than an ideal position. The proper understanding of animal anatomy can still result in an accurate shot and a quick kill.

Trees or landforms may block the hunter's view of the heart/lung vital target area or the animal may be charging right at them. In these instances, other vital target areas (brain or spinal cord) can provide a secondary target.

In cases such as a charging bear, the hunter may not have an effective shot at any of the vital areas. In these situations, a good understanding of the bear's skeleton or bones can help a hunter make a quick shot to the shoulder that may knock down and stop the animal long enough for a hunter to find and shoot into one of the vital target areas.

Even when the hunter has a good view of a vital area, there may be a risk that the animal runs into water or onto thin ice before dying, so retrieval of the animal would be very difficult and possibly dangerous.

In these cases, responsible hunters do not take a shot. They either take steps to eliminate the risk or they wait to hunt that animal on another day.

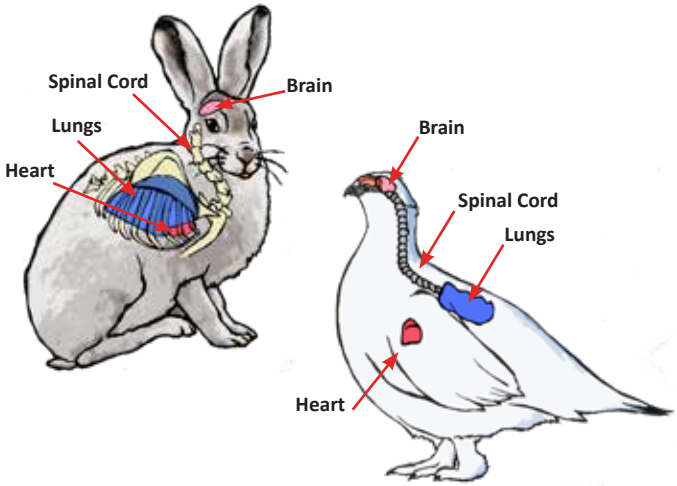
A respectful and responsible hunter does everything possible to be in position for the best shot instead of taking a shot that risks wounding or losing the animal.

A responsible hunter practices and is prepared for all potential situations.

SHOT PLACEMENT FOR SMALL GAME AND WATERFOWL

The vital organs of hares, upland game birds and waterfowl are the same as big game animals. These are the heart, lungs, brain and spinal cord. Recommended shot placement for small game and waterfowl is different than those for big game.

Recommended shot placement for small game and waterfowl are the brain and spinal cord or head and neck. Shots to the heart/ lung area are discouraged.



Shots aimed at the heart/lung area of upland game birds and waterfowl pass through the breast first. This is the largest source of meat on these birds. The small size of the birds means any loss of meat can be significant.

It is possible to place a clean shot into the heart/ lung area of a hare, but a shot slightly off target can mean a loss of meat.

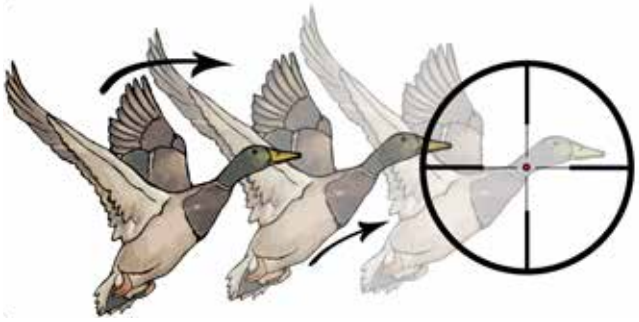
The feathers or fur of birds and small game can make their bodies look much bigger than they actually are. This can cause a hunter to misjudge the location of the heart/lung area.

The heads of hares, upland game birds and waterfowl are small, but exposed. The heads are also not part of the main meat areas. The exposed target of the neck (spinal cord) contains nerves and blood vessels that supply blood to the rest of the vital organs.

A well-placed shot to the head or neck cuts off sensation and kills the animal or bird within seconds.

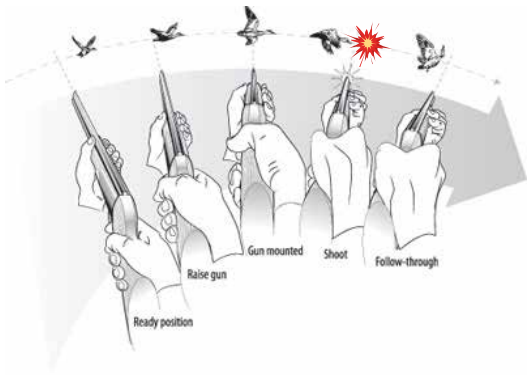
The best firearm for hunting waterfowl is a shotgun because it can fire multiple projectiles or shots at the same time.

Hunting waterfowl involves shooting at a bird that is moving, often very quickly. A hunter needs to "lead" the bird. This means aiming ahead of the bird. The goal is to have the shot and bird arrive at the same point at the same time.



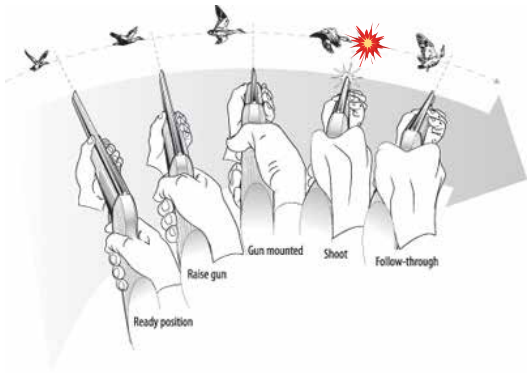
The two most common shooting methods waterfowl hunters use to do this are:

Swing-through – In this method, the hunter starts his aim behind the bird, following its imaginary "smoke trail", then catching up and passing the bird, achieves the necessary lead to fire where the bird will be without stopping the swing of his aim (follow through).



Swing-through Shooting Method

Sustained Lead – This method requires the hunter to start their aim slightly ahead of the bird, swing along the bird's flight path at the same speed as the bird, while keeping ahead of it, then firing while continuing to follow through.



Sustained Lead Shooting Method

FIREARM AND AMMUNITION SELECTION

A good understanding of the vital organs, bones and muscles of the animal being hunted helps a hunter choose the right firearm and ammunition combination to ensure one-shot kills.

In some cases, the choices of firearm and ammunition are guided by legal requirements. Examples from the *Big Game Hunting Regulations* are:

- At least .30 calibre ammunition is required for hunting wood bison.
- In all areas of the NWT, the minimum size of ammunition allowed for hunting wolf and wolverine is .222 calibre.
- For all other types of big game the minimum is .243 calibre.
- Ammunition containing non-expanding bullets, steel-jacketed bullets or tracer ammunition cannot be used for hunting.

While legislation gives the minimum standards, a hunter has a lot of choice in the type of firearm and ammunition they can use.

Firearm and ammunition manufacturers publish information recommending the best size (calibre and gauge) of firearm and ammunition, including bullet weight for specific animals. This information can be very useful to the new hunter.

Experienced hunters in the area where you plan to hunt can be one of your best sources of information. They can tell you the most suitable calibre and ammunition for the species hunted and local hunting conditions in the area.

Precise bullet placement in the vital organs is the key to a successful hunt. The most powerful calibre or gauge will not compensate for poor bullet or shot placement.

BOW HUNTING

Bow hunting is permitted in the NWT and is subject to the same regulations as hunting with a firearm. Draw weight must be at least 20kg at 700mm draw. Arrows must have a broadhead point width of at least 25mm at the widest point or a barbless, 3-bladed bodkin head.

CROSSBOW HUNTING

New standards for crossbow use require a draw weight of at least 68kg at 700mm, a bolt weight of at least 16.2g and at least a 2.2cm diametre cutting broadhead.

VISUAL ABILITIES

Unobstructed vision is very important. Impaired vision can be dangerous to the hunter and others.

A hunter needs good distance vision. This allows a hunter to distinguish the camouflaged form of a distant animal from the surrounding landscape under varying light conditions.

Binoculars improve a hunter's ability to see distant objects. They also help a hunter look into, and through, brush and trees.

Rifle telescopic sights are not a substitute for binoculars.

A respectful and responsible hunter always double-checks the target no matter how good their distance vision is.

A hunter also needs to have good close-up vision. A hunter relies on close-up vision when lining up the iron sights.

Poor distance or close-up vision can be dealt with through the use of corrective eyeglasses.

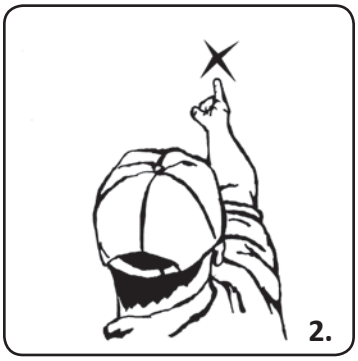
Hunters need to be able to judge distances accurately. This requires good depth perception. Poor depth perception is often the result of one eye being dominant. The dominant eye judges speed and range, and focuses more accurately than the other eye.

Most right-handed people are right-eye dominant. Most left-handed people are left-eye dominant.

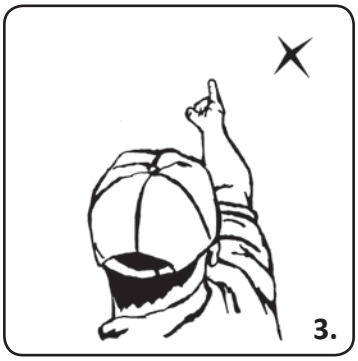
DETERMINING YOUR DOMINANT EYE

Hold one arm out and, with both eyes open, point your index finger at an object across the room.

Now close your left eye. If you are still pointing at the object, as in figure 2, you are right-eye dominant.



If it appears you are pointing to the side of the object, as in figure 3, you are left-eye dominant.



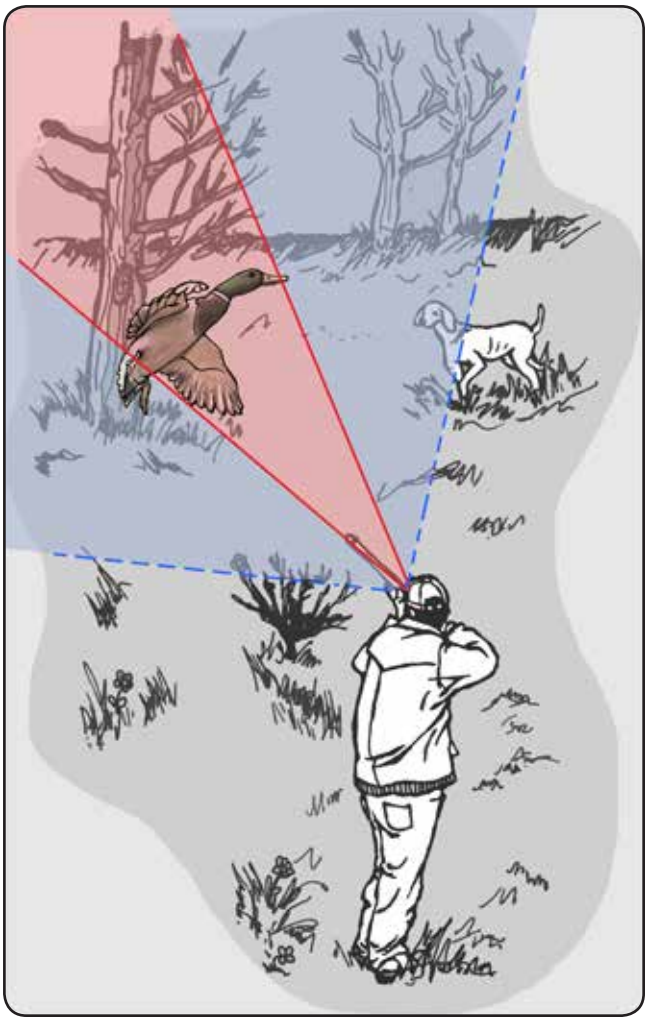
There are varying degrees of eye dominance. Some people are cross dominant. They are right-handed, but left-eye dominant. These people should mount the rifle or shotgun on the left shoulder instead of the right shoulder. This can make the difference between hitting and missing the target.

People tend to close one eye and look only with the dominant eye when aiming, thinking this gives a clear image of the target. However, closing one eye limits depth perception. Aiming with both eyes is recommended.

Target practice with a patch over the dominant eye can lead to more accurate shooting with both eyes open.

A hunter needs to see more than what is immediately in front of them. A hunter must be able to see things moving on either side, above and below, and be aware of any objects within the immediate area of the target. This is called peripheral vision.

A hunter using peripheral vision can see objects within the target area without having to move their head or body.



VISUAL LIMITATIONS

Safe hunters know their visual limitations and take steps to correct the problems.

The ability to see in flat or low light conditions can be improved by wearing special tinted glasses. In bright conditions, polarized sunglasses help reduce the glare from the sun reflecting off water or snow.

Corrective eyewear must be worn when hunting.

JUDGING DISTANCE

Accurately judging distances is a key skill all hunters must learn to make quick, humane kills. Poor judgment of distance leads to missed shots or, worse, wounding and loss of the hunted animal. Practice with your firearm at a gun range will help you become better at judging distances. Hand-held range finders can also be helpful.

Hunters use different methods to judge the distance to the target. The simplest one used by most is taking a guess. Over short distances (about 40m maximum) people can learn to guess fairly accurately. The problem is that guesses are less accurate over longer distances.

The accuracy of guesses is improved with practice. Start with objects in our everyday environment; for example, on your way to school or work. Stop and select a distant and stationary object. It could be the school, store or a fuel drum. Guess how far it is to the object then actually measure the distance.

You do not need a measuring tape; simply count your paces as you walk towards the object.

Once you get good at pacing and judging distances in town, practice in an environment similar to the one where you will hunt.

Today's hunters may use range finders that take much of the guess work out of judging distances.

Range finders are electronic devices that accurately determine distance by sending a laser pulse in a narrow beam to the object. They then measure the time taken by the pulse to be reflected off the target and returned to the sender.

They vary in design, features and cost, but generally, the better the quality the greater the accuracy if used correctly.

If you purchase a new range finder, learn how to use it before you go out hunting.

Pacing

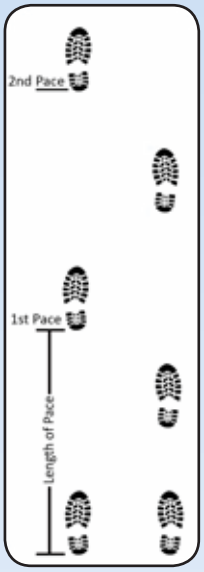
A pace is equivalent to two natural steps. In this example, every left step is counted as a pace.

The length of the pace is measured from the heel of one left track to the heel of the next left track.

The average length of a pace will vary between people and also when travelling over different types of terrain.

To determine your average pace:

- Step 1: Measure out a course 60m long.
- Step 2: Walk the course with a natural stride and count the number of paces.
- Step 3: Calculate your pace by dividing the length of the course by the number of paces you counted. If the course was 60 metres long and it took 50 paces then the average length of your pace is 1.2 metres (60 divided by 50 = 1.2).



Though range finders have several valid uses in hunting, most hunters do not recommend using a laser range finder when preparing to take your shot. The added time and movement needed to use the range finder will often destroy the opportunity to take the shot. Sometimes, there just is not time to use a range finder and get a shot off.

While range finders are useful to hunters, no one should depend solely on their range finder.

When hunting from a stationary position (blind, tree stand), another good way to judge distance is to use a method called 'land marking'.

Near their hunting point, the hunter measures the distance to distinct objects (e.g. rocks, trees, creeks, etc.) using pacing or their range finder. If a range finder is used, the hunter does not need to leave their shooting position to measure the distances.

The hunter makes a mental map of the distances to set objects. Keeping track of the varying distances can be difficult since nature seldom distributes trees and rocks evenly, at easy to remember distances.

Sometimes hunters set out markers at set spacing (e.g. 10m). Many things can be used as markers, but objects natural to the area, like branches or piles of rocks, are best since unnatural materials might scare the animal away.

Using the known distances to two markers that the animal is standing in between, it's fairly easy to come up with a reasonable estimation of the distance to the animal. For instance, if a caribou is between a marker 50m away and another 60m away, but closer to the 60m maker, the animal is between 55 and 60m away.

To prevent shooting at birds that are too far away, waterfowl hunters sometimes set out easily recognizable decoys to mark the ideal shooting ranges. Knowing the bird's location in relation to the marker decoys, the hunter knows when it is appropriate to fire.

Using 'marking', the hunter can quickly and easily estimate distances. When game does arrive, the hunter can focus on taking their shot, rather than trying to guess distance.

A method that can be used by hunters on the move is called subtending. Subtending is comparing sizes of a known object close by to a distant target to estimate the targets distance. For example, your hand can be used to judge distances in the field.

Hold your thumb up with your arm outstretched. At 46m, a man 1.8m tall is about the height of your thumb.

At 91m away the person will be about the height of your thumbnail.

At the bottom of the thumbnail there is a white half-crescent. When you can hold your thumb up and sight it toward a person and their height is no taller than that white crescent, that person is now about 270m away.

This method works well to estimate the height of a moose's front shoulder, which is approximately 1.5 to 2m – close to the height of the average person (1.8m).

With a smaller animal, such as a caribou, you need to first develop a scale specific to a caribou's average shoulder height of about 1.1 metres. Using the person as a comparative scale, you would over-estimate the distance.

This method of subtending is a very quick way to judge distance and can be done while holding a firearm or bow in the aiming position.

Many competitive archers use the pole method. They imagine a pole of a certain length, and determine how many poles running along the ground would be required to reach the target. For instance, if their imaginary pole length is 10m, and in their mind's eye they imagine three poles in between them and the target, they know the distance is 30m. This method takes considerable experience.

Guessing, range finders, subtending and the pole method are a few common methods to judge distance. Hunters in the forest need to use different methods than those hunting in the mountains or on the open tundra as the line of sight is usually much less.

Take the time to find the method(s) that works best for you and for the habitat you will be hunting in. Then practice, practice, practice.

HUNTING TECHNIQUES

Successful hunters know a variety of hunting techniques. Not all animals behave the same. Some animals' behaviours may change based on weather conditions or time of day. If hunters only know one hunting technique, they limit their chances of being successful.

Below are some hunting techniques to consider.

SPOT AND STALK

Spot and stalk hunting means moving slowly through good habitat until an animal is spotted and then quietly and cautiously creeping or 'stalking' close enough for a clear one-shot and quick kill.

Stalking often involves finding sign (tracks, scat, beds, scrapings) of the animal hunted and following the tracks. This should lead to the animal or group of animals.

Photo by: T. Macintosh

Stalking requires total focus. The hunter needs to keep track of wind direction at all times. They must also concentrate on staying quiet, and moving slowly and silently to prevent alerting wildlife of their approach. The hunter must also stay aware of where they are, noting landmarks so they can find their way back to the vehicle or camp at the end of the day.

Remaining patient is the key to success. Stalking to within accurate shooting range of big game is, perhaps, the ultimate test of a hunter's skill.

Some waterfowl hunters use a version of stalking by quietly drifting, paddling or wading along marsh edges and creeks. They are hoping to get close enough to ducks to flush them into shooting range. This is called "jump shooting".

STILL-HUNTING

Still-hunting is a technique where the hunter walks slowly and quietly through an animal's habitat, stopping frequently to scan and listen for game.

Binoculars are extremely valuable even when scanning in close cover.

As a general rule, the hunter should spend at least 10 times longer being still and observing than walking.

Big game hunters generally use this method in unfamiliar terrain or in, and around, areas with plentiful animal signs.

The best time for this type of hunting is after a heavy rain when leaves and underbrush are soaked or when the snow is light and not crunchy. It is easier to move around quietly in these conditions.

A hunter must keep the wind in their favour so wildlife is not alerted to their presence.

SIT AND WAIT

A hunter using this technique must find the prime habitat of the animal they are hunting and pick a spot where the animals are most likely to feed or travel. The hunter just needs to wait for the animal to come to that spot.

The most common form of "sit and wait" in the NWT involves the use of ground blinds. These structures are located on the ground and can be built of almost anything that can conceal the hunter from the animal or birds.

Hunting from ground blinds is most often used by waterfowl hunters. They are also used for hunting big game, such as caribou.

Hunters locating and occupying ground blinds must always be aware of wind direction and the position of the sun during the times they will be hunting. This will help make sure their position is not revealed to the animals or birds they are hunting.

Some hunters, especially bow hunters, use elevated tree stands placed in, or against, trees.

Elevated stands offer advantages to firearm and bow hunters. The hunter is better concealed because they are above the normal line of sight of an animal and their scent is off the ground. This makes it difficult for an animal to detect the hunter.

The "sit and wait" method requires lots of patience and discipline. The hunter must remain as quiet as possible because sound is harder to conceal than scent or movement. The hunter may see the animal before it is in the proper shooting range or lane. It takes discipline to wait for the animal or bird to get close enough for a good shot.

When hunting with others, respect one another's shooting lanes. Do not follow, or fire at, animals or birds that move into another hunter's shooting lane or zone of fire.

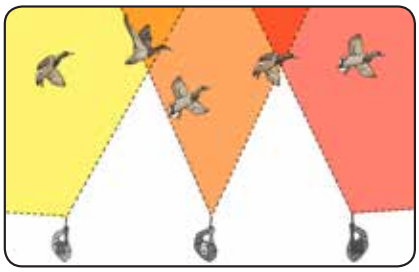


Figure 6: Zones of Fire

Caution: If you "still" or "sit and wait" hunt effectively, wildlife and other hunters will not be aware of your presence. When meeting another hunter, alert them to your presence and your intentions. Take a few minutes to talk about how you each plan to move through the area. In some cases, you may need to change your plans to hunt the area to reduce the risk of accidentally putting another in harm's way.

CALLING

Calling is a technique where the hunter tries to imitate the sounds made by wildlife to attract animals or birds close enough for an effective shot. Hunters using the "sit and wait" method of hunting normally use this technique to improve chances for a successful hunt.

Photo by: E. Reed

During the moose mating season, hunters can call moose within range by using a combination of calls, imitating the long bawls of a cow or the grunts and snorts of a bull.

Waterfowl hunters traditionally use calls to draw birds to decoys and within range. Duck calls may mimic the "chuckle" noises made by feeding ducks to communicate that it is safe to come close.

Many types of animals respond to calling. Even predators like wolves can be called by mimicking the distress calls of injured hares.

Learning to imitate sounds to attract animals takes time and practice. There are many audio tapes, videos and websites available to help you learn the various sounds and techniques.

RATTLING AND THRASHING

"Rattling" is the clashing together of real or imitation antlers to mimic the sound of sparring bulls.

A similar technique is used to attract bull moose in the NWT during the breeding season. Hunters use the dried shoulder blades (scapula) of the moose instead of the heavy antlers. Tapping the scapula against trees or using it to thrash brush and branches make sounds like the noise of antlers hitting. A simpler option is to use a paddle to thrash the brush.

DECOYS

Decoys try to mimic shape and behaviour of the animal itself.

Waterfowl hunters in the NWT use a combination of decoys and 'calling' to try to mimic waterfowl feeding either in the water or on land.

Waterfowl decoys can range from small white garbage bags and pieces of cloth to elaborate, commercially made waterfowl replicas.

Simply setting out decoys is not enough. Decoys need to be laid out in a certain way depending on the species being hunted and weather conditions.

The necessary skills for successfully using decoys are developed through knowledge and experience. New hunters should develop their technique by hunting with experienced hunters.

Photo by: T. Macintosh

NORTHERN HUNTING SITUATIONS

Hunters should be aware of the wide diversity of hunting conditions found in the NWT. The recommendations below will help you safely hunt in the most common hunting situations.

FOREST, TUNDRA AND MOUNTAIN

In forested country, never shoot until you have positively identified your target. Remember, trees and bushes can hide people and buildings beyond your target. Never take chances. Wait until you are sure. Always keep track of your hunting companions.

On the tundra, distances can be deceiving. Bullets may travel further than in forested country. Always make sure of your target and the area beyond it.

Do not shoot at animals standing on the horizon line. Make sure your shots have a solid backdrop in case you miss your target.

ON WATER

Hunters in the NWT can spend a considerable amount of time on the water while hunting and/or travelling to and from their hunting grounds. Hunters in the NWT are more likely to drown in a boating accident than to be shot in a firearms accident.

Wear a Canadian Coast Guard-approved personal flotation device (PFD). A PFD can make a difference between life and death for a hunter who falls into cold water.

Always unload firearms before getting in and out of a boat. Protect your unloaded firearm from the elements by putting it in a case and securely stowing it away.

If more than one person is shooting, establish a "zone of fire" before the hunt begins. This means each hunter has an area where they can fire without endangering anyone else in the hunting party. This is very important when hunting game that can appear very suddenly, such as waterfowl.

Hunting from a moving boat increases the risk of injury to the people in the boat and others in the general area. When hunting waterfowl from a boat you may only shoot once the motor has been turned off and the boat (any boat, canoe or yacht equipped with a motor) has stopped its forward progress.

Good planning and organization are the keys for a safe, successful hunt.

Photo by: T. Macintosh

Always remember bullets may ricochet when shooting at any animal in the water. Look around carefully before you fire. Always make sure you know what lies beyond your target.

ON ICE

Bullets may also ricochet off the ice.

Be careful if water or slush splashes up the barrel of a firearm. If this happen, empty the chamber of the firearm and check for any obstructions. If water or ice is found, remove all bullets from the firearm and clean the barrel immediately. A couple drops of water in the barrel can change the point of impact drastically. A bullet fired in a barrel obstructed by packed snow or ice will damage the barrel and could seriously injure the shooter.

If you must cross an ice crack or pressure ridge, unload your firearm.

SNOWMOBILES AND ATVS

It is common to carry firearms slung across the back when hunting from snowmobiles or ATVs. Rough terrain may tip or upset you. Remember, it is not safe to carry a loaded firearm when driving.

If you carry your firearm slung across your back there is a risk that snow or mud may get into the muzzle of your firearm. Prevent this from happening by using muzzle covers (barrel cots). These are available from most hunting supply stores.

A simpler alternative is to criss-cross two pieces of standard electrical tape over the muzzle.

When travelling, place your unloaded firearm in a case and tie it down securely on your ATV, sled or komatik.


Photo by: T. Macintosh

The use of hard sided gun scabbards (boots), mounted securely to your ATV or snowmobile, can protect and securely store your firearm while keeping it readily available when needed.

Make sure your firearm and ammunition are the first items to be unpacked and safely stored when you return home.

PRACTICE, PRACTICE, PRACTICE

Hunters must have:
good knowledge of wildlife anatomy;

- the ability to correctly judge distance;
- the discipline to take only shots that can be made with certainty; and
- the ability to shoot accurately from all shooting positions.

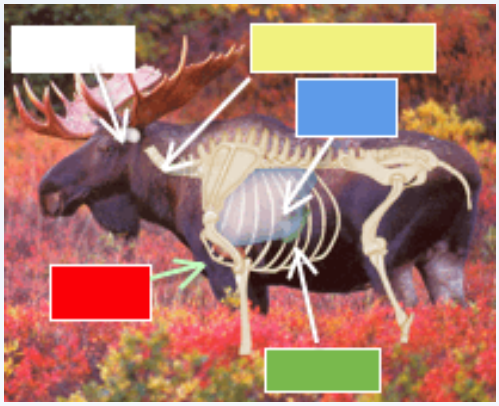
SUMMARY

No one is a born expert in these skills. Life-long learning and practice are very important. Developing and improving skills and knowledge takes time. Hunting with experienced hunters who are willing to share their knowledge is an important part of the learning process.

Module 4 Quiz

1) ***Circle*** the bull (male) caribou in the photograph below.

2) ***Label the diagram below*** using the following terms: Heart, Lungs, Brain, Spinal Cord, and Liver.



3) In the diagram above, ***circle*** the heart/lung vital target area.

4) ***Fill in the blanks.*** Recommended shot placement for small game and waterfowl are the _____ and _____ _____.

Shots to the _____ / _____ area are discouraged.

5) ***Circle your choice***. The NWT Hunter Education program recommends shooting with:

One eye closed Both eyes open

6) ***Use the following words to fill in the blanks below***:

wounding loss missed shots

Accurately judging distances is a key skill that all hunters must learn in order to make quick, humane kills. Poor judgment of distance leads to _____ _____ or worse, _____ and _____ of the hunted animal.

7) The hunter must learn a variety of hunting techniques to be successful. ***Fill in the blanks below to name a few hunting techniques***.

Spot and _____ _____ hunting

Sit and _____ _____ or Thrashing

8) Developing and improving hunting skills takes time and practice.

True or False

PLANNING AND PREPARATION

In the previous modules, you learned about the values of a respectful hunter, the laws governing hunting, wildlife ecology and management, wildlife anatomy, and common hunting techniques.

You are almost ready to go hunting. The next step is preparing for the hunt.

Proper planning and preparation can make the difference between a safe and successful hunt and one that ends poorly.

Your hunt can come to a quick end if you forget an important piece of equipment or you find it doesn't work when you need it.

Every year, some northern hunters get stranded or go missing because they don't have the proper equipment with them or their equipment fails.

Don't let this happen to you. Take the time to prepare properly before you go hunting.

Good planning and preparation improves hunting success and helps make sure a hunter is comfortable and safe.

Photo by: T. Macintosh

Experienced hunters recommend you select your hunting equipment based on the answers to the following questions:

- Where will you hunt?
- What type of animal(s) will you hunt?
- What type of hunting technique will you use (stalking, sit and wait, etc.)?
- What type of weather may occur?
- What type of shelter is available in the hunting area?
- How long will you be away?

Where will you hunt?

Just knowing the name of the place you will hunt is not enough. You must also know:

- How will you get there?
- Will you walk or travel by boat, snowmobile, truck or plane?
- How far away is the hunting area?
- How much fuel and oil will you need to get there and back safely?
- What is the terrain where you will hunt? Is it bush, tundra, mountains, open water or ice?
- What type of equipment and clothing will you need to hunt in the area?

What type of animal(s) will you hunt?

The size of firearm and ammunition needed for your hunt depends on the type of animal you plan to hunt. Remember, you want to make quick, one-shot kills.

You must also use equipment and supplies to help process the animal and pack it out. Generally, the larger the animal the more equipment and supplies you will need.

What type of hunting technique will you use?

The type and amount of equipment and supplies needed will depend on the hunting technique you use. For example, a duck hunter who plans to hunt from a blind in, or next to, water will need more equipment than a hunter who plans to 'spot and stalk' an animal on land only.

In addition to basic hunting equipment, the duck hunter needs to bring materials to build a blind, decoys and calls to attract waterfowl, and a tool to retrieve downed birds. A spot and stalk hunter may need little more than basic hunting equipment.

Photo by: T. Macintosh

A hunter may need a canoe or boat to get to the hunting site regardless of the hunting technique used. Transportation and retrieval methods used determine additional equipment and supplies needed, such as paddles, outboard motor boat, PFDs, gas, spare parts and possibly food for the dog(s).

The type of clothing you need for your hunt also depends on the hunting technique you use.

What type of weather may occur?

Weather plays a big part in the type of clothing and survival equipment you will need. Clothing and equipment may vary depending on the season.

Survival equipment includes protection from the elements (clothing, rain gear, tents), tools for creating heat (fire, camp stove, candles), and a way to make a shelter in an emergency situation (tarp, axe, snow knife).

Delays because of weather conditions are common in the NWT. Always be prepared to be out longer than planned. Let the weather, not your schedule, dictate your travel. Failure to respect the weather can have fatal consequences.

Photo by: T. Macintosh

What type of shelter is available in the hunting area?

Are there cabins in the area you can use during your hunt or in the case of an emergency? If the cabin you plan to use is not your own, make sure you get the owner's permission before you leave. If you need to use a cabin for emergency shelter, make sure you tell the cabin owner when you return to town.

If there is no available cabin, you will need to bring your own shelter.

You should always carry equipment you can use to make an emergency shelter. This could include an axe, tarp or snow knife. A responsible hunter is always prepared for an emergency.

Photo by: T. Macintosh

Photo by: T. Macintosh

How long will you be away?

The amount of clothing, food, supplies and fuel you will need depends on how long you plan to be hunting.

Remember, weather or equipment breakdowns may mean you could be away longer than planned. Be prepared for delays by packing additional supplies.

Always be prepared to stay out overnight even if you only plan to be out for the day.

Use these planning questions to put together the equipment and supplies you need for your hunt.

CHECKLISTS

Many experienced hunters recommend using checklists to prepare for a hunting trip. Most hunters use a checklist for each one of their needs.

Here are some of the needs:
1. Mode of transportation
2. Communication tools
3. Basic hunting equipment
4. Personal gear
5. Camping equipment
6. Processing equipment and supplies

The checklists provided in this manual are just examples to help you consider all equipment and supplies needed for your hunt. You should talk to experienced hunters and members of your hunting group before filling out your checklists. This will make sure the checklists work for your hunting trip.

Photo by: T. Macintosh

BOAT

- ☐ Gas
- ☐ Oil
- ☐ Funnel with filter
- ☐ Paddles
- ☐ Anchor
- ☐ Rope
- ☐ PFDs (one per person)
- ☐ Bailing pail
- ☐ Spare boat plug
- ☐ Spare prop and shear pins
- ☐ Spark plugs
- ☐ Sounding device
- ☐ First aid kit
- ☐ Fire extinguisher
- ☐ Tool kit
- ☐ Flares
- ☐ Emergency light

SNOWMOBILE

- ☐ Gas
- ☐ Oil
- ☐ Gas line antifreeze
- ☐ Spare belt
- ☐ Spark plugs
- ☐ Spare light bulb
- ☐ Helmet
- ☐ Goggles
- ☐ Tool kit
- ☐ Small block and tackle or winch

ATV

- ☐ Helmet
- ☐ Gas
- ☐ Oil
- ☐ Spare belt
- ☐ Plugs
- ☐ Tire pump
- ☐ Tire repair kit
- ☐ Spare light bulb
- ☐ Tool kit
- ☐ Small block and tackle or winch

MODE OF TRANSPORTATION

There are laws about the use of motorized vehicles while hunting in the NWT. Make sure you check to see what rules apply to your situation and plan accordingly.

CANOE/DUCK BOAT

- ☐ Paddles/oars
- ☐ Bailing pail
- ☐ Extra boat plug
- ☐ Rope
- ☐ PFDs (one per person)
- ☐ Sounding device

Hunters sometimes underestimate the amount of fuel needed for their trip. This means they either have to cut their trip short or risk being stranded.

Carefully consider your fuel needs and make allowances for possible changes to your planned route or poor travel conditions. Take extra fuel even if you are only planning to be gone for a few hours.

Use the 'one-third rule': one-third of your fuel to get out, one-third to get back, and one-third in reserve.

Always include safety equipment and repair kits for the type of transportation you are using. Put together a repair kit checklist for each mode of transportation you will be using.

With self-propelled modes of transportation, like a canoe, you need food and water to stay strong. If you don't get enough water or liquid and high calorie food, you can end up dehydrated, drained of energy and cold. Lack of energy can harm your decision-making abilities.

COMMUNICATION TOOLS

HF Radio

Photo by: S. Cairns

The main radio communication tool used by hunters in the NWT is the rugged and dependable Spilsbury SBX-11 two-way HF radio, often known as the orange radio. The HF radio provides hunters with a means of long distance two-way communications. Other people can monitor the radio channel being used.

Remember, radio communications are not private. Anyone with the same radio frequency can hear all conversations. Monitoring the radio at night can let you know if there are other hunters in the same area as you and where they are. If you need help, all radio listeners in the area can hear your call and may be able to respond faster than responders from town.

Advances in satellite communication technology now provide other communication options for hunters.

COMMUNICATIONS

- ☐ HF radio with antenna
- ☐ Marine radio with antenna
- ☐ Satellite phone
- ☐ Personal locator beacon (PLB)
- ☐ SPOT
- ☐ Personal emergency locator transmitter (ELT)

Satellite Phones

Satellite phones are more expensive to operate than radios, but they provide clear reception and a more confidential means of communications.

Satellite phones have grown in popularity in recent years. Only the sender and receiver can hear the conversation. This confidentiality is important if information of a personal nature needs to be talked about, such as the condition of an injured person or relaying SAR information.

Satellite phones work around the world. It can be difficult to connect to a satellite and maintain a signal if the user is in a building, a valley sided by steep hills or mountains, or in a heavily wooded area. The phone's antenna must be in the open so it has an unobstructed view of the sky. Satellite phones require a clear line-of-sight with the satellite to send and receive signals.

Satellite phone users are able to connect to cell and landline phones. They are only able to communicate with other satellite phones if they both have the same service provider.

In an emergency situation, a satellite phone user may be able to get help from town. A radio user, on the other hand, is able to connect with people in the area who may be better able to respond to the situation. It is good to carry more than one means of communication.

Emergency Locator Transmitters (ELT)

Emergency locator transmitters (ELTs) are tracking transmitters to help find and locate boats, aircraft and people in distress. ELTs are also sometimes called emergency locator beacons.

Two main types of beacons are used in the NWT: Personal locator beacons (**PLBs**), which work on a satellite network developed as a joint effort of governments around the world (called COSPAS-SARSAT); and **SPOT** beacons, which work on a satellite network called Geos and operated by Globalstar, a commercial company.

PLBs

PLBs are specialized hand-held transmitters that send a radio distress signal through a system of satellites and ground stations to the closest rescue coordination centre to where the beacon was activated (see illustration below).

PLBs transmit with enough power for the radio signal to be tracked by Search and Rescue (SAR) units. Some PLB units are equipped with GPS technology and can also transmit coordinates via the radio signal.

PLBs transmit a continuous analog radio signal on 121.5 MHz, the international distress frequency. Trained rescuers can pinpoint your location by homing in on this signal even if visibility is obscured by darkness, fog, blowing snow or tree cover.

Activating a PLB automatically starts a full SAR response. PLBs use a manual, two-step process to send a distress signal. This prevents accidental activations of the signal.

There is an initial purchase or rental charge for PLBs. There is no ongoing subscription or system access fee for SAR satellite coverage. PLBs need to be registered to be most effective.

You provide information about yourself and your emergency contact person when you register your PLB. Your contact should be able to provide rescue teams with valuable information from your trip plan (trip objectives, number in the party, possible medical conditions, gear you are carrying, etc.). Make sure you leave your trip plan with the emergency contact identified for your PLB.

SPOT

SPOT satellite Global Positioning System (GPS) messenger devices are recent small hand-held technology. The SPOT transmits radio signals to a commercial satellite network system.

SPOT users must register with Globalstar and pay activation and annual renewal fees.

The SPOT has a GPS that determines the unit's location when it is activated. It does not transmit a homing signal like a PLB.

Similar to a PLB, activating a SPOT automatically triggers a SAR response. Once activated, an SOS message is sent on to satellites and on to the GEOS International Emergency Response Centre (IERC). The IERC alerts the emergency response coordination centre closest to you.

SPOT users can purchase features so their contacts can track their progress using the internet.

SPOTs can also send non-emergency messages to your contacts. These pre-programmed messages include "OK" and "Request Assistance".

Searchers can use your previous "OK" messages as a "last known location" to start a search for you. The "OK" message feature also allows the SPOT to be tested at home and in the field at various locations to make sure it is working properly.

The "Request Assistance" message tells your contacts you need assistance, but a full emergency response is not required. Your contact can respond in a manner you have agreed to before your trip.

SPOT coverage is available virtually anywhere in the world. SPOT technology is unreliable when used indoors, in a cave or in a dense forest. The use of a SPOT as your only emergency communication device is not recommended.

Whether you plan to use a radio, a satellite phone or a SPOT, all members of your hunting group should know how to use the communication device(s).

CAUTION

Check with the National Search and Rescue Secretariat, http://www.nss.gc.ca, to find out what technology is best for your purposes.

Emergency locator transmitter technology and standards are evolving quickly. Recent developments in portable emergency notification and locating device technologies may make COSPAS-SARSAT PLBs supported by Search and Rescue operations obsolete.

Recent Satellite Emergency Notification Devices (SEND) use commercial satellite systems rather than the COSPAS-SARSAT satellite system.

This combines the best of both worlds. It provides a reliable distress alerting system backed by a rigorous set of standards and the two-way messaging and tracking features of SPOT messenger.

Any person travelling on the land should notify a trusted emergency contact of his or her plans in case there are problems. Do not rely upon PLBs, SPOTs, HF radios or satellite phones to always work.

BASIC HUNTING EQUIPMENT

The basic hunting equipment checklist is intended as a guide to help get you started making your own equipment list. Talk with experienced and respected hunters in your area as you make your own checklist.

You should pack your basic hunting equipment items into a hunting bag or daypack used only for hunting.

Check the contents of your hunting bag and make sure it is fully stocked before each hunt.

BASIC HUNTING EQUIPMENT

- ☐ Survival kit
- ☐ Small first aid kit
- ☐ Licence/tags
- ☐ Firearm
- ☐ Extra ammunition
- ☐ Firearm cleaning kit
- ☐ Electrical tape or muzzle covers
- ☐ Binoculars/ spotting scope
- ☐ Map and compass/GPS
- ☐ Flashlight, head lamp
- ☐ Spare batteries
- ☐ Sheath knife and belt
- ☐ Folding pocket knife
- ☐ Sharpening tool
- ☐ Strike-anywhere matches/lighter
- ☐ Waterproof match case
- ☐ Fire starter
- ☐ Flint
- ☐ Single burner stove and fuel
- ☐ Thermos
- ☐ Water
- ☐ Lunch
- ☐ Tea pail
- ☐ Toilet paper
- ☐ Rain gear
- ☐ 2-day supply of prescription medicine (if necessary)
- ☐ Axe
- ☐ Folding saw
- ☐ Snow knife
- ☐ Trail snowshoes
- ☐ Bug jacket
- ☐ Insect repellent
- ☐ Communication device

Survival Kit

Preassembled survival kits are available from most outdoor and safety supply stores, and online. Prices, quality and practicality of the items included in these manufactured kits can vary quite a bit. Even the most complete kits should be modified to meet your specific needs.

It is better to assemble your own survival kit. Putting together a survival kit can be quite easy. A metal coffee can makes an excellent container to hold your survival items. The coffee container can be used as a pot to boil water or to cook food. Some hunters even modify the can so it can be used as a heater or lantern.

The items in your kit, whether you buy it or put it together yourself, must address the four basic elements of survival: *shelter, fire, water and food*.

Remember, getting water for drinking during the winter months can be difficult if you can't build a fire or don't have a camp stove.

Most people who carry a survival kit never have to use it. Taking the time to prepare a kit helps remind hunters of the potential risks so they are more likely to consider and avoid situations that put themselves (or others) in danger.

SURVIVAL KIT

- ☐ Ground-air signal card
- ☐ String saw
- ☐ Strike-anywhere matches/lighter
- ☐ Waterproof match case
- ☐ Fire starter
- ☐ Signal mirror
- ☐ Signal flares
- ☐ Whistle
- ☐ Small flashlight (extra batteries and bulb)
- ☐ Multipurpose tool (Leatherman)
- ☐ Duct tape
- ☐ Spare compass
- ☐ Heavy duty garbage bag
- ☐ Orange plastic sheet
- ☐ Survival blanket
- ☐ Flagging tape
- ☐ Fishing line and hooks
- ☐ Snare wire
- ☐ Needle and thread
- ☐ Emergency candle(s)
- ☐ Emergency rations
- ☐ High energy food bars
- ☐ Chocolate
- ☐ Dried soup mix
- ☐ Tea bags
- ☐ Playing cards
- ☐ Pocket book
- ☐ Metal container to hold survival gear and to be used as a tea can

Emergency First Aid Kit

A 2012 American study of hunting-related injuries found the most common injuries were due to falls (which caused sprains), cuts and bruises. The lower back, hands, fingers, lower leg and ankle were the most common injuries. More serious injuries, like gun or arrow wounds, were rare.

A sample basic first aid checklist is provided below:

EMERGENCY FIRST AID KIT

- ☐ First aid handbook
- ☐ Band aids (6 – 12)
- ☐ 10cm x 10cm sterile bandage
- ☐ Roll of gauze bandage
- ☐ Roll of elastic bandage
- ☐ Adhesive tape
- ☐ Petroleum jelly
- ☐ Antiseptic
- ☐ Tylenol
- ☐ Razor blade
- ☐ Small scissors
- ☐ Tweezers
- ☐ Small mirror
- ☐ Mole skin
- ☐ Burn ointment
- ☐ Calamine lotion – small bottle
- ☐ Pencil and notebook
- ☐ Super glue

Supplies for dealing with more serious injuries should be in your vehicle (e.g. boat, truck, ATV or snowmobile) or camp.

You can assemble your own emergency first aid kit from scratch or buy a preassembled kit and modify it to meet your needs. St. John Ambulance sells a variety of first aid kits.

You should always seek the help of a professional first aider in developing an emergency first aid kit checklist. Professional advice is available from community health centres and St. John Ambulance in Yellowknife.

You need to be familiar with every item in the first aid kit and know how to use it.

All northern hunters are encouraged to take Wilderness First Aid and CPR training.

The *Official Wilderness First Aid Guide* by St. John Ambulance is an excellent resource for home study.

PERSONAL GEAR

Clothing

One of the biggest challenges for NWT hunters is dressing for cold. You want your clothing to keep you warm and dry.

Take time to select and gather the appropriate hunting clothing. If you are cold, wet or too hot, your attention will be focused on your discomfort and not on the hunt.

Experienced hunters know dressing in layers is the key to comfort. Adding or removing layers allows you to fine-tune your comfort level.


Photo by: T. Macintosh


Photo by: T. Macintosh

If you are working hard, you can overheat and start sweating. Sweat is your worst enemy when hunting in cold weather. You will cool down rapidly once you stop moving around. Unless you can add more clothing or change into dry clothes, your risk of hypothermia increases significantly.

***Hypothermia** occurs when your body loses heat faster than it can produce heat. This causes a dangerously low body temperature. When your body temperature drops, your heart, nervous system and other organs can't work properly. Left untreated, hypothermia can eventually lead to complete failure of your heart and respiratory system, and death.*

The best way to prevent sweating is to remove layers of clothing and allow your body to cool down, but still remain warm and dry.

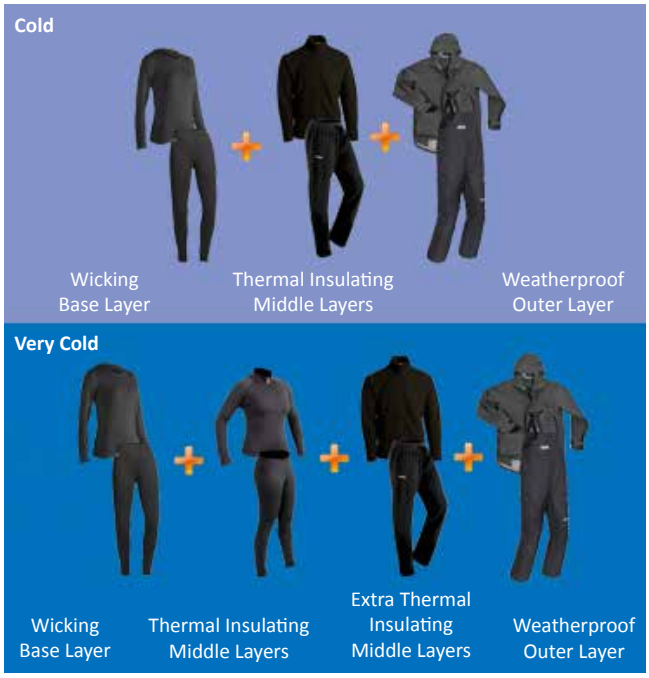
In warm weather, overheating can lead to heat exhaustion unless you can reduce your core body temperature. Removing layers allows your body to cool down. In some cases, wearing a light layer to protect your body from the sun can be beneficial.

Think in terms of managing your body heat and avoiding moisture when planning what clothing or layers will be needed.

You must consider three layers. The first or base layer is next to your skin. It should wick sweat away from your skin, retain heat and dry quickly.

The middle layer is the thermal insulating layer. It traps warm air near your body. The insulating layer should be made up of a few thin, warm layers rather than one thick layer. A number of thin layers will insulate better and allow more control over your body temperature. If you will be sitting still, you can add a layer or two. If you are going to be working hard, you can remove layers until you are comfortable. It is also easier to pack extra thin layers in your daypack than a large bulky layer.

Layering for the Cold



The third or outer layer needs to be wind-resistant and, ideally, water-repellent not waterproof. The outer shell must be breathable and allow water vapor to escape while preventing moisture (rain or melted snow) from getting in.

The outer layer should also be made out of a material that doesn't make a lot of noise when you move or brush up against bushes and tree branches.

Layering also works to keep your feet, hands, neck and head warm.

Feet

You should use two layers of socks to keep your feet dry and warm during cold weather. The first layer should be a thin sock that can wick moisture away from your feet. The second layer should be a thicker sock that insulates well. Layering socks will keep your feet warm and help prevent blisters.

The weatherproof layer needs to keep the wind and water out while allowing moisture to escape. If your feet will be submersed in water, the outer layer needs to be waterproof. Remember, waterproof material, like rubber, does not breathe. Always carry extra socks and liners so you can replace layers if they become damp or wet.

Most cold weather footwear comes with an extra insulating layer. This layer should be removable so it can be dried.

Hands

Mitts work best for keeping hands and fingers warm in cold weather.

Mitts need to be removed to operate the firearm trigger. This exposes the fingers to the cold and the freezing cold metal pieces of the firearm.

Experienced hunters address this problem by wearing a lightweight glove inside their mitts.

Outer Mitt and Inner Glove Combination

Gloved fingers can easily operate the firearm. Gloves also protect fingers from the weather and the metal parts of the firearm.

Most mitts consist of two layers, an outer weatherproof layer and an inner insulating layer. An inner glove provides a wicking layer inside the mitt. The inner glove may be synthetic or a synthetic/cotton blend.

Experienced hunters carry spare gloves so they can replace the inner ones with dry ones when they get damp or wet.

Head and Neck

Hunters are encouraged to wear a hat, in all weather, when they are hunting. A hat provides shade for the head and face on a hot sunny day. It also can prevent sunburn and overheating. A hat keeps you warm by slowing heat loss through your head on cool or cold days.

On cool fall days, hunters should wear a hat and a jacket with a high collar and unlined hood.

If the weather is warm, the hood and collar can be rolled down to allow heat to escape. The baseball cap protects you from the sun's rays. If the weather is cool, the collar can be pulled up to keep your neck warm. The hood can be pulled up to provide weatherproofing if it is windy, raining or snowing. The hood also adds another insulating layer to your neck and head.

During the cold days of winter, thicker or additional layers are needed to keep you warm.

Cold Weather Protection

On cold days, a wool toque or fur hat prevents heat loss through your head better than a baseball cap. Insulated lining in parka hoods and fur trim around hood edges provide more protection in cold weather. A good hood fits close to your face and helps control heat loss from all of the head area.

Layered clothing also disguises body scent and makes it more difficult for the hunted animal to detect the hunter.

Keep it Loose
Layers work best if they are loose fitting. Tight clothing and footgear restricts blood circulation and decreases the amount of air trapped between the layers. This reduces its insulating value.

Clothing Materials

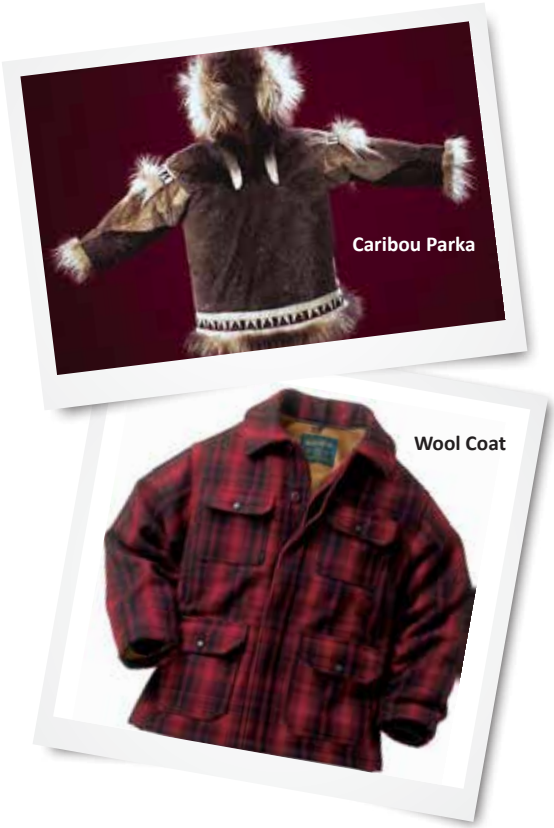
The materials used to make clothing can be natural fabrics, such as cotton, wool, and hair, fur or hides from animals, or man-made, synthetic materials.

Natural Materials

Clothing made of natural materials, like caribou hides and wool, have excellent insulating properties. They are also weatherproof and tend to lie flat and close to the body. Caribou or wool clothing makes little noise when you move or brush up against objects. This is important when you are stalking wildlife.

Two layers of caribou skins is the original layered clothing in the north. The inner layer, worn with the hair next to the body, allows moist air to move or wick away from your skin. The air between the hairs of the two hides and the space between the hide layers provides three insulating layers. The outer hair provides the weatherproof layer.

Clothing made of caribou or wool are excellent choices for cold weather clothing.



Cotton clothing (underwear, t-shirts, jeans, flannel shirts) is a not a good choice for cold, wet weather. Cotton absorbs moisture. It loses its already limited insulating ability when wet. This can cause rapid transfer of heat away from the body and increase the risk of hypothermia.

Synthetic Materials

Clothing made of synthetic materials copies the wicking, insulating and weatherproof properties of natural materials.

Lightweight, weatherproof, breathable, scent proof and silent synthetic fabrics are available. Some winter clothing made from synthetic materials is bulky and noisy compared to wool or caribou skin clothing.

New synthetic materials are always being developed. This provides more choice for hunters. Hunters choose natural or synthetic clothing as a personal preference. Make sure the materials selected have the right properties for a particular layer.

Clothing Checklist

The following clothing checklist is an example only. Develop your own checklist using the principles of 'layering' and the advice of experienced hunters in your area.

Photo by: T. Macintosh

CLOTHING

- ☐ Duffle bag
- ☐ Light socks (not cotton)
- ☐ Wool socks
- ☐ Boots (leather or rubber)
- ☐ Spare laces
- ☐ Winter boots
- ☐ Silicone boot dressing
- ☐ Camp shoes
- ☐ Underwear (not cotton)
- ☐ Tee shirt(s) (not cotton)
- ☐ Long sleeved shirt(s) (not cotton)
- ☐ Sweater(s)
- ☐ Fleece hoodie
- ☐ Pants
- ☐ Wind pants
- ☐ Coveralls
- ☐ Wool pants
- ☐ Snowmobile pants
- ☐ Vest
- ☐ Jacket
- ☐ Parka
- ☐ Hat or toque
- ☐ Neck warmer
- ☐ Balaclava
- ☐ Gloves and mitts
- ☐ Moccasins
- ☐ Rain gear
- ☐ Dry bags

Your personal gear includes toilet articles (hygiene products and medications) and other personal items.

The following checklists are examples of what you could include in your personal gear bag.

TOILET ARTICLES

- ☐ Biodegradable soap/shampoo
- ☐ Hand cream(s)
- ☐ Hand sanitizer
- ☐ Tooth brush and toothpaste
- ☐ Dental floss
- ☐ Towel and washcloth
- ☐ Baby wipes
- ☐ Prescription medicine
- ☐ Spare glasses/ contacts
- ☐ Feminine products
- ☐ Razor
- ☐ Shaving cream
- ☐ Toilet paper
- ☐ Sunglasses
- ☐ Sunscreen

Always pack extra prescription.

OTHER

- ☐ Camera and film/disk
- ☐ Spare camera battery
- ☐ Sunglasses
- ☐ Pencil and notebook
- ☐ Pocket book
- ☐ Playing cards
- ☐ Sun screen
- ☐ Insect repellent

When you are weather bound, playing cards or reading can help you pass the time.

CAMPING EQUIPMENT AND SUPPLIES

The items you need to pack will be determined by the:

- length of trip;
- season;
- type of shelter available;
- transportation method; and
- location of hunt (above or below treeline).

The checklists included below can help you develop your own checklists. Talking with and accompanying experienced hunters on trips are the best ways to find out what items are needed and best suited for your hunting area.

SHELTER

- ☐ Tent
- ☐ Tarp
- ☐ Poles
- ☐ Tent pegs
- ☐ Rope
- ☐ Sleeping bag
- ☐ Foam pad or Therm-a-rest
- ☐ Caribou/muskox hides

LIGHTING

- ☐ Lantern
  - ▫ fuel
  - ▫ spare mantles
- ☐ Flashlight

spare bulb and batteries

- ☐ Headlamp
  - ▫ spare batteries
- ☐ Candles

Lighting in camp makes it easier and safer for everyone.

HEAT SOURCE

- ☐ Fire
- ☐ Matches/lighter
- ☐ Wood stove
  - ▫ Chainsaw and oils
  - ▫ Axe
  - ▫ Folding saw
  - ▫ Stove pipe
  - ▫ Damper
- ☐ Camp stove
  - ▫ Naphtha or white gas
  - ▫ Spare generator
- ☐ Kerosene heater
  - ▫ Kerosene
- ☐ Propane heater
  - ▫ Propane

COOKING

- ☐ Strike-anywhere matches
- ☐ Frying pan
- ☐ Cook set
- ☐ Tea or coffee pot
- ☐ Cooking utensils
- ☐ Forks, knifes, spoons
- ☐ Plates
- ☐ Bowls
- ☐ Cups
- ☐ Water jug/pail
- ☐ Wash basin
- ☐ Cooler(s)
- ☐ Food
- ☐ Dish cloth/ tea towel
- ☐ Soap

Work with other members of your hunting group when developing your checklist.

Each member can identify what equipment and supplies they will bring. Lay out all the equipment in one place and pack as a group to make sure nothing is missed.

PROCESSING EQUIPMENT AND SUPPLIES

You do need to take equipment and supplies to help you process and pack out the meat.

Generally, the bigger the animal the more equipment and supplies you will need to handle, cool and pack out the meat.

If you are processing animals in low light, you should use lanterns or headlamps.

PROCESSING EQUIPMENT AND SUPPLIES

- ☐ Rubber or latex gloves
- ☐ Paper or cloth towels
- ☐ Cloth bags
- ☐ Plastic bags
- ☐ Cheese cloth
- ☐ Saw/hatchet
- ☐ String
- ☐ Meat knives
- ☐ Ula/uluit
- ☐ Sharpening kit
- ☐ Rope
- ☐ Pack frame
- ☐ Cooler(s)
- ☐ Lantern
- ☐ Headlamps
- ☐ Knives
- ☐ Block and tackle or winch

For a large animal, like a moose, your processing equipment could also include:

a tarp to place under the animal when quartering;

- cloth sacks (game bags or old bed sheets) large enough to hold a quarter; and
- a small hand winch or block and tackle to position the carcass for butchering or to pull an animal out of the water.


Photo by: T. Macintosh

The amount of equipment you need to go hunting can seem overwhelming.

Remember, you don't need to get every piece of equipment available. Focus on the items most important for the type of hunting you plan to do. You can add other items to improve your safety and comfort.

All your equipment items need to be appropriately sized. If you are hiking and carrying all your equipment on your back, your essential shelter would be a tarp or small backpacker tent and not a canvas wall tent.

Refining your equipment needs comes with experience. Experienced hunters can provide advice on the best choices for equipment that will work in your area.


Photo by: T. Macintosh

CARE OF HUNTING EQUIPMENT

Your hunting equipment should be in good working condition. You count on it to work each and every time it is needed. If your equipment fails, whether it is your means of transportation or a piece of clothing, there will be consequences.

The severity of a consequence is determined by which piece of equipment fails and the circumstances. You could have a cold, uncomfortable and sleepless night if you forgot to check your sleeping bag zipper before leaving town.

A snowmobile breakdown could leave you stranded a long way from shelter. This could have life-threatening consequences. The consequences of using a poorly maintained firearm could be fatal.

Safe hunters understand their dependence on their hunting equipment. They treat their equipment with respect.


Photo by: T. Macintosh

Firearm Care

Your firearm is the most important piece of hunting equipment you will own.

The most important part of caring for your firearm is keeping it clean and free of moisture. Before each hunt, thoroughly inspect your firearm and make sure it is in perfect working order.

ATVs, Motor Boats and Snowmobiles

Always follow the maintenance guidelines outlined in the owner's manual for your ATV, boat and/or snowmobile.

Inspect your equipment on a regular basis for worn or damaged components. Making repairs or replacing parts is a top priority. Do the required maintenance between trips.

Communication Equipment

Make sure your communication devices are fully charged and in good working condition before you pack them. Check radio antennas for any damage and make the necessary repairs immediately.

Basic Hunting Equipment

Go through your basic equipment to make sure all items are there and in good working order every time you return from a hunting trip.

Replace any survival or first aid kit items used during your last trip. There can be serious consequences if you don't keep these kits fully stocked.

Clothing

Unpack and dry clothing items after each trip. Store your clothing away from strong odours like perfumes and heating fuel.

Check for wear and damage after every trip and make the required repairs before your next hunting trip.

Carry extra laces and a sewing kit to replace a broken bootlace or fix a zipper that doesn't stay closed.

Camping Equipment

Clean, dry and inspect all camping equipment before putting it away. Make any repairs required before storing it. You don't want to find out your camp stove needs a new generator just before you leave on your trip.

Processing Equipment and Supplies

Clean, dry and inspect your meat processing equipment when you return from a hunt. Ensure you make any needed repairs before storing these items.

All supplies used during a hunt should be replaced when you return to town.

TRAVEL PLANNING

An important part of preparing for your hunt is planning for the unexpected. Prepare for potential injuries, equipment breakdowns and weather delays by carrying survival and first aid supplies, spare parts for mechanical equipment, and extra fuel and food.

You may need the help of others to deal with an injury, weather or equipment issue. If you are able to communicate with people in your hunting area or back in town, help can be sent quickly.

If you can't communicate with others, help can't be sent to you. Responsible hunters plan for the worst-case situation by completing a travel plan before leaving. They make sure a responsible person has a copy of their travel plan.

A travel plan lets people know where you are planning to hunt, how you are going to get there and when you expect to get back. If you don't make contact or return as planned, help will be sent.

Make it easy for responders to find you by including a map with your planned route. Mark your planned camping spots on it. The map can be a simple sketch or a full-sized topographical map, depending on the distances you plan to travel and the difficulty of the terrain.

Your travel plan should also include a list of all the equipment you have taken. This can help responders determine the degree of urgency of the response.

A copy of a Safe Travel Plan form is attached. You can get additional copies by contacting your:
local Community Health Representative;

- local RCMP detachment; and/or
- the Department of Health and Social Services at (867) 920-8927.

You may never need help, but if you do, a travel plan could be a lifesaver.

If you decide to stay out longer than planned, let your contact know. If you can't make contact, return as planned. This will avoid an unnecessary search for you.

Report Your Return

Let your contact know as soon as you return from your hunting trip. This will avoid unnecessary stress for your contact and could avoid an unnecessary search.

MODE OF TRANSPORTATION

BOAT

- ☐ Gas
- ☐ Oil
- ☐ Funnel with filter
- ☐ Paddles
- ☐ Anchor
- ☐ Rope
- ☐ Life jackets/PFDs
- ☐ Bailing pail
- ☐ Spare boat plug
- ☐ Spare prop and shear pins
- ☐ Spark plugs
- ☐ Sounding device
- ☐ Flares
- ☐ Emergency light

SNOWMOBILE

- ☐ Gas
- ☐ Oil
- ☐ Gas line antifreeze
- ☐ Spare belt
- ☐ Spark plugs
- ☐ Spare light bulb
- ☐ Helmet
- ☐ Goggles

Photo by: T. Macintosh

ATV

- ☐ Gas
- ☐ Oil
- ☐ Spare belt
- ☐ Plugs
- ☐ Tire pump
- ☐ Tire repair kit
- ☐ Spare light bulb

CANOE/DUCK BOAT

- ☐ Paddles/oars
- ☐ Bailing pail
- ☐ Extra boat plug
- ☐ Rope
- ☐ Life jackets
- ☐ Sounding device

COMMUNICATIONS

COMMUNICATIONS

- ☐ HF radio with antenna
- ☐ Marine radio with antenna
- ☐ Satellite phone
- ☐ Personal locator beacon (PLB)
- ☐ SPOT
- ☐ Personal emergency locator transmitter (ELT)

HUNTING EQUIPMENT

BASIC HUNTING EQUIPMENT

- [ ] Survival kit
- [ ] Small first aid kit
- [ ] Licence/tags/ authorizations
- [ ] Firearm and ammunition
- [ ] Firearm cleaning kit
- [ ] Electrical tape or muzzle covers
- [ ] Binoculars/ spotting scope
- [ ] Map and compass/GPS
- [ ] Flashlight, head lamp
- [ ] Spare batteries
- [ ] Sheath knife and belt
- [ ] Folding pocket knife
- [ ] Sharpening tool
- [ ] Strike-anywhere matches/lighter
- [ ] Waterproof match case
- [ ] Fire starter
- [ ] Single burner camp stove and one liter of fuel
- [ ] Water
- [ ] Lunch
- [ ] Tea pail
- [ ] Toilet paper
- [ ] Rain gear
- [ ] 2-day supply of prescription medicine
- [ ] Axe
- [ ] Folding saw
- [ ] Flagging tape

SURVIVAL KIT

- [ ] Ground-air signal card
- [ ] Strike-anywhere matches/lighter
- [ ] Waterproof match case
- [ ] Fire starter
- [ ] Signal mirror
- [ ] Whistle
- [ ] Small flashlight (extra batteries and bulb)
- [ ] Multipurpose tool (Leatherman)
- [ ] Spare compass
- [ ] Heavy duty garbage bag
- [ ] Orange plastic sheet
- [ ] Survival blanket
- [ ] Flagging tape
- [ ] Fishing line and hooks
- [ ] Snare wire
- [ ] Needle and thread
- [ ] Emergency candle(s)
- [ ] High energy food bars
- [ ] Chocolate
- [ ] Dried soup mix
- [ ] Tea bags
- [ ] Metal container to hold survival gear and double as a tea can

EMERGENCY FIRST AID KIT

- [ ] First aid handbook
- [ ] Band aids (6 – 12)
- [ ] 10cm x 10cm sterile bandage
- [ ] Roll of gauze bandage
- [ ] Adhesive tape
- [ ] Petroleum jelly
- [ ] Antiseptic
- [ ] Tylenol
- [ ] Razor blade
- [ ] Small scissors
- [ ] Tweezers
- [ ] Small mirror
- [ ] Eye snare

PERSONAL GEAR

CLOTHING

- ☐ Duffle bag
- ☐ Cotton socks
- ☐ Wool socks
- ☐ Boots (leather or rubber)
- ☐ Spare laces
- ☐ Silicone boot dressing
- ☐ Camp shoes
- ☐ Underwear
- ☐ Tee shirt(s)
- ☐ Long sleeved shirt(s)
- ☐ Sweater(s)
- ☐ Fleece hoodie
- ☐ Pants
- ☐ Wind pants
- ☐ Coveralls
- ☐ Wool pants
- ☐ Snowmobile pants
- ☐ Vest
- ☐ Jacket
- ☐ Parka
- ☐ Hat or toque
- ☐ Neck warmer
- ☐ Balaclava
- ☐ Gloves and mitts
- ☐ Moccasins

TOILET ARTICLES

- ☐ Biodegradable hand soap
- ☐ Biodegradable shampoo
- ☐ Hand creams
- ☐ Tooth brush and toothpaste
- ☐ Towel and washcloth
- ☐ Prescription medicines
- ☐ Spare glasses/ contacts
- ☐ Feminine products
- ☐ Razor
- ☐ Shaving cream
- ☐ Toilet paper

OTHER

- ☐ Camera and film/disk
- ☐ Spare camera battery
- ☐ Sunglasses
- ☐ Pencil and notebook
- ☐ Pocket book
- ☐ Playing cards
- ☐ Sun screen
- ☐ Insect repellent
- ☐ Small generator and lights

Photo by: T. Macintosh

CAMPING EQUIPMENT AND SUPPLIES

SHELTER

- ☐ Tent
- ☐ Tarp
- ☐ Poles
- ☐ Tent pegs
- ☐ Rope
- ☐ Sleeping bag
- ☐ Foam pad or Therm-a-rest®

HEAT SOURCE

- ☐ Fire
  - ▫ Matches
  - ▫ Fire starter
- ☐ Wood stove
  - ▫ Axe
  - ▫ Folding saw
- ☐ Camp stove
  - ▫ Naphtha or white gas
  - ▫ Spare generator
- ☐ Kerosene heater
  - ▫ Kerosene
- ☐ Propane heater
  - ▫ Propane

LIGHTING

- ☐ Lantern
  - ▫ fuel
  - ▫ spare mantles
- ☐ Flashlight

spare bulb and batteries

- ☐ Candles

COOKING

- ☐ Strike-anywhere matches
- ☐ Frying pan
- ☐ Cook set
- ☐ Tea or coffee pot
- ☐ Cooking utensils
- ☐ Forks, knifes, spoons
- ☐ Plates
- ☐ Bowls
- ☐ Cups
- ☐ Water jug
- ☐ Wash basin
- ☐ Cooler(s)
- ☐ Food
- ☐ Dish cloth/tea towel
- ☐ Soap

Photo by: T. Macintosh

PROCESSING EQUIPMENT AND SUPPLIES

SUPPLIES

- ☐ Rubber or latex gloves
- ☐ Paper or cloth towels
- ☐ Cloth bags
- ☐ Plastic bags
- ☐ Cheese cloth
- ☐ Saw/hatchet
- ☐ String
- ☐ Rope
- ☐ Block and tackle/ winch
- ☐ Pack frame
- ☐ Cooler(s)

Photo by: T. Macintosh

Module 5 Quiz

1) Good planning and preparation improves hunting success and helps make sure a hunter is comfortable and safe.

   True or False

In questions 2 to 9, fill in the blanks.

2) Experienced hunters recommend you select your hunting equipment based on the answers to the following questions:

   Where will you _____ ?

   What type of _____ (s) will you hunt?

   What type of _____ ing technique will you use ?

   What type of _____ may occur?

3) When planning your gas supplies it is recommended that you use the one-third rule of thumb.

   1/3 of your gas to _____ _____,

   1/3 to _____ _____ and

   1/3 in _____ .

4) Your firearm is the most important piece of hunting equipment you will own. The most important part of caring for it is keeping it _____ and free of _____.

5) Always be prepared to stay out overnight even if you only plan to be out for _____.

6) Responsible hunters plan for the worst-case situation by completing a _____ _____ before leaving.

   They make sure to leave a copy of their travel plan with a _____ _____.

7) If you decide to stay out longer than planned, let your contact know. If you can't make contact, return as planned.

   True or False

8) Using checklists based on a basic hunting need, helps to keep the lists o_____ and helps to ensure nothing is f _____.

9) Checklists allow you to efficiently prepare for a hunt and ensure that _____ _____ _____.

The knowledge and skills learned in the previous five modules form the foundation on which your lifestyle as a safe and respectful hunter is built. Now it is time for 'The Hunt', where you will learn about all the things that must be done before and after you shoot the animals you hunt.

THE HUNT

The Oxford dictionary defines "hunt" as *to chase wild animals or birds in order to catch or kill them for food, sport or to make money;* and "hunting" as *the work of finding and killing or capturing animals for food or pelts*.

Dictionaries can describe hunting in basic terms, but they do not capture the essence of hunting to the hunter.

People hunt for many reasons. For some it may be their connection to culture; for others it may be their connection to the natural world. Some people hunt out of necessity while others may hunt to supplement the food they purchase.

You need to hunt to truly understand the essence of hunting and develop your own personal reasons for hunting.

All hunters must be responsible. All must follow the same code of conduct that has served hunters for centuries: respect for wildlife, environment, people, and self.

Figure 1: The Wheel of Respect

Your conduct while hunting determines if you are a responsible and respectful hunter.

There may be no one guiding you on your hunt to tell you when you are being respectful or disrespectful. You are responsible for your own actions. Let the value of respect be your guide.

SHARING

Sharing is an important aspect of respect. The sharing of hunted wildlife is a longtime practice among the peoples of the Northwest Territories: Indigenous and non-Indigenous alike. It is a tradition new hunters must continue.

Many hunters believe sharing first occurs when an animal chooses to give itself to a hunter. They also believe this will continue as long as hunters share their gifts with others.

A respectful hunter shares meat with those who helped with the hunt. Meat is also often shared with family members, elders, widows and single mothers who are unable to hunt for themselves.

Photo by: T. Macintosh

Each hunter decides what, how much and who gets to share the meat. Remember, any meat you share must be in the same or better condition as meat you would keep for yourself.

The following sections explain how to handle and treat hunted animals with respect.

WHAT TO DO WHEN YOU SEE THE ANIMAL YOU ARE HUNTING

Take your time – You must force yourself to slow down and not rush your shot. Rushing usually results in a poor hit, a miss or hitting the wrong target. Calm yourself by repeating: Take your time; take your time.

It is natural for hunters to be excited when they spot the animals they are hunting. This excitement can trigger the body to release adrenalin and cause the hunter to become anxious. If not controlled, this anxiety can become so overwhelming it overrides all rational thinking. This phenomenon is called an adrenaline rush.

Photo by: T. Macintosh

This can happen to any hunter. Novice and experienced hunters can all get adrenaline rushes. Experienced hunters recognize when they are getting overly anxious and can take simple steps to relieve their anxiety.

For more information on adrenaline rushes and how to deal with them see Module 8, 'Adrenaline Rush'.

Be sure of your target and beyond – Make sure you have a solid backstop for all your shots. Never shoot at an animal standing on top of a ridge or hill.

In forested areas, never shoot until you have clearly identified your target. Remember, trees and bushes can hide people and/or buildings. Never take chances. Wait until you are sure and always keep track of your hunting partners.

Distances can be deceiving on the tundra and the ocean. Bullets may travel farther than in forested areas. Be very careful when shooting over water or ice. Bullets can ricochet off these surfaces.

The distance at which a shot can be taken is based on the capabilities of the firearm used and the hunter's skills. Responsible hunters know their limitations and the limitations of their firearm, and hunt within them.

Zone of fire – When hunting with others make sure no one is in your zone of fire. Also make sure you do not aim at anything outside of your zone.

Select your target animal – Be sure of your target. There may be a male-only harvest requirement.

See Module 8, 'Wildlife Identification' (methods of identifying sex of caribou).

Do not shoot into a group of animals – Even a well-placed bullet can pass right through your target animal and hit an animal behind it. You may not even be aware the bullet struck a second animal. This animal could run off and die from its injuries.

Instead of shooting into a group, select a target animal separate from, or on the edge of, the group. Be prepared to make a quick second shot. Do not shoot another animal until you are sure the first is down.

There are many stories about hunters shooting into a group of animals and killing two with one bullet. This may happen occasionally, but most of these stories are 'urban legends'. Generally, shooting into a group produces wounded animals and wastage. This is a disrespectful practice and responsible hunters avoid it.

Select best shooting position – Choose a shooting position that provides the steadiest support for the situation.

If possible use a solid rest to help steady your rifle. A rest can be any solid object, including trees, large rocks, packs, the ground, snow machine or ATV seats.

Photo by: GNWT – P. Lacroix, ENR

Place the forestock and not the barrel of the rifle against your rest. If you are using a hard surface make sure you have padding between your forestock and the rest. This can be your hand, a piece of folded clothing or a packsack. The padding helps to absorb the recoil and provides a more solid support for the shot.

Some hunters use bi-pods to provide support and increase accuracy. Bi-pods can be attached to the rifle. They can be purchased or made from two sticks tied together.

Photo by: GNWT – P. Lacroix, ENR

Support your body as well as your rifle. This creates a more stable shooting position, increasing the accuracy of your shot.

Leave the safety on; keep your finger off the trigger and outside of the trigger guard until you are ready to fire.

Once the animal is in your sights, repeat these words to yourself:
take your time;

- breathe;
- focus on the vital target area;
- slowly exhale and gently squeeze the trigger; and
- prepare for follow-up shot if required.

Rehearsing what you need to do will help control your nerves so you can confidently make an accurate shot.

AFTER THE SHOT

After you take your shot, watch to see how the animal reacts to it. The animal's behaviour could be a clue to where it was hit.

Heart shot: The animal may immediately bolt or run off quickly. Generally, it only travels a few metres before losing consciousness and collapsing.

Lung shot: The animal may leave at a fast walk and seem unaffected. A lung-shot moose may make drum-sounding coughs and then stand still or lie down after travelling a short distance.

Stomach shot: A shot to an animal's paunch or rumen may seem to have no affect on it. The animal could walk or run away before lying down within 400 or 500m if it is not disturbed or pursued. An animal hit in the area behind the diaphragm may hunch over as it moves away.

Spine shot: Generally, an animal hit in the spine immediately drops to the ground. The animal is likely to be crippled and not dead. It will require a finishing shot. Watch the animal carefully in this situation. A hit causing spinal shock rather than spinal damage may only temporarily cripple the animal. The animal could suddenly recover, get to its feet quickly and run off.

All hunters plan for a quick, one-shot kill with the animal dropping dead in its tracks or dying within seconds, but things don't always go according to plan.

Photo by: T. Macintosh

If you see the animal go down or hear it go down heavily nearby, go directly to that location. Approach slowly and cautiously because the animal may not be dead yet.

If the animal moves out of sight after being shot, go to the spot where the animal was when you shot at it. Look for signs the animal was hit. Do not assume you missed hitting it. Some hunters have sworn they missed an animal only to find a blood trail or a dead animal not far away.

Mark your shooting position so you can see it while you are searching for signs of the animal. Use flagging tape to mark the spot where the animal was standing when you shot it.

Do not mark the spot by scuffing the ground as you may disturb signs of the hit.

If you have trouble finding the exact spot, start searching in gradually widening circles starting from where you think the animal was when you shot it.

Evidence of a hit can tell you about the nature of the wound:

- Bright red or pink blood with bubbles in it indicates a hit in the lungs. The animal is likely nearby.
- White belly hair, bits of intestines or green fibrous material means the animal was gut-shot and you likely have long tracking to do.
- Dark blood may indicate a liver or muscle wound. Depending on the hit site, the animal may move a fair distance.
- A small amount of blood tapering off to none may mean a minor flesh wound.
- A lot of hair may mean the shot just grazed the animal.

- Wounded wildlife can be tracked and recovered using patience and the right skills. Retrieval techniques vary with the animal hunted. Caribou or moose hunters within the treeline commonly use the retrieval techniques described here. The same principles and methods can be applied to other big game animals above the treeline.

Unless you saw the animal fall, wait at least half an hour after the shot before tracking a wounded animal hit in a vital area. It is recommended you wait two hours or more before tracking an animal that may be gut-shot. Some hunters believe the longer you wait to track a gut-shot animal the greater the chance of finding it. This gives a fatally wounded animal time to wander off, lie down and bleed internally until it is unable to get up.

If you push a wounded animal, and it gets its adrenaline flowing, it may keep moving further away at a much faster rate than you. This reduces the chances of you finding it.

The only reasons to begin tracking earlier are if heavy rain or snowfall threaten to wipe out the blood trail or if darkness is approaching.

You can start tracking the wounded animal after waiting the appropriate length of time. Ideally, tracking is done by two people. One hunter concentrates on tracking while the other does a

visual search out in front and to the sides of the track looking for the animal. Be ready to make a kill-shot if the animal rises up in front of you.

Walk to the side of the trail so you do not disturb the sign. Walk slowly and mark spots of blood with flagging tape or toilet paper. Just remember to go back and pick up your markers when you're done.

If you lose the trail and can't find more blood, start searching in gradually widening circles. Start this search from the last place you found blood.

Walk slowly and be quiet and thorough.

Approaching downed wildlife – Approach a downed big game animal cautiously and from the rear to determine if it is still alive. If possible, approach from upslope and downwind of the animal.

Watch carefully for any rise and fall of the chest. Poke the animal's hind leg with a stick to see if it moves. Do not use your firearm to poke it.

If the animal's eyes are closed it is likely still alive. Eyes of dead wildlife are usually open and glazed over.

Photo by: GNWT – D. Allaire, ENR

Dealing with wounded animals – Wounded animals must be killed as quickly as possible when you find them.

A single shot to the base of the ear will quickly kill any wounded big game animal found.

Do not use a club or stick to kill wounded big game. Indigenous peoples of the NWT consider hitting an animal with a stick to be disrespectful and believe if you hit an animal with a stick, others of that species will not return to the area.

As soon as you confirm the animal is dead – remove the cartridge from the chamber of your firearm.

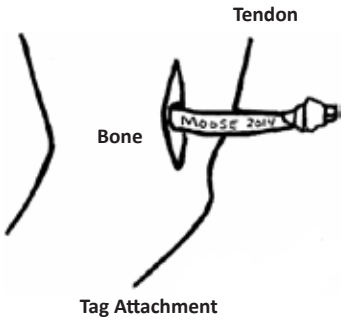
Symbols and Offerings – Traditionally, Dene hunters have left an offering (rifle cartridge, tobacco, etc.) at big game kill sites to show respect and gratitude to the animal for giving its life so they could have food. All hunters are encouraged to also give thanks.

Leaving an offering does not need to be an elaborate affair. The offering and how long you pause are personal choices. Simply take the time to reflect on your good fortune and the sacrifice of the animal for your benefit.


Photo by: T. Macintosh

Attach tags – If you require a tag(s) to hunt big game animals, you must have them with you during the hunt. As soon as you kill your animal a tag must be attached. The tag must remain attached to the animal until the meat is consumed or processed.

Tags must be attached to the carcass of all big game animals killed, except muskox, bear, wolf and wolverine. The tag for these four species must be attached to the hide.



HANDLING AND TREATMENT OF ANIMAL CARCASS

Shooting an animal does not signal the end of the hunt. It marks the beginning of the most important phase of the hunt: handling and treatment of the animal carcass.

A good hunter has the knowledge and skill to put high quality, good tasting meat on the table. Proper carcass handling shows respect for the animal.


Photo by: T. Macintosh

Handling techniques vary by species hunted, location of the hunt (mountains, tundra, forest etc.), weather and planned end use of hides. Individual hunters determine the method, remembering to respect the animal, and use as much of it as possible and avoid wasting any part of the animal.

This manual focuses on basic techniques, emphasizing how to handle and treat the carcass safely:

1. Cool the animal immediately.
2. Keep it clean.
3. Keep it dry, well-ventilated and cool.


Photo by: T. Macintosh

BIG GAME CARCASSES

Preparation

Look after your own safety first. While handling the animal carcass you will be focused on your work. Your ability to detect the presence of other hunters or bears will be reduced, but you must take steps to ensure others in the area are aware of your presence.

In a forested area, tie fluorescent flagging tape to branches around your work site.

In open country (e.g. tundra, shorelines, or frozen lakes), position your ATV, boat or snowmobile close to your work area. This technique will alert others of your presence.

Prepare your work area. Choose a clean area as free of tripping hazards (e.g. sticks, logs, rocks, hummocks, or brush) as possible.

In deep snow use your snowmobile or snowshoes to pack a work area so you can move around easily.

Move the carcass into position. If the animal is laying in water, mud or other debris, move it to a new location. Pick a spot where you can keep it as clean as possible while handling the carcass.

To keep things clean during snow-free periods you may have to place the carcass on a tarp or bed of freshly cut brush or boughs.

Prepare a clean area next to the carcass on which you can place the meat from your animal. Use a tarp, clean brush or snow.


Photo by: T. Macintosh

Get out your first aid kit, knives, saw, axe, ropes, meat bags and any other equipment you need before you start to cut the carcass. Lay them out on a piece of tarp, in a spot you can easily reach, but where you won't be walking over them. If you think you may need extra lighting, get it ready and set it up before you begin.

Before you begin, make sure your firearm is safe and secure. In bear country, the firearm needs to be in easy reach and ready – ammunition in magazine only.

Cooling

An animal's normal body temperature of about 38 degrees Celsius should be reduced down to 21 to 26 degrees as quickly as possible, preferably within the first hour after the kill. The first hour is critical because bacteria grow very well at 32 to 38 Celsius.

An animal's body temperature may rise after it dies. The muscles and internal organs continue to generate heat while the animal's cooling system, the circulatory system, shuts down. The animal's hide and insulating hairs trap body heat.


Photo by: T. Macintosh

Skinning and cutting up the carcass cannot be delayed in warm weather. The animal's hide and guts should be removed right way and the carcass cut into smaller pieces (quartering). This speeds up the cooling process and prevents the meat from spoiling.

The well-insulated hides of bison, moose and muskox may make it necessary to skin the animal right away, even in freezing temperatures, so the carcass can cool properly.

When air temperatures are cooler many hunters prefer to remove the hide first and leave the handling of the guts until the end of the field dressing process.

Skinning and Cutting up the Carcass

Your instructor(s) will use the video *The Caribou Hunters* to show you one method to skin and cut-up a caribou carcass in an efficient and respectful way.

The video, co-produced by the Fort Smith Métis Council and ENR, also provides guidance on how to harvest the edible parts from the gut pile. These include the liver, heart, large intestine and those parts traditionally known as the lace, hair net, thimble and bible.

Even if you do not eat these organs, try to harvest as many of the edible parts as possible. Many people, especially elders, do eat them and appreciate when you share these parts of the animal with them.

The techniques shown in the video can be applied to other species of big game animals and to other hunting situations as well.

Other Methods

While the video *The Caribou Hunters* shows one way to handle an animal carcass, there are others. Techniques can vary between groups of hunters, hunting situations and traditions.

You must remember, respectful hunters learn throughout their lives. Experienced hunters in your community can show you the techniques they use and you can select the methods that work best for you.

No matter which techniques you choose to use, the goal is always to:

- maximize use of the animal;
- minimize wastage; and
- show respect for the animal and people.

Meat Handling

Use as little water as possible when cleaning the meat; moisture increases the chance of bacteria growing. If you must use water to cool or wash the meat, make sure you use clean rags or paper towel right away to remove any remaining water.

In freezing temperatures, hunters often use snow to help clean out the abdominal and chest cavities, and clean off the meat. However, they are careful to wipe up any remaining moisture.

As pieces are cut from the carcass, spread them out in a single layer on your prepared clean surface to cool. Do not pile sections of meat on top of each other. This will hinder the cooling process.

Photo by: T. Macintosh

Meat may need to be hung during warm weather to make sure it cools properly. If the meat can't be hung, it must be kept off the ground in a way that allows air to circulate underneath it. Placing the meat on top of clean sticks or brush can do this.

Photo by: T. Macintosh

If the plan is to "age" the meat, the hide is left on the carcass (whole or quartered). The hide provides protection from dirt and flies, and prevents the meat from drying out during the aging process.

***Aging** is the process of allowing the muscle tissue to break down in controlled conditions. It can help make older animal meat tender.*

Food safety agencies recommend cooling the meat to 4 or 5 degrees Celsius. If meat can be kept at this temperature, you may have up to two weeks to cut, dry, smoke and/or freeze it. The warmer the weather, the less time is available to preserve the meat.

Meat is at risk of contamination from flies from the time it is quartered until it forms a surface "crust".

As the surface of meat dries, a thin hard "crust" forms. Properly crusted meat will be a dull-red colour with a hard, shiny surface. Once a crust forms flies can't lay eggs on the meat.

Another way to keep meat clean and protect it from flies is by loosely wrapping it in cheesecloth or putting it into breathable cloth bags.

Photo by: T. Macintosh

In below-freezing temperatures, plastic bags or tarps can be used to wrap a carcass. Remember, however, the meat must be cooled and dried before placing it into plastic bags. Do not use plastic bags or tarps during warm weather because they hold heat and allow bacteria to grow. This causes meat to spoil.

Discourage flies from laying eggs on the meat by wiping the outside of it with a wash of white vinegar or applying a liberal sprinkling of black pepper. Don't worry about the vinegar temporarily getting the meat wet, it dries quickly.

Keep meat dry, well-ventilated and cool.

Keep exposed meat as dry as possible. Use as little water as possible when cleaning the carcass. Moisture increases the chance of bacteria growing.

Moisture also prevents the protective "crust" from forming, making the meat more susceptible to contamination from flies.

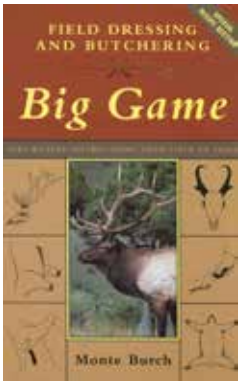
If water is needed to cool or wash the carcass, use clean rags or paper towel to dry the meat immediately.

Use ropes or poles to suspend a tarp above, and away from, the meat if the meat needs to be covered to shade it from the sun or to protect it from rain, dew, frost or snow. This will allow the air to circulate around it.

The meat should be checked daily. If the surface of the meat is not drying and feels slick to the touch, a bacteria issue is developing. Take additional action, such as smoking the meat or rearranging it to face the wind, to prevent the meat from spoiling.

Photo by: T. Macintosh

Descriptions of gutting and handling can be found in books, magazines and on the internet. The best source of information and the best way to learn these skills are from respected and experienced hunters in the area.



Disposal of Remains

Respectful practices for the disposal of gut piles and bones of big game species, such as caribou, moose and bison, are similar across the NWT. The precautions listed below are some of the ways you can show respect for wildlife and other people: Move your animals off the ice and on to land before gutting and cutting up the carcasses.

- Gut piles and bones from land animals should be left on land, not in the water or on the ice.
- Do not leave gut piles on ice roads. The warm gut piles freeze to the ice surface and are a hazard to snow removal operators and others using the road.
- Choose sites away from areas used by people, such as campsites, trails or roads.
- Cover gut piles with snow, brush or the hides that can't be used.
- Bury bones left around homes, campsites and where dogs are tied.

There may be additional practices hunters must follow when hunting in different areas of the NWT. Show respect for others by taking the time to learn about the culturally appropriate disposal practices in the areas where you will hunt.

Safety in Bear Country

The NWT is bear country. We are fortunate to share this vast territory with healthy populations of black, grizzly and polar bears. Your chance of encountering a bear depends on the area, the time of the year and how often you hunt.


Photo by: T. Macintosh

Hunters must take the time to educate themselves about bears. Find out where they live and why, where they may be in different seasons, how they behave, and how to tell if a bear has been, or is, in the vicinity. Hunters also need to learn how to prevent encounters and what to do in the event you do encounter a bear.

Your local ENR Office can provide information on bear safety and lend you copies of the DVDs *Staying Safe in Bear Country* (black and grizzly bear safety) and *Polar Bears: A Guide to Safety*.

Many of the things done while hunting (such as moving quietly, blending in with your surroundings, and handling, transporting and storing meat) may increase the risk for a bear encounter. It is what you do or don't do around the kill site that may increase your risk of encounter the most.

To reduce the risks, follow the guidelines listed below:

- Move the animal to an open area before field dressing it if you can. Detecting an approaching bear is more likely in the open. The bear can also detect you, avoiding sudden surprise encounters.
- While gutting and cutting up the animal, keep your rifle loaded and close at hand, with the safety on. Place the rifle with the muzzle pointing away from your work area and in a location where it cannot be knocked over.
- In areas where the chance of bear encounters is high, use the "gutless" method for handling and treating the animal. Avoid opening the gut cavity until all the edible pieces of meat have been recovered. This helps limit odors that may attract bears.


Photo by: T. Macintosh

- Pack out all useable parts (meat, organs, hides and/or heads) as soon as possible. The number of trips needed depends on the size of the animal, the number of people helping and your proximity to your transportation (e.g. boat, ATV, etc.).
- If possible, pack everything out in one trip. In most cases, multiple trips will be needed and you may not be able to return to the kill site until the following day. The greatest risk of encountering a bear is when you return to the kill site.
- When making multiple trips to the kill site, cache the remaining parts (meat, hide, etc.) in an open area at least 30m from the kill site. If you must cache your meat, it is the law to take reasonable measures to ensure your meat is protected from being disturbed by other animals or the natural environment. Remember to mark the cache by attaching a tag or marking the harvester name, licence number, or name of the local harvesting committee if an Indigenous harvester, and remember to leave your signature. Cache tags are available at your local ENR office. These tags are free.
- Before leaving the kill site and cache, place a marker to visually tell if they have been disturbed between trips. Tie flagging tape to the top of tall sticks and stand them up in the covered gut pile, and place brightly coloured flagging tape around the cache. Remove the flagging tape on the final trip out.
- Approach the cache cautiously when you return. Make noise (loud talk, clapping, blowing whistle, etc.) to announce your presence.
- Scan from a distance with your binoculars looking for bears or signs a bear may have discovered your cache.

When bears first discover a cache they usually drag pieces off a short distance before starting to eat. While the bear may not be near the cache, it may be very close.

- Approaching the cache from upwind will also help warn of your approach. Most bears will move off once they detect the presence of humans.
- If there is a bear at your cache site, stop your approach immediately. Ready your firearm and deterrents and, from as far away as possible, alert the bear of your presence by making noise. If the bear doesn't move off immediately after detecting your presence, try to scare it off by making more noise or firing deterrents.
- If a bear doesn't scare off or becomes aggressive, abandon the cache to the bear. Challenging a bear claiming a cache is not a wise decision. You must report the occurrence to a Wildlife Officer as soon as practical.
- If there are signs a bear has been at the site, continue to make noise while you load up as much as you can. Leave the site as quickly as possible. When travelling with others, one person should be armed and constantly on the lookout for bears while the others load up.
- If you are hunting in an area where your chance of an encounter with a bear is high, you may wish to carry a can of bear spray. Bear spray is easy to use. It has proven to be effective in stopping black and grizzly bear attacks or minimizing injuries when used properly at close range. The effectiveness of bear spray on polar bears has not been adequately tested.

Transporting Meat

It can be a challenge to keep meat dry, cool and clean while transporting it back home. The bottoms of boats, truck beds, komatiks and sleds are commonly contaminated with water, dirt and fuels.

Experienced hunters will prevent meat from coming into contact with these surfaces by lining the bottom and sides of their boat, truck bed or sled with a clean tarp or pieces of logs and fresh cut brush. In the winter, some hunters partially fill their truck box with clean snow before placing the meat inside.

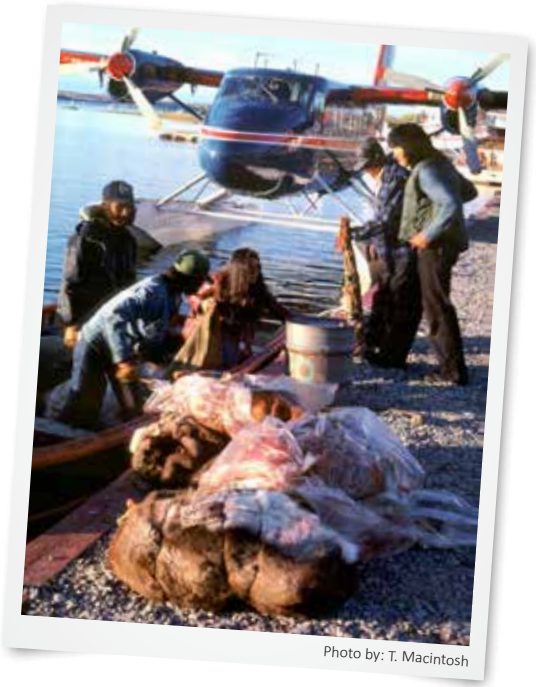


Photo by: T. Macintosh

Completely cover the meat with a tarp if there is a chance it will be exposed to dust, debris, water or blowing snow.

Taking the time and care to keep meat cool, clean and dry produces high quality and good tasting meat. It prevents meat wastage and shows respect for the animal.

Once you return to camp or town you can cut the larger pieces of meat into smaller pieces based on how you plan to use the meat.

The meat chart (Module 8) describes different cuts of meat. This meat chart can be used as a guide to the uses of meat found on caribou. These same general cuts are also found on all animals with antlers or horns.

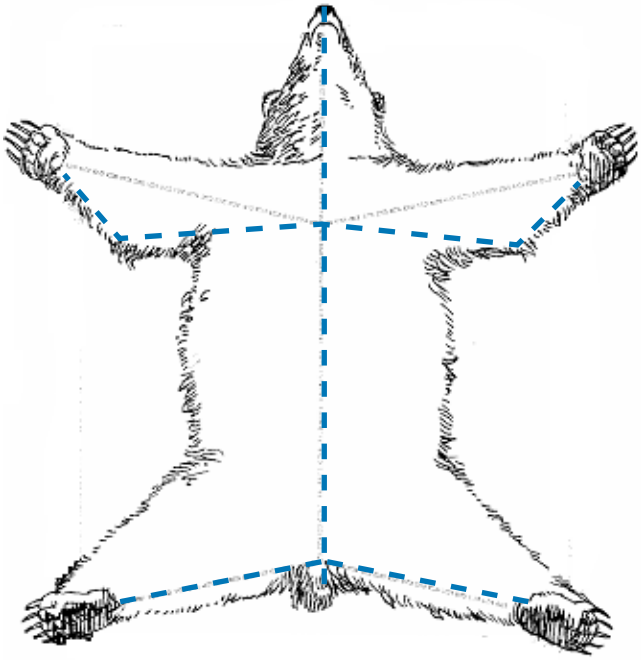
The meat can be preserved in many ways, such as drying and smoking. Use of the meat is a personal choice. Remember, it's against the law to waste any of the edible parts of wildlife prescribed in the Regulations.

See Module 8 for tasty caribou meat recipes.

Photo by: T. Macintosh

SKINNING BEARS, WOLVES AND WOLVERINES

Bears – Skinning a bear is similar to skinning an animal with antlers or horns. The main difference is the skin of the feet and head are normally left attached to the hide. The main cut lines for skinning bears are shown below.



These lines generally correspond to those locations where the hair begins pointing in different directions.

When skinning a bear, cut from the tip of the tail along the centre of the abdomen to within 7 to 8cm of the lower lip. For each hind leg, start the cut from the inside edge of the pad near the heel, then cut along the centre of the leg until it meets the cut along the abdomen.

Use a knife to carefully free the skin from the body by cutting the connecting tissue in between the meat and the hide. Always work from the hind end forward.

To skin out the feet, cut around one side of the footpad leaving the pad intact in one whole piece. The rest of the paw is skinned out like a glove. The toes are skinned down to the last knuckle and then cut off. This removes all of the meat and bone that may cause spoilage and keeps the claws attached to the hide. Do not split down each individual toe to the nail. Repeat this procedure for the rest of the legs.

If the hide will be used for taxidermy purposes do not skin out the paws. Taxidermists prefer to have the paws cut off at the wrist, but left attached to the hide.

At the head, work carefully from the base of the skull towards the base of the ears. Skin over the muscle at the base of each ear until yellow cartilage is visible.

Cut down and forward through this cartilage to the skull to free the ear. Continue skinning towards the eyes.

Once the skin has been freed and pulled forward, insert the forefinger of your left hand under the rear edge of the eyelid from the outside.

Pull taut and cut the tissue between the eyelid and bone until the tear duct is reached.

Continue skinning close to the bone until you reach the corners of the mouth.

Insert your forefingers in the mouth and lift the lips.

Sever the cheek muscles about 2cm from the corner of the mouth.

Skin close to the bone until the lower lip is free. Be very careful not to split the lip. Leave the upper lip attached for now.

Skin out the muzzle up to the nostril. Then insert your finger in the nostrils to guide you as you cut through nose cartilage to the bone. Skin close to the bone until the nose and upper lip are free.

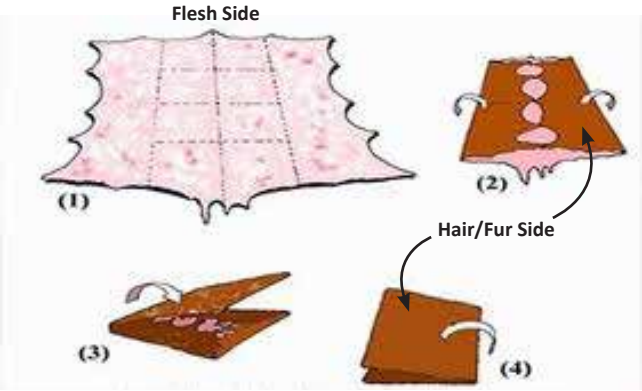
If the hide is not being stretched and dried right away, make sure to prevent it from spoiling by freezing it or covering the flesh side of the hide with coarse salt, especially around the face and in the paws.

Try to remove as much fat and flesh from the hide as possible before freezing or salting.

Salted Black Bear

It takes about 9kg of coarse salt to treat an average-sized black bear hide and about 18kg to do an average-sized grizzly bear hide.

For all hides, fold the hide skin to skin so no fat or salt gets on the hair or fur.



How to fold salted side

Never store or transport raw hides in plastic. This makes the hair slip from the hide. Always store raw hides in burlap or in cloth game bags.

Wolf and Wolverine – Skinning a wolf or wolverine depends on how the hide will be used. If the hide is being used for clothing or trim, use the same "open" skinning method used to skin a bear.

If the hide is being sold to a fur buyer, use the "case" skinning method. Case skinning is like removing a sweater or sweatshirt, grasping the bottom and turning it inside out as you pull it up over your head.

Make a cut from the top of the foot pad along the inside of one back leg and continue to the top of the foot pad of the other back leg.

Remove the pelt from the carcass by turning it inside out and skinning down over the back legs, forelegs and head.

Case Skinned Wolf

Consult experienced wolf hunters or trappers in your area for advice on case skinning a wolf or wolverine.

DVDs on proper methods of skinning and handling bear, wolf and wolverine may be obtained from your local ENR office and are available on the ENR website.

SMALL GAME AND BIRDS

Photo by: T. Macintosh

Photo by: T. Macintosh

GUTTING SMALL ANIMALS

1. Cut through the skin and pelvic bone at the anus. Cut up to the breastbone with the sharp side of the blade pointing upwards while carefully working a finger under the back of the blade to avoid cutting the stomach or intestines.
2. Hold the animal with one hand. With the other, reach into the body cavity and pull the esophagus (windpipe) and work all the internal organs loose. Pull using a downward motion.
3. Wipe out the cavity with paper towel and allow the body to cool.

Wear latex gloves

Some hunters prefer to skin small game before gutting it. The methods listed below are recommended to make sure the meat cools quickly.

Photo by: T. Macintosh

1. **Break the skin**:
   Hold the rabbit or other small game by the back legs and gather a bunch of skin around an ankle. Twist this skin until it breaks.

2. **Get the skin off**:
   Pull the skin down off of the leg. Repeat on the other leg. Work from the rabbit's hips to its head.

3. **Remove extremities**:
   Use game shears to remove the feet and head.

4. **Take the guts out**:
   Make a cut along the belly through the rib cage and pelvis. Open the sides of the belly and grasp the windpipe below the severed neck and pull it out.

5. **Cut up the meat**:
   Cut under the shoulder blades from the front legs and through the hip sockets for the back legs. For the tenderloins, cut the belly flaps away on both sides. Next, cut through the spine below the rib cage and above.

Field and Stream Magazine

BIRDS

Photo by: T. Macintosh

Retrieval – Try to recover all game birds as quickly as possible after they are shot. If wounded, the birds may escape by hiding in dense cover or swimming away.

Wounded Birds – Wounded birds should be quickly killed as soon as they are found.

There are a several methods used to quickly kill wounded birds. Two of these methods are the "compression" and "wringing" methods.

Compression Method
Put the bird's breast in your hand. Place your thumb under one wing and your fingers under the other wing.

Squeeze the bird tightly, compressing the ribs and internal organs. Hold it this way for about a minute or until the head falls limp.

This forces the air from the lungs and suffocates the bird with minimal damage to the bird.

This method is best suited to grouse and ptarmigan, but can also be used on smaller ducks.

Wringing Method
Make a fist, with the bird's head in your palm and its neck in the ring of your thumb and forefinger.

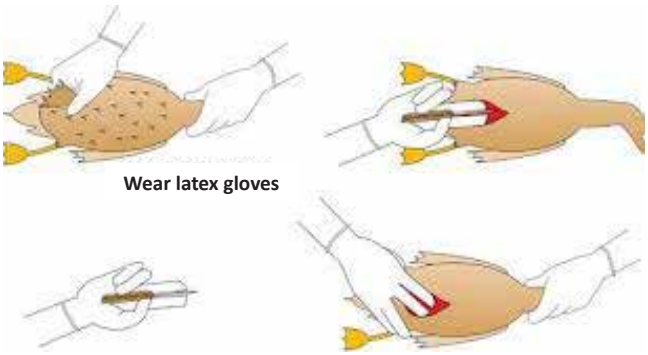
Holding the bird up, start to spin the bird and on the second spin quickly move your hand downwards about a foot and snap it upwards abruptly. This motion snaps the bird's neck and ends its suffering.

This method can be used on all sizes of birds. It is preferred for larger birds, like ducks and geese, that are difficult to kill using the compression method.

To prevent wasting the meat of small animals and birds, best practice is to remove the internal organs (guts) as soon as possible after the animal or bird dies.

Gutting Birds

1. Pluck the bird's belly feathers.
2. Make an incision at the anus, circle it with a knife and cut up to the breastbone.
3. Insert two fingers into the body cavity and pull the internal organs, stomach, and intestine free. Pull the guts and anus free of the carcass.
4. Drain the cavity, wipe with paper towel, and store the body in a cool well-ventilated space.



Remember, *to legally possess a migratory bird leave at least one fully feathered wing attached to the bird. The wing can only be removed when the bird is prepared for immediate cooking.*

Waterfowl and game birds can be plucked (feathers removed) or skinned. Some hunters believe leaving the skin on the bird makes a tastier meal because it seals in the natural juices. This may leave annoying pinfeathers or down.

Others claim skinning allows you to clean a bird faster and makes it easier to remove the heavy fat under the skin that adds an oily taste to the meat.

Some hunters gut and also skin their birds immediately. An example of the skin and gut method can be found in the Alaska Department Fish and Game *How to Field Dress a Grouse or Ptarmigan* included in Module 8.

Some hunters use a combination of the two methods.

Remember: The meat must be cooled as much as possible before packing for transportation back to camp or town.

WILDLIFE DISEASES AND PARASITES

Most big game animals in the NWT are healthy. However, diseases and parasites can occur in any wildlife population. Some of these diseases can infect people or domestic animals.

Hunters should look for signs of sickness in an animal before they shoot. These signs include:

- poor condition (weak, sluggish, thin or lame);
- swellings or lumps, hair loss, blood or discharges from the nose or mouth; and/or
- abnormal behaviour (loss of fear of people and aggressiveness).

Swollen joint of a caribou with brucellosis

If You Shoot a Sick Animal

- Wear gloves when handling the animal.
- Do not cut into diseased parts.
- Wash your hands, knives and clothes in hot soapy water after you've finished cutting up and skinning the animal, and disinfect them with a weak bleach solution.
- If meat from an infected animal can be eaten, cook meat thoroughly until it is no longer pink and juice from the meat is clear.
- Do not feed parts of infected animals to dogs.
- Report all wildlife diseases.

Collecting Samples

If you are collecting samples, always:

- wear rubber gloves to protect yourself.
- place each sample in a separate plastic bag.
- samples should be submitted frozen or kept cool unless otherwise noted.

Record information, such as:

- date and location collected;
- type of animal;
- sex and estimated age of the animal;
- description of the sample; and
- any other conditions that may be important (e.g. unusual weather, signs of a struggle, etc.).

For more information about the safe handling and consumption of diseased wildlife see Module 8, or contact your local Renewable Resource Officer.

SUMMARY

The true test of a hunter's knowledge and skill is clearly demonstrated when he/she brings the wildlife meat and parts home.

Experienced users of wildlife harvests can tell if the animal was hunted in a respectful way or if it was chased before being shot.

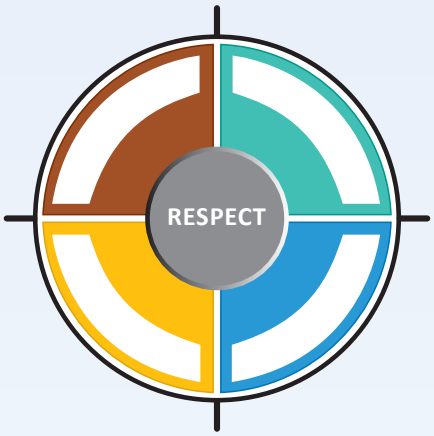
They can tell how much care and skill was used in field dressing and cutting up the meat.

They can also see how much respect a hunter shows towards others by how they share their good fortune.

The pride that comes with doing the job right is very rewarding.

Module 6 Quiz

1) When hunting, all hunters must be guided by the value of respect for... ***Fill in the blanks to complete the Wheel of Respect***.



The Wheel of Respect

2) Sharing is an important aspect of respect and a respectful hunter shares his or her kills with others.

   True or False

3) Being sure of your target and what lies beyond it is only important when your target animal is standing at the top of a hill.

   True or False

In questions 4 to 7, fill in the blanks.

4) Checking a downed animal's eye can help tell if it is dead or alive.

   If the animal's eyes are closed it is likely

   _____ _____.

   If the animals eyes are open and glazed over it is likely _____.

5) A responsible hunter must handle and treat an animal carcass safely by:

   _____ the animal immediately.

   Keeping it _____.

   _____ it dry, well-ventilated and cool.

6) Use as little water as possible when cleaning the meat; moisture increases the chance of _____ growing.

7) The two humane methods of killing wounded birds are the C _____ and W _____ methods.

Circle true or false for questions 8 to 11.

8) Responsible hunters know their limitations and the limitations of their firearm, and hunt within them.

   True or False

9) The principles of keeping a carcass cool, clean and dry does not apply to birds.

   True or False

10) There is only one method for skinning and cutting up a caribou.

    True or False

11) Travelling with an experienced hunter is one of best ways to learn about hunting.

    True or False

SURVIVAL SKILLS

Previous modules provided information on knowledge and skills needed to show respect for wildlife, environment and other people. This module focuses on respect for self and how to stay safe while hunting.

Figure 1: The Wheel of Respect

As a hunter, respect for self includes knowing basic survival skills. These will help you:

- take care of yourself on the land;
- prevent being lost or injured; and
- deal with emergency situations if they occur.

You will become a better and safer hunter as you gain knowledge and learn new skills. Skills must be developed through practice and experience.

Respectful and responsible hunters understand the limits of their knowledge and skills and stay within them.

Photo by: T. Macintosh

AWARENESS

The most important and valuable survival skills are self-awareness and a keen sense of your surroundings.

You can prevent injuries such as frostbite, hypothermia, dehydration, sunburn, heat stroke and exhaustion by being aware of what your body is telling you, knowing your physical limits and responding appropriately. Pushing beyond your limits can lead to injury and possibly life-threatening situations.

A keen sense of your surroundings allows you to avoid dangers, anticipate weather and keeps you from becoming lost. It improves your abilities to find water, locate food and discover natural shelters (if needed).

Being aware of your surroundings can also help you travel safely and find your way back home.

Always make sure you look back regularly when travelling so you can recognize the landscape if you need to backtrack.

WAYFINDING

The ways that people and animals orient themselves in physical space and navigate from place to place is called 'wayfinding'. This means knowing where you are, where you want to be and how to get there.

Hunters today have access to accurate topographical maps, compasses and hand-held global positioning systems (GPSs).

Always carry a map and compass.

But, when the batteries on the GPS die or the compass is left at home or camp, traditional techniques of using the sun, moon, stars and snowdrifts to wayfind may be the only means to navigate.

Photo by: T. Macintosh

You will need to take additional training to fully learn these skills. You can do this through practical experience, by taking courses or asking experienced hunters to teach you these skills while out on the land.

LOST OR STRANDED

Proper preparation and the development of your wayfinding (navigational) skills significantly reduce the chances of becoming lost or stranded. You should always be prepared to deal with these situations in case they do happen.

Getting lost or stranded can be a temporary setback or a life-threatening ordeal. It depends on how well prepared you are.

If you have a communication device, such as an HF radio, satellite phone, SPOT or personal locator beacon, use it to alert people of your situation right away.

If you do not have a communication device, a search may not begin until you are reported overdue. Remember, the earlier in your trip you get lost or stranded, the longer you may have to wait for help.

Even if you are able to communicate your situation to potential rescuers it may be a while before they find you.

WHAT TO DO IF LOST

If you think you may be lost, stop. Your chances of being found are reduced if you continue travelling after realizing you are lost. Searchers will have an easier time finding you if you are not a moving target.

If you left a travel plan and followed it, searchers will know where to start looking and should find you quickly.

If you did not leave a travel plan, it could be a long time before someone knows you are missing. Once they realize this, they won't know where to start looking. You may be left with no other option than to rescue yourself.

Always leave a travel plan with someone you trust and pack emergency supplies with you. Doing both of these things could save your life.

When you realize you are lost remember the acronym **STOP**.

S is for Stop, Sit and Stay Calm

If you think you are lost, stop, sit down and stay calm. You can't think very well if you panic. Take a moment to collect your thoughts. Breathe slowly and deeply. Drink some water and have something to eat.

Even if you are travelling by snowmobile, ATV or boat the same advice applies. Don't keep driving until you are both lost and stranded.

Use remaining fuel to get to the best possible survival place to wait for help.

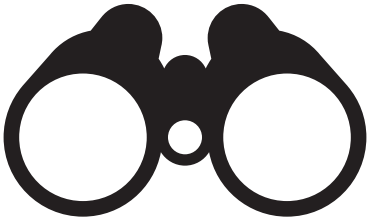

Photo by: T. Macintosh

T is for Think

How did you get here? Get your map out and try to locate the point at which you first became disoriented. A little backtracking may help. Mark your trail as you move using piles of stones, broken branches or other signs. You can always come back to where you were.

Always make sure you look back regularly when travelling so you can recognize the landscape if you need to backtrack.

If you believe you are lost, think about what you have to help you in this situation. Take an inventory of your survival kit items and think about how you can use them. Take a mental inventory of your options before you make any moves. Think about the possible repercussions of each of them. Prioritize your separate needs, such as attending to an injury, before choosing a plan of action.



O is for Observe

Look around. What could pose a risk to you (e.g. shifting ice or changing weather)? What in your immediate area could be used as a heat source or provide shelter? What is available for making signals? Where can you set out your signals so they can be easily seen at a distance or from the air?

P is for Plan and Prepare

Create a plan of action. Be positive and take care of yourself.

Whether you are stranded because of equipment failure or you are lost, plan to be found by preparing signaling devices (e.g. signal mirrors, flashlight, fires, etc.). If it is late in the day:

- find or make a shelter against the weather; and
- prepare a heat source.

SHELTERS

If you don't have a tent, a tarp and some rope can be used to create a simple emergency shelter.

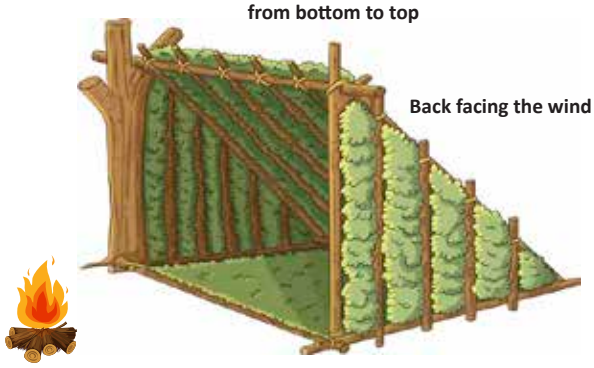
A waterproof canvas tarp is better than one made of plastic since canvas allows moist air to escape. Plastic traps moisture and can cause you to become damp or wet. When wet you will lose body heat 25 times faster than if you stay dry.

Lean-to

Within the treeline, a simple lean-to made of a frame of sticks covered with spruce boughs can be used as an emergency shelter.

Build a lean-to in a site that offers natural protection from the wind, is located near a source of water and has a good supply of dry wood.

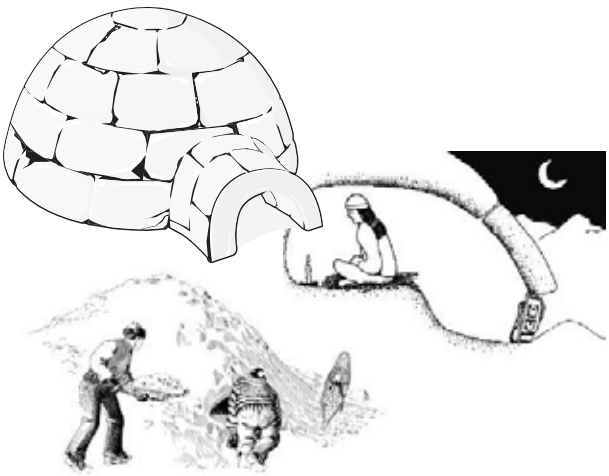
Make a bed of spruce boughs and hides if you have them so you don't have to lie against the ground.



A lean-to can provide good protection from the wind, rain, snow or sun. It also provides some protection from the cold. A fire can provide enough heat to help you stay warm and dry your wet clothing or gear. If firewood is not plentiful or is difficult to get, you may end up burning too much body energy searching for it. The less energy you have, the harder it is to stay warm.

Snow Shelters

If you get lost or stranded during the winter, a shelter made of snow can provide excellent protection from the weather.



The spaces in snow trap air, making it excellent insulation. The temperature inside a snow shelter can be 0 degrees Celsius or warmer even when the outside temperature is -40 degrees. When you add body heat and heat from burning a candle, the inside of a snow shelter can be significantly warmer than a lean-to or tent (without a heat source).

Igloo

The igloo is the most well-known type of snow shelter. Developed by Inuit, igloos have provided protection to people in harsh cold climates since ancient times.

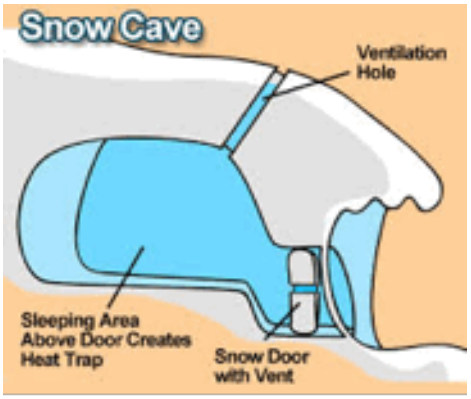
The skill of igloo building is not as common today. This skill could make the difference in your survival in an emergency situation. All Arctic hunters are encouraged to learn the specialized skills and knowledge needed to build a traditional igloo.

Hunters should also learn to make other types of snow shelters like snow caves and quinzhees.

Snow Cave

A snow cave is a simple shelter. It is built by digging into the side of a large snowdrift. The snow needs to be four to five feet deep and wind packed.

If the drift is not deep enough, you can pile snow on top of the drift until you have the depth you need. Let piled snow set for at least 20 minutes before starting to carve out your cave.



Find a safe spot away from potential avalanche slopes and leeward slopes, where blowing snow could clog and seal the cave's air vent.

Quinzhee

When snowdrifts cannot be found or the snow is not deep enough, a quinzhee is an ideal shelter. It is basically a pile of snow in the shape of a dome with the interior hollowed out.

Quinzhees are most useful below the treeline areas where snow is lighter (more powder) and not naturally compacted. They can also be useful above the treeline during early winter before the snow is suitable for cutting snow blocks.

When piling snow for your quinzhee, make sure you just pile the snow. Do not compact it. If the snow is packed, it will lose some of its insulating properties.

Once the snow has been piled, it must sit for a few hours to allow the snow to set before carving out the inside.

Snow Trench

A snow trench is the most basic of snow shelters. It probably won't be as warm as a quinzhee or a snow cave because the structure is not as tight or as well insulated. It will still provide shelter from a storm, and is quick and easy to build. You simply dig a trench in the snow and then cover it with snow blocks or a tarp.

A snow trench should be large enough for you to sit and sleep comfortably. For most people, this would require a trench approximately 220cm long by 80cm wide so your sleeping bag doesn't brush the walls and get wet; 90-100cm deep should allow you to sit up.

If there is not enough snow to dig a metre-deep snow trench, raise the height of the trench by piling the snow or snow blocks around the top edges of the trench.

Snow Shelter Considerations

Get started early. Igloos, snow caves and quinzhees take time to construct. If you think you may need to build a shelter, do not delay. Remember:
Do not build snow shelters at the base of cliffs or other locations where drifting snow could bury your shelter.

- Snow cave and quinzhee ceilings must be at least one foot thick to keep them from collapsing.
- Shelter entrances should be on the downwind side of the shelter.
- Floors or sleeping platforms should be above the top of the entry tunnel so the warmer air is trapped inside.
- Ceiling and walls should be smooth so melting snow water runs down the walls and does not drip on you.
- Entrances should be tarped or blocked, but not be airtight.

Snow shelters will blend into their surroundings so make your shelter as visible as possible using something that contrasts with the snow.

Routinely go outside to check for searchers and aircraft. Snow shelters block sound as well as they insulate.

Ventilation is Crucial

Always leave a ventilation hole at the entrance of a snow shelter to allow a change of air. Carbon dioxide from breathing and carbon monoxide from burning candles must have a way to get out. These gases can rise to dangerous levels without ventilation and possibly cause death.

Once the shelter warms up, poke a 5cm diametre hole through the roof and keep it clear. Adjust the vents to keep the interior temperature right at freezing. If the interior is too warm, the walls will be wet and the air will be moist and clammy. Better dry and cool than warm and wet. One candle is enough light. Make sure you put it out during the night.

A candle can be used as an indicator of oxygen levels inside a snow shelter. If the candle doesn't burn properly or it dies, the oxygen level is dropping. There is still enough for a human to stay conscious and add ventilation.

Do not cook inside a snow cave or quinzhee. If you must cook make sure you have an extra ventilation hole directly above your stove. Always leave the doorway partially opened while the stove is on.

SOURCES OF HEAT

Above the Treeline

Always travel with a means of generating heat. Carry plenty of fuel. Always carry spare matches, lighters or other means of ignition. Keep these in a waterproof container.

Take along a camp stove that burns naphtha or white gas or a kerosene heater. Stoves using butane or propane are not reliable in the winter.

Lard, margarine, butter, seal oil, whale oil or cooking oil can be burned using a wick (cloth or cotton grass).

In some areas north of the treeline wood is available for burning. This could be dried driftwood, dead willow branches, dwarf willow and birch bushes or heather plants.

Below the Treeline

Fuel is usually no problem in the treed areas of the Northwest Territories. You must carry a means of igniting the fuel, such as matches, lighters, flint and steel or a hand drill. Be sure to protect them from moisture.

SIGNALING

Once you have taken care of shelter and heat, you need to attract help. Signaling is basically communicating your needs to others in the area that could be on the ground or in the air. Your signals must be easy to see and understand.

Use a signal to mark your location even if you have used your communication device (HF radio, satellite Phone, SPOT or ELB) to alert people of your need for help. This makes it easier for searchers to find you.

Select a signal site with good visibility close to your shelter. For example, you could use a clearing, hilltop, lakeshore or the surface of a frozen lake.

Everyone should be familiar with SOS. **SOS** (Save Our Souls) is the best-known international distress signal.

During daylight, you can visually signal aircraft of your need for help simply by marking SOS in large letters on the ground or in the snow.

The SOS signal can be transmitted by using the "Morse Code" signal of three short, three long, three short clicks, noises or flashes, followed by a pause.

The Morse Code signal can be sent using flashes of light reflected off a signal mirror or any other shiny surface.

Signal Mirror

A strobe light at night is an effective tool for alerting searchers to your location. Turning a flashlight on and off can produce a similar signal, but is less visible than a strobe light.

Almost any signal repeated three times is an internationally understood distress signal.

Loud Noises

A series of three loud noises can attract ground searchers to your location. You may signal using three gunshots, but you risk using up ammunition, which may be needed for survival. A better choice is to use the emergency whistle in your survival kit.

3 in a Triangle

Your distress signal can be constructed from whatever material is available, including brightly coloured material, piles of rock, brush or anything else at hand. Your signal should look out of place with your surroundings. Space individual signals about 30m apart so they are seen as three separate things when viewed from a distance.

Signals laid out in the shape of a triangle makes your distress signal even more clearly understood as an international sign of distress.

Signal Fires

Fire is the best visual signal to use at night as the bright flame can be easily seen. During the day, the smoke from your fire can be seen from long distances. Three fires laid out in a triangle or in a straight line are an internationally recognized distress signal.

During the day, create three smoke fires. First build a strong fire and add live vegetation, spruce boughs, green moss, grasses or even water to it to create smoke.

Once you have attracted the attention of rescue aircraft, stand upright with your arms overhead in the shape of a Y to indicate – yes – you need to be rescued. If you are unable to stand up, signal with your arms overhead in a Y position while you lie on the ground. You may wave your arms back and forth in a crosswise position overhead, but begin and end your waving from the Y position, the clear rescue sign.

ENEMIES OF SURVIVAL

In an emergency situation, it is not uncommon to experience feelings that can have a negative effect on your survival. No matter how severe these feelings are, they can be overcome if you know how to deal with them.

Pain or Injury
- Must be treated first, using the appropriate first aid treatment.

Cold

Get out of cold or wet weather.
- If no shelter is available, construct one.

Thirst
- You must have water to survive, but do not eat snow. The amount of body heat required to melt it only results in further dehydration of body tissues.

Hunger
- Hunger pains are more annoying than serious. You can survive without food for up to 30 days as long as you are able to stay warm and have water.

Fatigue
- Don't tire yourself. Conserve your energy.
- Make a comfortable shelter so you can rest and avoid fatigue.

Boredom and Loneliness

Keep your mind occupied. A good way of doing this is by working on a shelter or fire.

Fear
- Fear is a normal reaction everyone feels.
- Try to understand why you are afraid.
- Use common sense to deal with, and overcome, your fear.
- Keep fears subdued by being mentally and physically busy.

KEYS TO SURVIVAL

1. Control fear.
2. Get shelter.
3. Make signals.
4. Keep mentally and physically busy.

HYPOTHERMIA

Hypothermia is a serious cooling of the body's core to a temperature below the normal 37 degrees Celsius. Hypothermia is caused by:
- over-exposure to cold, wet or windy weather; and/or
- immersion in cold water.

Developing Hypothermia

Surprisingly, most cases of hypothermia on the land occur in wet and windy weather at temperatures only 0 degrees to 10 degrees Celsius.

In cold water, your body loses heat much faster than on land. Hypothermia begins within minutes after you enter cold water.

Detect Hypothermia Early

A person with any of these symptoms could be suffering from hypothermia:
violent or uncontrollable shivering (often accompanied by fatigue);
- difficulty speaking, thinking or performing complex tasks;
- irrational behaviour, stiffened muscles; and
- unconsciousness, absence of reflexes.

In the final stages of hypothermia, loss of coordination and confused or irrational behaviour may cause a victim to appear drunk.

Treatment

You should immediately provide a blanket or other item to cover someone with hypothermia. You should also provide a source of heat for added warmth. Gradually warm the victim, being gentle at all times. Do not exercise or massage cold arms and legs. A sudden circulation of cold blood increases the risk of heart failure.

The following are preferred warming methods for someone suffering from hypothermia.

Mild Hypothermia

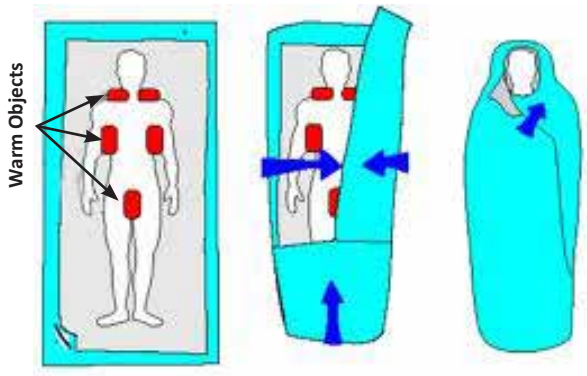
Let the victim rest in a sheltered area near a source of heat.

- Provide a change of dry clothes.
- Provide warm liquids if the victim is conscious.
- Warm baths can help very mild cases, but keep the victim's arms and legs out of the water to prevent a sudden circulation of cold blood.

Severe Hypothermia

Send someone for medical aid, if possible.

- Place warm objects near the head, neck, chest and groin area.
- Remove wet clothing, if possible, and cover the victim with a good insulation and a waterproof covering.
- Use another person's body heat, concentrating on chest-to-chest contact.



Hypothermia Wrap

- Provide warm sweet liquids if the victim is conscious (e.g. Gatorade).
- Cover the victim's head. Heat loss through the head is significant.
- Do not give up your efforts until qualified medical personal have taken over.

Prevention

The best protection against hypothermia is being prepared. Make sure you:

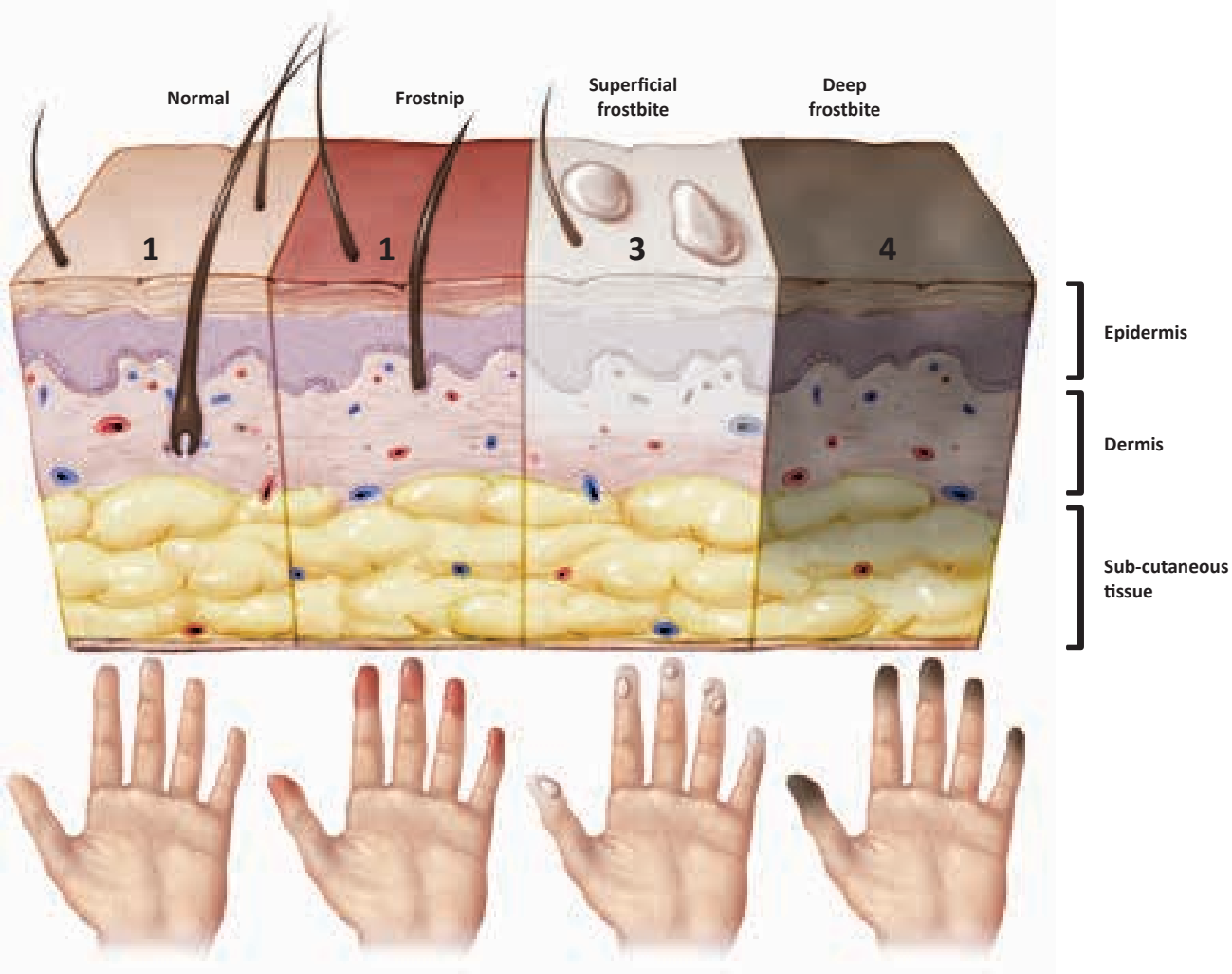
a) Stay as dry as possible.
b) Dress warmly for the cold.
c) Take a change of clothes.
d) Carry a survival kit with a space blanket.
e) Avoid travelling over ice in late spring or early fall.
f) Let someone know your travel route and destination and when you expect to return.

FROSTBITE

Frostbite is caused by either prolonged exposure to cold temperatures or shorter exposure to very cold temperatures.

Most commonly, frostbite will strike first in the extremities, such as fingers, toes, ears, cheeks and nose. However, any part of the body exposed to freezing temperatures can experience frostbite.

As a natural reaction to cold temperatures, blood vessels, especially in the extremities, constrict to prevent body heat loss. When these parts of the body lose that warming blood flow, the fluid inside the cells and tissues can freeze into ice crystals. As with any liquid, this fluid takes up more space in a frozen state than a liquid state and can cause the cells to rupture, sometimes causing permanent damage.



There are three degrees of frostbite:

- **Frostnip** is a mild form of frostbite where only the skin freezes and does not lead to permanent tissue damage. Watch for yellowish or white patches that feel soft when touched. A painful tingling or burning is felt.
- **Superficial frostbite** is more serious than frostnip. It can be recognized by numbness and white or grayish-yellow skin that ache or throbs and feels slightly hardened.
- **Deep or severe frostbite** is the most dangerous of the three forms. The skin and underlying tissue freezes. Permanent damage is possible, depending on how long and how deeply the tissue is frozen.

Deep/severe frostbitten skin appears gray/black, and feels waxy and usually firm. The affected area will be completely numb and blisters may appear.

What You Should Do

Frostnip

Generally, frostnip is not serious and is easily cured when you get out of the cold.

- You can warm cheeks, nose or ears by cupping a warm hand over them. Keep them warm by covering them with a toque or neck warmer.
- Warm cold fingers by simply blowing on them or placing them in your armpits.
- Removing damp or wet socks and replacing them with dry ones may be all that is needed to warm cold toes.

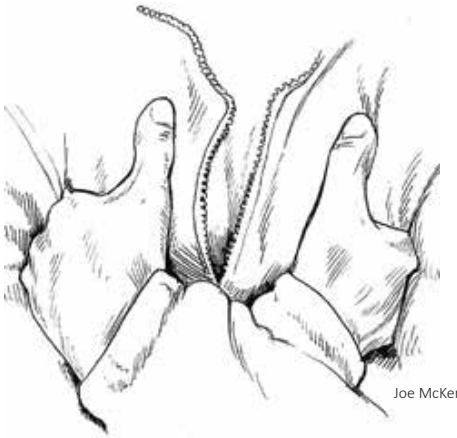
- Wiggling your toes and fingers can increase circulation and quickly warm them. If you are unable to wiggle your toes your boots are too tight – you need bigger boots.

Frostbite

- Many people with frostbite may also be experiencing hypothermia so make sure to check for signs and treat that condition too.

Joe McKendry

- Putting frostbitten hands, feet or ears in warm water [40°C-42°C (104°F-108°F)] for 15 to 30 minutes is the gentlest and safest way to warm frostbitten skin. Without a thermometre, you can check the temperature with your elbow or wrist.



Joe McKendry

- Tuck hands or feet inside warm clothing next to bare skin. Place chilled fingers in an armpit.
- Warm towels can be used to warm the genital area, but be careful not to burn the skin.
- Be aware that if you (or the person) sit in front of a heater or a fire to warm up, there is a greater chance of getting burned. This is because normal feeling is lost in cold-injured skin; you may not know when to move away from the heater or fire.
- Protect the cold or frozen body part from further cold exposure and bruising. Pad frozen fingers or toes. Gently wrap fingers or toes in soft, dry material, such as cotton or gauze.
- Seek medical attention.

Do Not

- Put snow on the area or pack snow around the limb. Do not rub the areas with snow; that is a myth and will make the problem worse.
- Rub or massage frostbitten skin or disturb blisters, which can further damage tissue.
- Re-warm frozen skin if refreezing is possible before you get medical attention or into somewhere out of the cold for a long period. The injury will be worse if your skin freezes, thaws and then refreezes. There could be permanent damage.
- Walk on frozen feet if possible. However, it is better to walk on frozen feet than to thaw your feet if there is a chance they will refreeze.
- Use direct dry heat, like heating pads or a campfire, to thaw frostbitten tissue. Remember, the frozen area will be numb and not able to detect heat and you could end up burning yourself.

LEARN MORE

The survival skills discussed in this module are only the basics. Continue to learn by consulting with, and travelling with, experienced hunters from the areas that you hunt.

Hunters should also educate themselves or take training on:

- compass and GPS use;
- first aid;
- boating safety;
- ice safety;
- avalanche safety; and
- bear safety.

SUMMARY

When travelling out on the land it is your responsibility to have the proper knowledge and skills to be able to:

- take care of yourself;
- prevent being lost or injured; and
- deal with emergency situations if they do occur.

You also have a responsibility to yourself and others to understand the limits of your knowledge and skills, and stay within them.

To go beyond your limits could put yourself, and other people, in danger.

With experience you will build on the survival skills discussed in this module, increasing your capability to take care of yourself while on the land.

The reward of learning survival skills is knowing that one day they could save your life. However, it is not just about you. It is about using your skills to help other people when the time comes.

Photo by: T. Macintosh

Module 7 Quiz

1) The most important and valuable survival skills are self-awareness and a keen sense of your surroundings.

   True or False

2) Learning traditional wayfinding techniques are no longer necessary now that there are GPS and SPOTS.

   True or False

Complete the following statements by filling in the blanks.

3) Which wayfinding tools should hunters always carry with them?

   C _____ and

   M _____.

4) When you realize that you are lost you should recall the acronym **STOP**.

   S is for _____,

   T is for _____,

   O is for _____,

   P is for _____.

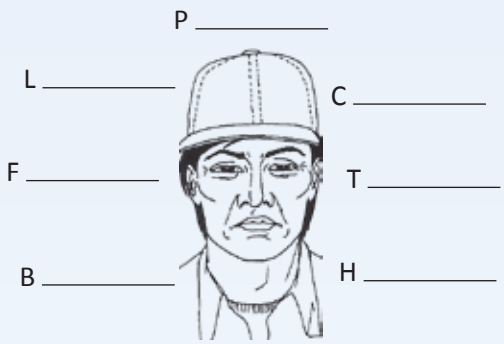
5) If you find yourself lost or stranded, plan to be found by preparing signaling devices (e.g. signal mirrors, flashlight, fires, etc.). If it is late in the day:

   Find or make a _____ against the weather.

   Prepare a _____ source.

6) **SOS** (Save Our Souls) is the best-known international distress signal, but almost any signal repeated _____ times is an internationally understood distress signal.

7) The Enemies of Survival are:



Fatigue

8) Hypothermia is caused by over-exposure to cold, wet or windy weather and/or

   Over exposure to heat True or False

   Immersion in cold water True or False

   Lack of fluids True or False

9) Most cases of hypothermia on the land occur in wet and windy weather at temperatures only 0° to 10° C.

   True or False

10) ***Underline*** your selection. Treat frostbitten fingers by:

    Rubbing them with snow.

    Putting them in hot water.

    Putting them in warm water.

PLANNING AND PREPARATION

MODE OF TRANSPORTATION

BOAT

- ☐ Gas
- ☐ Oil
- ☐ Funnel with filter
- ☐ Paddles
- ☐ Anchor
- ☐ Rope
- ☐ PFDs (one per person)
- ☐ Bailing pail
- ☐ Spare boat plug
- ☐ Spare prop and shear pins
- ☐ Spark plugs
- ☐ Sounding device
- ☐ First aid kit
- ☐ Fire extinguisher
- ☐ Tool kit
- ☐ Flares
- ☐ Emergency light

SNOWMOBILE

- ☐ Gas
- ☐ Oil
- ☐ Gas line antifreeze
- ☐ Spare belt
- ☐ Spark plugs
- ☐ Spare light bulb
- ☐ Helmet
- ☐ Goggles
- ☐ Tool kit
- ☐ Small block and tackle or winch

ATV

- ☐ Helmet
- ☐ Gas
- ☐ Oil
- ☐ Spare belt
- ☐ Plugs
- ☐ Tire pump
- ☐ Tire repair kit
- ☐ Spare light bulb
- ☐ Tool kit
- ☐ Small block and tackle or winch

CANOE/DUCK BOAT

- ☐ Paddles/oars
- ☐ Bailing pail
- ☐ Extra boat plug
- ☐ Rope
- ☐ Tool kit
- ☐ Small block and tackle or winch
- ☐ Life jackets
- ☐ Sounding device
- ☐ Patch kit

COMMUNICATIONS

COMMUNICATIONS

- ☐ HF radio with antenna
- ☐ Marine radio with antenna
- ☐ Satellite phone
- ☐ Personal locator beacon (PLB)
- ☐ SPOT
- ☐ Personal emergency locator transmitter (ELT)

HUNTING EQUIPMENT

BASIC HUNTING EQUIPMENT

- ☐ Survival kit
- ☐ Small first aid kit
- ☐ Licence/tags
- ☐ Firearm
- ☐ Ammunition
- ☐ Firearm cleaning kit
- ☐ Electrical tape or muzzle covers
- ☐ Binoculars/ spotting scope
- ☐ Map and compass/GPS
- ☐ Flashlight, head lamp
- ☐ Spare batteries
- ☐ Sheath knife and belt
- ☐ Folding pocket knife
- ☐ Sharpening tool
- ☐ Strike-anywhere matches/lighter
- ☐ Waterproof match case
- ☐ Fire starter
- ☐ Flint
- ☐ Single burner camp stove and with fuel
- ☐ Thermos bottle
- ☐ Water
- ☐ Lunch
- ☐ Tea pail
- ☐ Toilet paper
- ☐ Rain gear
- ☐ 2-day supply of prescription medicine (if necessary)
- ☐ Axe
- ☐ Folding saw
- ☐ Snow knife
- ☐ Trail snow shoes
- ☐ Bug jacket
- ☐ Insect repellent
- ☐ Communication device

SURVIVAL KIT

- ☐ Ground-air signal card
- ☐ String saw
- ☐ Strike-anywhere matches/lighter
- ☐ Waterproof match case
- ☐ Fire starter
- ☐ Signal mirror
- ☐ Whistle
- ☐ Small flashlight (extra batteries and bulb)
- ☐ Multipurpose tool (Leatherman)
- ☐ Spare compass
- ☐ Heavy duty garbage bag
- ☐ Orange plastic sheet
- ☐ Survival blanket
- ☐ Flagging tape
- ☐ Fishing line and hooks
- ☐ Snare wire
- ☐ Needle and thread
- ☐ Emergency candle(s)
- ☐ Emergency rations
- ☐ High energy food bars
- ☐ Chocolate
- ☐ Dried soup mix
- ☐ Tea bags
- ☐ Playing cards
- ☐ Pocket book
- ☐ Metal container to hold survival gear and double as a tea can

EMERGENCY FIRST AID KIT

- ☐ First aid handbook
- ☐ Band aids (6 – 12)
- ☐ 10cm x 10cm sterile bandage
- ☐ Roll of gauze bandage
- ☐ Adhesive tape
- ☐ Petroleum jelly
- ☐ Antiseptic
- ☐ Tylenol
- ☐ Razor blade
- ☐ Small scissors
- ☐ Tweezers
- ☐ Small mirror
- ☐ Mole skin
- ☐ Burn ointment
- ☐ Calamine lotion – small bottle
- ☐ Pencil and notebook
- ☐ Super glue

BEAR SAFETY

- ☐ Bear deterrents
- ☐ Bear deterrent launcher
- ☐ Bear spray
- ☐ Emergency whistle

PERSONAL GEAR

TOILET ARTICLES

- ☐ Biodegradable soap/shampoo
- ☐ Hand cream(s)
- ☐ Tooth brush and toothpaste
- ☐ Dental floss
- ☐ Towel and washcloth
- ☐ Baby wipes
- ☐ Prescription medicines
- ☐ Spare glasses/ contacts
- ☐ Feminine products
- ☐ Razor
- ☐ Shaving cream
- ☐ Toilet paper
- ☐ Sunglasses
- ☐ Sunscreen

CLOTHING

- ☐ Duffle bag
- ☐ Light socks (not cotton)
- ☐ Wool socks
- ☐ Boots (leather or rubber)
- ☐ Spare laces
- ☐ Winter boots
- ☐ Extra duffels/ liners
- ☐ Silicone boot dressing
- ☐ Camp shoes
- ☐ Underwear (not cotton)
- ☐ Tee shirt(s) (not cotton)
- ☐ Long sleeved shirt(s) (not cotton)
- ☐ Sweater(s)
- ☐ Fleece hoodie
- ☐ Pants
- ☐ Wind pants
- ☐ Coveralls
- ☐ Wool pants
- ☐ Snowmobile pants
- ☐ Vest
- ☐ Jacket
- ☐ Parka
- ☐ Hat or toque
- ☐ Neck warmer
- ☐ Balaclava
- ☐ Gloves and mitts
- ☐ Moccasins
- ☐ Rain gear
- ☐ Dry bags

CAMPING EQUIPMENT AND SUPPLIES

SHELTER

- ☐ Tent
- ☐ Tarp
- ☐ Poles
- ☐ Tent pegs
- ☐ Rope
- ☐ Sleeping bag
- ☐ Foam pad or Therm-a-rest®
- ☐ Caribou/muskox hides

LIGHTING

- ☐ Lantern
  - ▫ fuel
  - ▫ spare mantles
- ☐ Flashlight

spare bulb and batteries

- ☐ Headlamp
- ☐ Candles

HEAT SOURCE

- ☐ Fire
- ☐ Wood stove
  - ▫ Chainsaw and oils
  - ▫ Axe
  - ▫ Folding saw
  - ▫ Stove pipe
  - ▫ Damper
- ☐ Camp Stove
  - ▫ Naphtha or white gas
  - ▫ Spare generator
- ☐ Kerosene heater
  - ▫ Kerosene
- ☐ Propane heater
  - ▫ Propane

PROCESSING EQUIPMENT AND SUPPLIES

COOKING

- ☐ Strike-anywhere matches
- ☐ Frying pan
- ☐ Cook set
- ☐ Tea or coffee pot
- ☐ Cooking utensils
- ☐ Forks, knifes, spoons
- ☐ Plates
- ☐ Bowls
- ☐ Cups
- ☐ Water jug/pail
- ☐ Wash basin
- ☐ Cooler(s)
- ☐ Food
- ☐ Dish cloth/ tea towel
- ☐ Soap

SUPPLIES

- ☐ Rubber or latex gloves
- ☐ Paper or cloth towels
- ☐ Cloth bags
- ☐ Plastic bags
- ☐ Cheese cloth
- ☐ Saw/hatchet
- ☐ Meat knifes/ulu
- ☐ String
- ☐ Rope
- ☐ Pack frame
- ☐ Cooler(s)
- ☐ Lantern
- ☐ Headlamps
- ☐ Block and tackle or winch

ADRENALINE RUSH

It is natural for a hunter to be excited when spotting the target animal. In some cases, this excitement can cause the body to suddenly release adrenalin. This can cause a hunter to become very anxious. If not controlled, this anxiety can be so overwhelming it overrides all rational thinking. This phenomenon is called an 'adrenaline rush'.

An adrenaline rush can occur before, and after, a hunter has taken a shot.

Before a shot, this rush may cause the hunter to freeze and be unable to pull the trigger. It can also cause a hunter to shake so badly that they cannot hit their target.

In the worst situations, a hunter imagines seeing or hearing things and fires without thinking. This can result in tragedy, with hunters shooting other hunters.

Hunters who get an adrenaline rush after the animal has been killed often shake so badly they must sit down rather than risk falling down. There have been cases where the hunter was so excited to get to their downed animal they have walked off elevated tree stands.

An adrenaline rush can be experienced by any hunter, both novice and experienced. The experienced hunter has learned to recognize when they are getting overly anxious and can take simple steps to relieve their anxiety.

SIGNS OF AN ADRENALINE RUSH

Symptoms include sweating, dry mouth, increased heart rate, heart palpitations, tremors (some severe), numbness or tingling, shallow or rapid breathing, loss of urinary and/or bowel control, confusion, poor judgment, poor decision-making, impulsiveness, muscle tension, fatigue, nausea, and dizziness. Most people have two or more of these symptoms during an attack.

Everybody reacts to an adrenaline rush in a different way. In minor cases, it is just a pounding in the chest and a shortness of breath.

In extreme cases, it has been known to induce heart attacks. Hunters can do crazy things, like repeatedly actioning their firearm and emptying all the rounds onto the ground without ever pulling the trigger.

Adrenaline rushes affect a hunter's shooting. When your breathing and heart rate skyrocket, it is not the best time to be lining up the cross hairs on an animal.

DEALING WITH AN ADRENALINE RUSH

You may or may not get an adrenaline rush in your lifetime. It may be an isolated incident or an every time occurrence.

If you do get an adrenaline rush, follow these recommendations to deal with the adrenaline surge:

Breathe

Breathe deeply, but quietly. It will clear your head and help calm your nerves.

Without holding your breath at any point, slowly inhale, pushing your stomach out, and exhale, pulling your stomach toward your spine. Try closing your eyes. Relax your shoulders.

Practice this technique until you are able to relax quickly during the breathing.

Take your time

You may want to rush the shot because you are afraid of missing the hard-earned opportunity. Force yourself to slow down. Rushing the shot is the main cause of a poor hit, a miss or hitting a wrong target. Hunters can calm themselves by repeating something like 'Take your time, take your time' or 'Pick a spot, pick a spot.'

Wait, breathe slowly and (if possible) get a solid rest to help steady your firearm. Be sure of your shot, concentrate on a vital target area, and slowly and gently squeeze the trigger.

PREVENTION

Practice your deep breathing while doing target practice. Get a good night's rest the night before your hunting trip.

While hunting, mentally rehearse the actions you need to take when the animal is within shooting range. When the animal is approaching, keep repeating in your head the words: Take your time, breathe, pick a spot, squeeze the trigger.

When an adrenalin surge occurs, you will be able to control your anxiety and make your shot confidently and accurately.

Practice

Regularly practice your deep breathing technique so that when you use it in a hunting situation you don't get dizzy due to the increased amount of oxygen in your system.

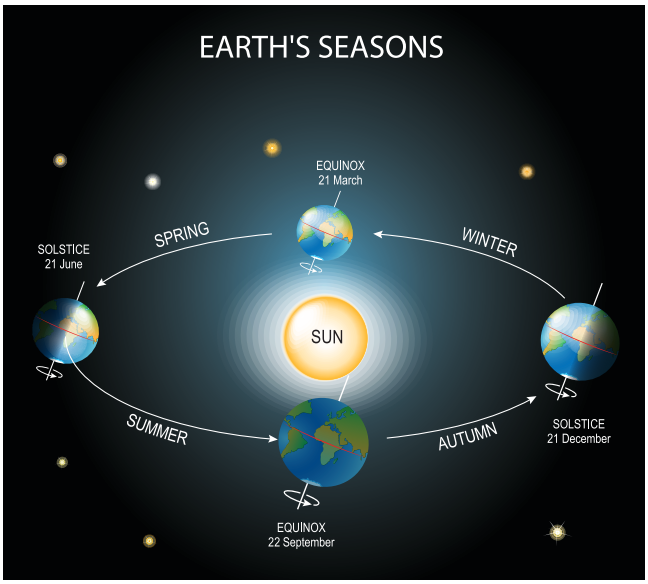
SUN, MOON, STARS AND SNOWDRIFTS

Hunter's today have access to accurate topographical maps, compasses and hand held Global Positioning Systems (GPS), but when the batteries on the GPS die or the compass is left at home or camp, traditional techniques of using the sun, moon, stars and snowdrifts to wayfind may be the only means to navigate.

THE SUN

The most fundamental method for navigating is to use the sun.

We know the sun rises in the east and sets in the west. In reality, unless you are on the equator, the sun only rises due east and sets due west on two days of the year, at the equinoxes. An equinox occurs twice a year, around March 21 and September 22. All other days of the year it rises somewhere north or south of due east, depending on the season.

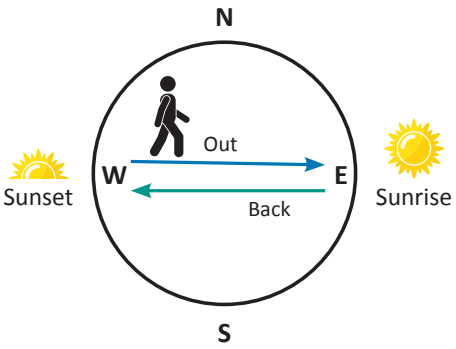


During the spring and summer, the earth's North Pole is pointed towards the sun. The sun rises north of due east and sets north of due west at this time of year.

During fall and winter, when the North Pole is pointed away from the sun, the sun rises south of due east and sets south of due west. The higher the latitude and the further the date is from an equinox, the further north or south the sun rises and sets.

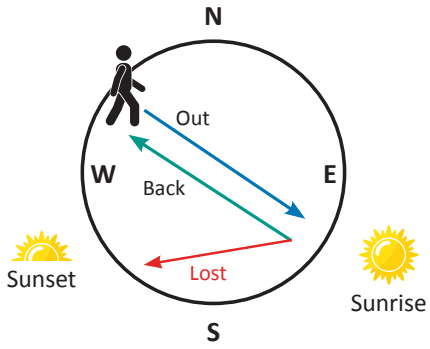
A hunter near Yellowknife can walk towards the sunrise in March or September, turn around at the end of the day and walk back towards sunset and probably find their way close to their starting point (out east, back west).

A hunter doing the same thing in June or December would get lost.



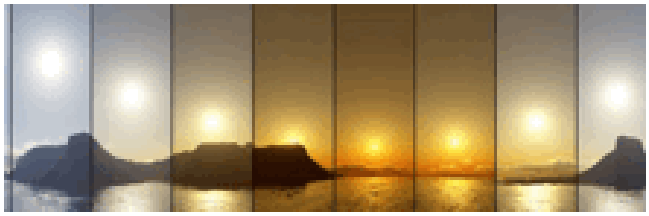
September or March near Solstice

In mid-winter, a hunter walking out towards the sunrise would be heading southeast. To get back to their starting spot at the end of the day he or she would have to walk back northwest. If they walked toward the sunset they would be heading in the wrong direction.



Mid-winter near Yellowknife

Above of the Arctic Circle in June the sun rises so far north of east and sets so far north of west that these points actually overlap – in other words the sun doesn't set.

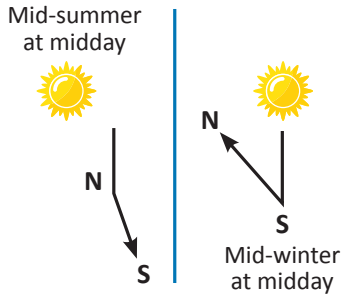


Determining South – A shadow cast by the midday sun can be used to determine which direction is south. For navigation purposes, midday is the moment when the sun is highest in the sky.

During mid-summer the North Pole is pointing towards the sun and the shadow of a fixed object points due south at midday. The base of the object will indicate north.

During mid-winter the North Pole is pointing away from the sun and the shadow points north instead of south.

It becomes more difficult to use the sun to accurately determine direction the further north you go. However, an awareness of the seasonal variations and practice can help you to use the sun to determine direction at any time between sunrise and sunset.



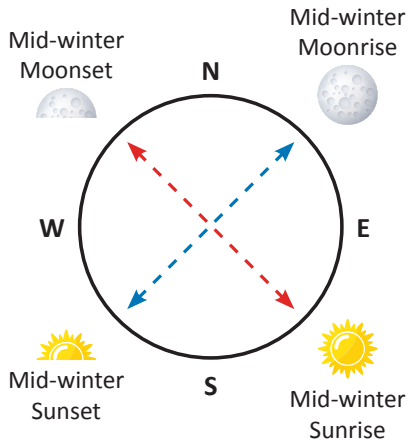
The sun does not rise above the horizon north of the Arctic Circle in December.

MOON AND STARS

The rising and setting of the moon roughly indicates east and west directions. Depending on the season, the moon's exact location on the horizon is somewhere north or south of due east or west on all but two days of the year.

The moon produces no visible light of its own. The bright side of the moon is only a reflection of the sun's light. The north or south direction of the rising or setting moon is opposite to that of the rising and setting of the sun.

During mid-winter, the sun rises south of due east and sets in the southwest, while the moon rises north of due east and sets in the northwest. The direction of sunset and moonrise occur opposite each other as shown in the figure.



Mid-winter near Yellowknife

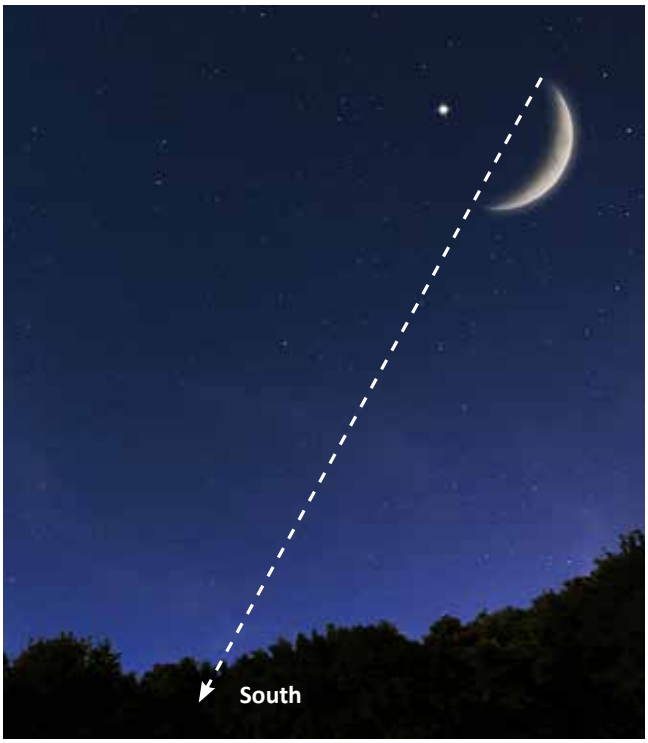
Moonrise and sunsets do not happen at the same time. The moon can rise before the sun has set or several hours afterwards. The timing of moonrise provides more clues as to which direction is east or west.

If the moon rises in the sky before the sun has set, the illuminated side of this late afternoon or evening moon will face the west. If, however, the moon rises in the night sky after midnight, the illuminated side will be facing the east.

You can use the moon to get a good estimate of the direction of south any time there is a partial shadow on the moon, between Full and New Moon.

You can get a rough idea of south from your position on Earth. The closer the moon is to the horizon, the more accurate your estimate of south will be.

You can do this by imagining a line drawn through the points where the shadow touches the bright surface on each side of the moon. Continue the line on that same angle down to the horizon to find south (see photo below).



THE NORTH STAR

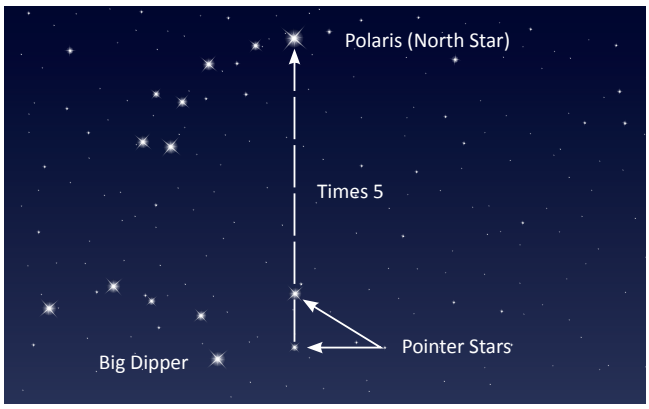
The North Star is a valuable navigation aid. It is located almost above polar north. The North Star does not rise or set during the night. It remains almost in the same spot above the northern horizon all year, while other stars circle around it.

To find the North Star, locate the handle of the Little Dipper. It is the brightest of the Little Dipper's seven stars, but not the brightest star in the sky.

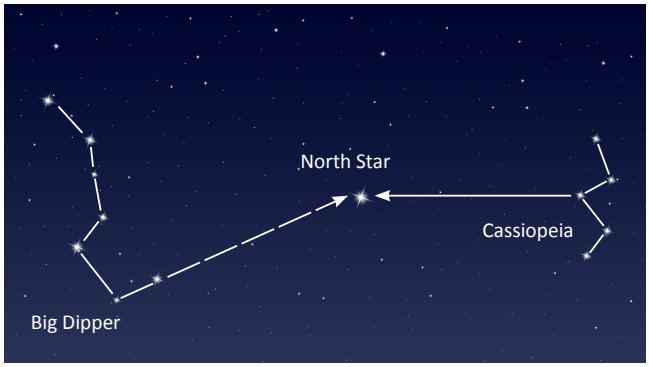
The Little Dipper is a faint constellation in the night sky. You may need other stars to find it.

The Big Dipper and Cassiopeia (shaped like a large W) can help you find the Little Dipper and the North Star. The Big Dipper and Cassiopeia never set. Both are always visible on a clear night. You can find them opposite of one another as they rotate around the North Star. Their position in the night sky changes from season to season.

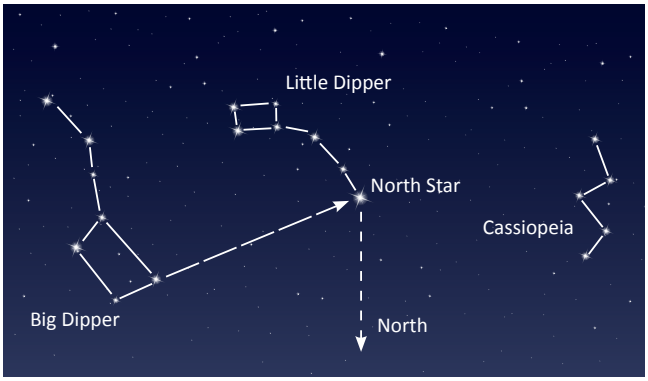
A common method of finding the North Star is to follow the line of the 'pointer' stars in the cup of the Big Dipper. These are the two stars farthest from the 'handle'. Draw an imaginary line through the two pointer stars and extended it by five times the distance between them to guide you to the North Star, the brightest star you come to, as shown in the diagram below.



Locate Cassiopeia to make sure it really is the North Star. The North Star appears about halfway between Cassiopeia and the Big Dipper (see illustration below).



Once you find the North Star, draw an imaginary line down to the earth. This is true north. You can easily figure out the south, east and west directions by facing north.



SNOWDRIFTS

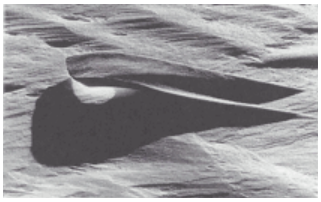
Winter snow can cover landmarks and other potential directional indicators used at other times of the year. It can be difficult to tell if you are on land or frozen water. Falling or blowing snow can also reduce visibility and markers. In these situations, hunters use drifted snow to determine direction.


Photo by: T. Macintosh

A prevailing wind blows most often across a particular region and during most of year. These winds are named in terms of where the wind is blowing from. For example, a prevailing northwest wind blows from the northwest. Some regions have a more fluctuating pattern of air movement than other regions. It is important to be aware of these conditions.

A responsible hunter knows which way the prevailing winds blow and the characteristics of the snowdrifts that form from these winds.

Snowdrifts formed by the prevailing winds are different from other snowdrifts. They are long lasting, dense and hard. They also contain drifts shaped like a tongue elevated above the ground, as shown in the photograph.



These tongue-like drifts point into the prevailing wind. If the prevailing wind in the area is from the northwest, the tongues of these drifts point to the northwest. This is one of most reliable direction indicators when navigating across large, flat areas with few landmarks or when visibility is limited.

This is a very simple description of prevailing winds and snowdrifts. It is meant as an example of a natural wayfinding method. The best way to learn this skill is from skilled hunters.

Navigating using snowdrifts as a direction indicator is not easy. A hunter needs a keen sense of observation and an eye for detail, especially when visibility is poor, and to be aware of any shifts in wind direction. If a hunter fails to do this, they could head in the wrong direction and become lost.

Resources: The DVD "Anijaarniq" is an excellent resource on wayfinding above the treeline and on the ocean ice.

This interactive DVD describes how the winds, snow and snowdrifts, sea ice and stars can be used to find direction. It was developed by the Nunavut Department of Education and produced by the Nunavut Research Institute.

MAPS

A map is one of the most important navigational tools available to modern hunters. Map reading is a fundamental skill all hunters must learn.

Maps show how things are related to each other by distance, direction and size. Maps range from a simple hand drawn sketch, showing only basic information needed, to highly detailed maps produced from aerial photographs.

The best type of map for hunting is a topographical (or 'topo') map produced using the National Topographical System (NTS). A 'topo' map is a detailed and accurate graphic representation of a portion of the Earth's surface. The proportion chosen for a particular map is its scale.

Scale is the relationship between distance on the map and distance on the ground. It is usually given as a fraction or a ratio – 1/10,000 or 1:10,000. This scale means that one unit of measurement on the map – one inch or one centimetre – represents 10,000 of the same units on the ground. The first number (map distance) is always 1. The second number (ground distance) is different for each scale. The larger the second number, the larger the area of the earth shown on the map.

*"**Small-scale maps**" show a large area of Earth in less detail.*

*"**Large-scale maps**" show a small area of Earth in great detail.*

A 1:50,000 scale map covers an area of the earth of about 40 kilometres east-west, 28 kilometres north-south. On a 1:50,000 scale map 1cm = 0.5km.

This is the most detailed scale available from the Government of Canada. 1:50,000 scale topo maps are available for all areas of the Northwest Territories.

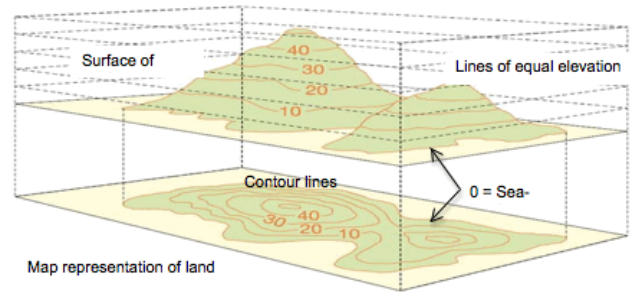
1:50,000			
	1:250,000		

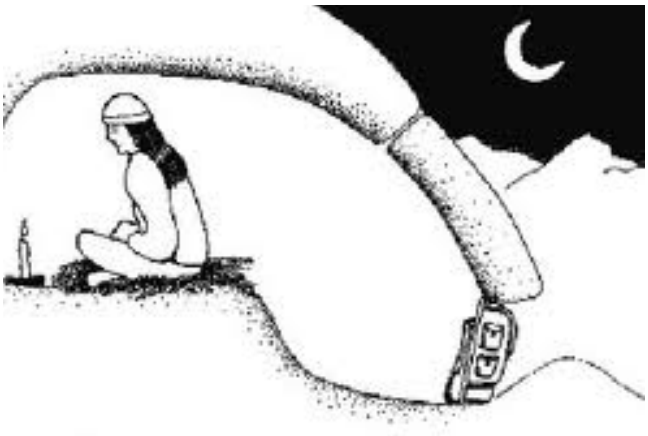
A 1:250,000 scale map covers the same area of land as sixteen 1:50,000 scale maps, or about 160 kilometres east-west, 112 kilometres north-south. On a 1:250,000 scale map 1cm = 2.5km.

Topographic maps show the location of lakes, rivers, streams and other features, such as swamps and man-made landmarks. Maps also illustrate the shape and elevation of surface features using contour lines.

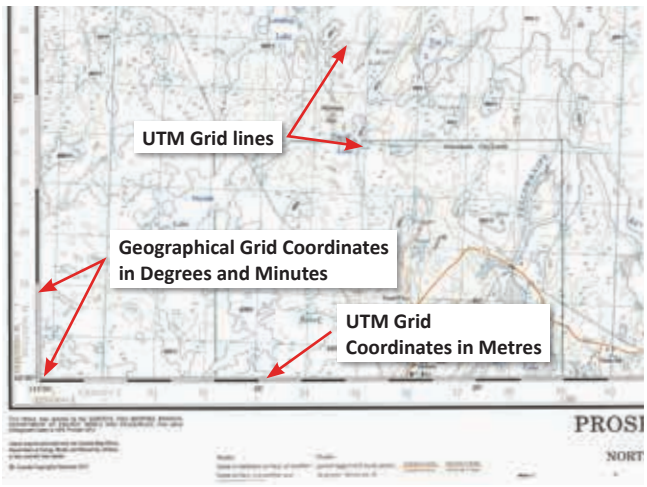
Contour lines on topographic maps provide details about the actual land surface through their shape and spacing.

Contour lines represent connected points of equal elevation on the Earth's surface. They provide a means of displaying three-dimensional (3D) information on a two-dimensional (2D) sheet of paper (see diagram below).





The vertical difference in elevation on the ground between contour lines is called the contour interval. The contour interval is constant on any map. Every fourth or fifth contour line is an index counter line. These lines are labeled with their elevation for reference and are usually darker than the other contour lines. Contour lines on a topographical map are coloured brown.



Closely spaced contour lines indicate steep bluffs or cliffs. Widely spaced contour lines indicate flat or gently sloping ground. V-shaped contour lines indicate uphill or upstream.

Topographical maps also have a geographic grid (latitude/longitude) and a UTM grid (kilometres). These grids help determine the precise position of places and things on the map.

Topographical maps are a useful planning tool. Once you learn to read these maps, you can use them to identify the places with the highest potential of hunting success, plan the safest and most efficient route to those sites, and identify the equipment and supplies needed to get there and back.

Maps can be used as a stand alone navigational tool, but they are most effective when used in combination with a compass or GPS.

Anyone who spends time in the outdoors should have a basic understanding and the skills to properly use a map and compass. A compass is useless without a map for anything other going in a straight line. Any map, even a hand drawn map, is better than no map. A map provides the directions you need and the compass is the tool needed to follow them.

Hunters travelling on large bodies of water or the ocean should have nautical (or hydrographical) charts. These charts show the depth of water, obstructions and other dangers to navigation, and the location and type of navigation aids available.

Resources

Further training is needed to use these positioning grids. This training can be self-taught using books and the internet. Training can also be gained by attending a map reading and/or orientation training course.

Remember, hunters with good map and compass skills live in your community. They can be your best resource for learning how to navigate accurately.

An excellent source of information on maps and how to use them is found on the Natural Resourced Canada website at www.nrcan.gc.ca.

Topographical maps are available from the following locations:

Canada Map Office
Natural Resources Canada
244 King Street West, Suite 010
Sherbrooke, QC J1J 2E8
(P) 1-800-661-2638 or 1-819-564-4857
(F) 1-819-564-5698
(E-mail) topo.maps@NRCan.gc.ca

Federal Publications Inc., 1998 - 2013
425 University Avenue, Suite 401
Toronto, ON M5G 1T6
(P) (416) 860-1611 or toll-free 1-888-433-3782
(E-mail) info@fedpubs.com

MSS Ltd.
47 Studney Drive
Hay River, NT XOE 0R6
(P) 1 888 397 0886
(E-mail) sales @mssltd.com
www.mssltd.com

Nautical charts are available for the Mackenzie River and Delta, Beaufort Sea, and Great Bear and Great Slave lakes. Charts can be obtained from:

Federal Publications Inc., 1998 - 2013
425 University Avenue, Suite 401
Toronto, ON M5G 1T6
(P) (416) 860-1611 or toll-free 1-888-433-3782
(E-mail) info@fedpubs.com

MSS Ltd.
47 Studney Drive
P.O. Box 4623
Hay River, NT X0E 1G3

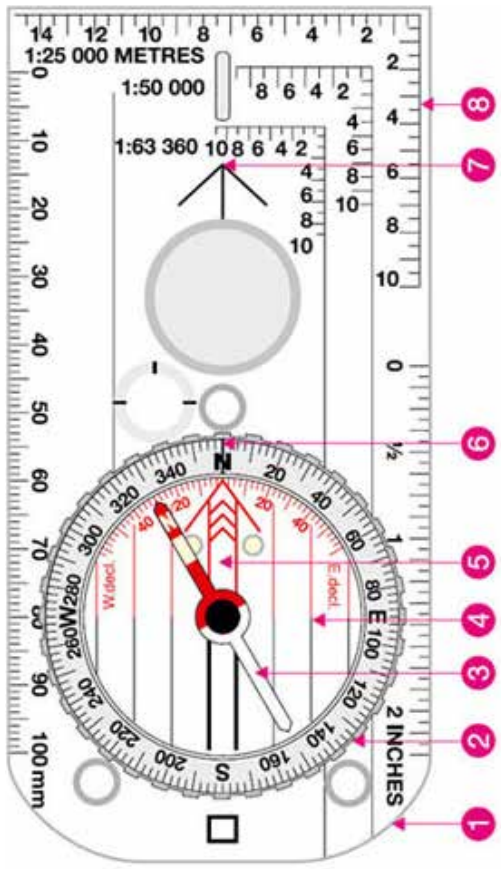
COMPASS

Compasses are some of the oldest navigational tools in history. They provided early explorers with a reliable means of direction finding when the sun or stars were not visible.

A hand-held magnetic compass is the most appropriate compass for the hunter.

This type of compass contains a small, elongated, permanently magnetized needle placed on a pivot allowing the needle to rotate freely in the horizontal plane.

The handheld compass is still a very practical and reliable direction-finding tool. A hunter should always carry a compass.

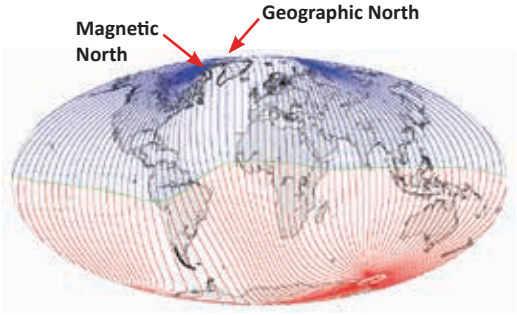


1. Map scales 1:25,000, 1:50,000 and metric measurer (known as Romer scales).
2. Direction of travel arrow – the big arrow at the end of the baseplate. This is the arrow you will use to point the compass when taking a bearing.
3. Index line or mark where bearings are read.
4. Declination settings.
5. Orienting arrow – fixed and aligned to north within the compass housing. Used to orient yourself (or the map) by lining it up with the magnetic needle. **You never follow your orienting arrow**.
6. Compass lines – on the bottom of the baseplate (also called 'orienting lines).
7. Magnetic needle – red end for north, white for south.
8. Compass housing – also known as the compass wheel, with a mark every two degrees covering 360 degrees, and N-S-E-W (the 'cardinal points').
9. Baseplate – clear plastic base so you can see map underneath.

The earth's magnetic field exerts a force on the compass needle causing it to rotate until it comes to rest in the same direction as the magnetic field. This direction is north over much of the Earth.

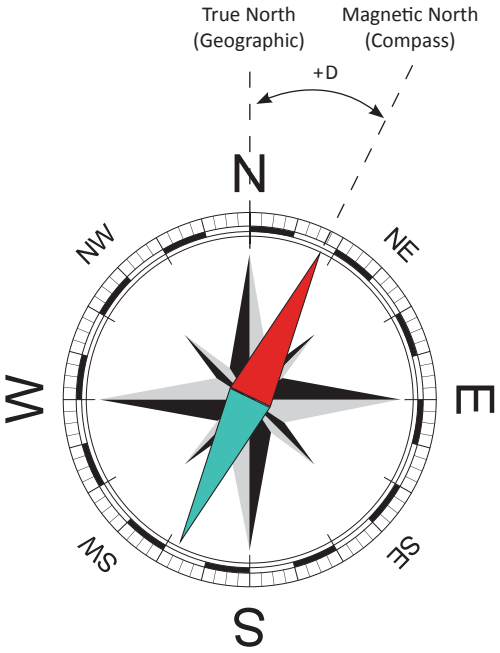
Compass Declination

It is important to remember that a compass needle points to magnetic north, not to true north. This angular difference, called **declination**, must be considered whenever using your compass.



Magnetic Field Direction (2010)

The angle of declination can vary widely depending on where you are in the Northwest Territories. Declination increases with latitude (how far north) and how far west you are from the magnetic pole.



For example, if you are in the extreme southeast corner of the NWT, the difference between true north and magnetic north is less than seven degrees. At Sachs Harbour, the difference is more than 25 degrees.

Declination for all of the NWT is easterly.

In some areas of the high Arctic variations in the Earth's magnetic field cause such large errors that magnetic compasses are useless. Other instruments must be used for navigation.

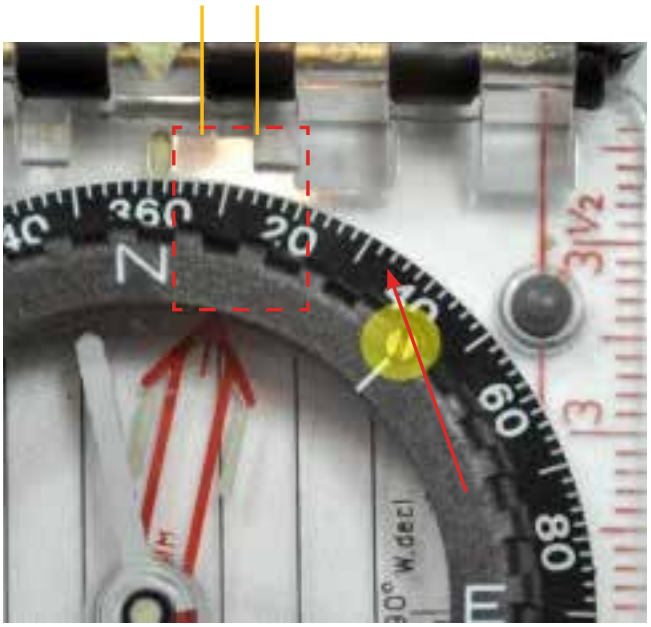
The exact location of the magnetic pole changes over time. The compass user must account for this change when calculating declination. The local magnetic declination is given on most maps, along with the date the map was printed and the predicted amount of declination change per year. Use this information to orient the map with a compass parallel to true north.

Maps are always drawn in their true perspective. All bearings you compute from them with the protractor function of your compass (not magnetic needle) will be a true geographic direction. This "true" or map bearing must be changed to a magnetic bearing and your compass adjusted accordingly.

The three ways to make the conversion are:

1. Using a compass with a mechanical device for offsetting the difference.
2. Applying the rhymes, 'declination east, compass least' (subtract east declination from your map direction) or 'declination west, compass best' (add west declination to your map direction).
3. Using an online declination calculator before leaving. In some calculators you enter the latitude and longitude of a position or simply click your position on a map and the declination information is displayed. Two examples are:
   - http://geomag.nrcan.gc.ca/calc/mdcal-eng.php
   - http://magnetic-declination.com

Declination set at 10 degrees east of Geographic or True North



Screw for adjusting declination

USING A COMPASS

Make sure you are familiar with the main features of the compass before using it to navigate. Training is required to properly use a compass. You should take a class on map and compass use to learn and fine-tune these skills.

Orienting Your Map

This simple skill is one of the most important when using a compass. Maps must be oriented to true north to give a proper picture of the area they cover.

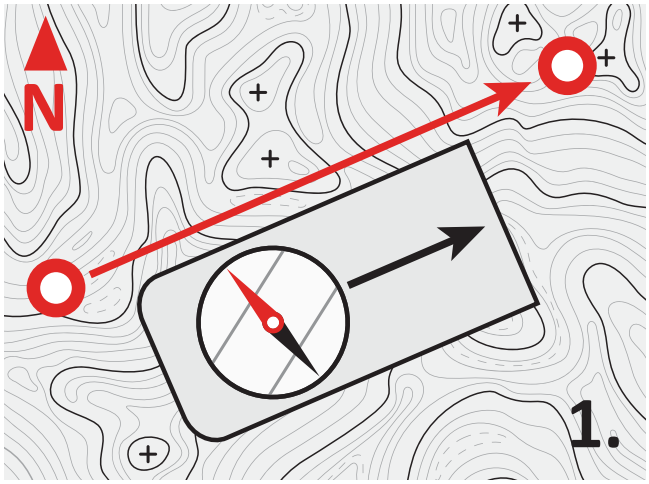
1. Set the declination of the compass for your location. Use declination information provided on the margin of the map or available online.
2. Set the compass to 360 degrees (North).
3. Hold the map horizontally or place it on a flat horizontal surface.
4. Place the compass flat on the map with the side of the baseplate against one of the north-south grid lines on the map with the 360 degree mark pointing to the top of the map. Make sure you use true north-south grid lines. There are grid lines on maps (survey lines and UTM grids) that don't point to true north. Map borders always point to true north.
5. Carefully turn the map with the compass until the north end of the magnetic needle is aligned with the orienting arrow or marks of the compass.

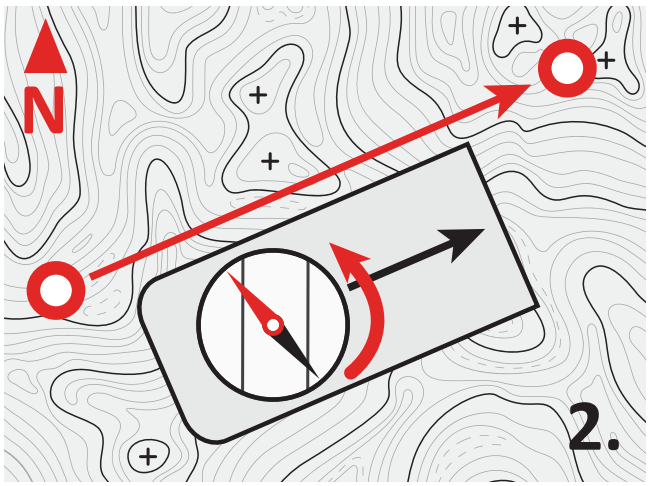
The map should now be oriented to the land. This makes it much easier to read.

Getting a Bearing from a Map

A bearing is a measurement of direction between two points; your starting point and where you want to go (destination). A bearing shows you the direction to take to get to your destination or next travel point. To get a bearing from a map:

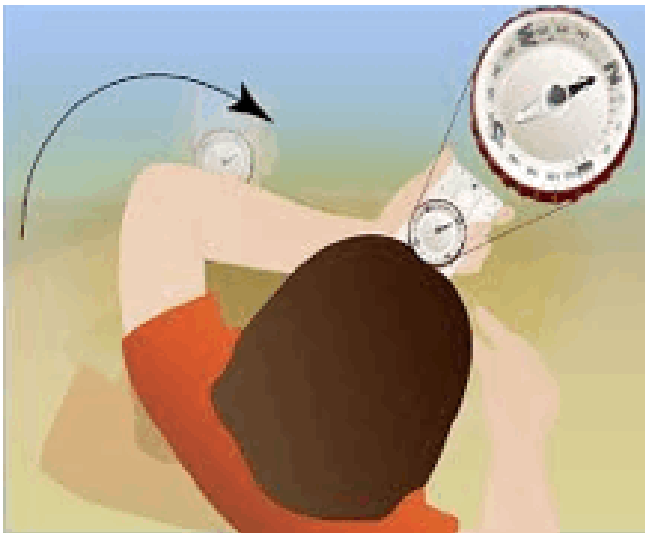
1. Place the compass on the map so the direction of the travel arrow is lined up with the way you want to go.
2. Once you have lined up the two points, press the baseplate firmly down on the map to keep it in place. Then turn the compass housing so the orienting lines engraved in its plastic base are parallel to the north arrows drawn on the map. Make sure the orienting arrow points north and not south.

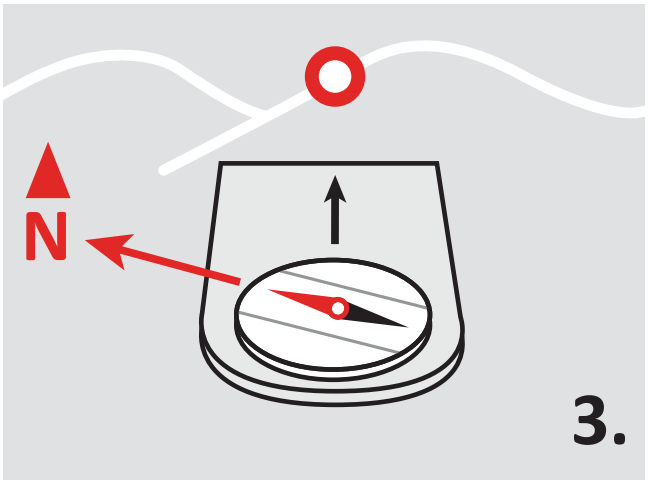




The bearing is indicated at the index line on the compass base. Before you follow the bearing on the ground, make sure you have adjusted the compass for declination.

Don't worry about the direction the magnetic needle is pointed. It has nothing to do with taking a bearing from a map.





Following the bearing on the ground:

1. Take the compass off the map and hold the compass at waist height in front of you so the direction of travel arrow points directly ahead of you.
2. Keep holding the compass in front of you with the direction of travel arrow pointing in the direction you are facing. Walk your body around until the compass needle is aligned with the orienting arrow on the base of the compass housing. The direction arrow now points in the direction you need to go.
3. Pick out a prominent object ahead of you along the direction of travel. Go to it and repeat the process. This way you can detour around obstructions, but still stay on your bearing.

Read the Instructions

All good compasses come with detailed instruction books. Read them and practice often to make sure you are using the compass effectively.

It is important to be as precise as possible when taking a bearing from a map. Any mistakes in taking the bearing will be magnified when you try to follow it on the ground.

GLOBAL POSITIONING SYSTEM (GPS)

Global Positioning System (GPS) devices are a relatively new navigation invention.

The GPS is based on finding a location on Earth using a specialized network of 24 satellites orbiting the Earth twice a day. These satellites are constantly transmitting radio signals towards Earth.

A GPS receiver calculates the difference between the time a satellite sends a signal and the time your system receives it. The receiver uses the information gathered from at least three satellites to triangulate your exact position. When moving, a GPS receiver can determine your direction of travel, your speed and how long it will take to reach your destination.

The GPS receiver makes all these navigational calculations in a matter of seconds. This saves considerable time when making navigational calculations.

The accuracy of GPS receivers is continually improving. Many current receivers can provide locations within 15m. Future advances in GPS technology promise to improve accuracy to within less than a few metres.

While a GPS is a powerful and useful navigational tool, it does not make map and compass skills obsolete. Think of your GPS receiver as an electronic companion to your map and compass.

Remember, GPS units are battery-powered electronic devices. Batteries can die, electronics can fail and units can be damaged. Always carry spare batteries or a means of recharging them. If the GPS is not waterproof, keep it in a dry bag and shield it from the elements. Take your GPS out from time to time to make sure it is still working.

Always carry paper versions of the topographical maps for the area where you are hunting; even if your GPS unit can display electronic versions.

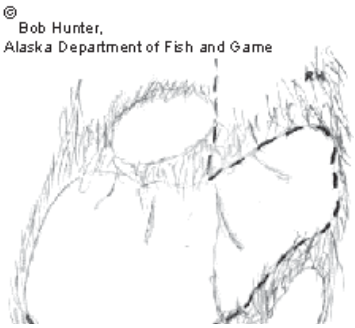
What a GPS Can Do

GPS receivers intended for hunters have the following features:

- **A Locator** – A GPS unit accurately triangulates your position and gives your location in coordinates: latitude and longitude or UTMs.
- **Point-to-point Navigation** – By entering your starting point and the coordinates of your destination (taken from a map, resource book, website, mapping software program or other source), a GPS can give you a straight-line, point-to-point bearing and the distance to your destination. Since trails rarely follow a straight line, the GPS bearing will change as you go. The indicated distance to travel will decrease as you approach your goal.

Waypoints are locations or landmarks along your route that are recorded as coordinates and stored in your GPS.

- **Route Navigation** – By combining multiple waypoints on a trail, you can move point-to-point with intermediate bearing and distance guides. Once you reach the first predetermined waypoint, the GPS receiver can automatically point you to the next one or you can do it manually.
- **Keep a Track** – One of the most useful functions of a GPS unit is its ability to lay a track or a virtual 'breadcrumb trail' of where you've been. You can configure a GPS to automatically record 'trackpoints' over intervals of either time or distance. To retrace your steps, simply follow the GPS bearings back through the sequence of trackpoints. The shorter the distance between trackpoints, the more accurate the path back will be. Tracking also allows you to record time and distance traveled.


© Bob Hunter, Alaska Department of Fish and Game

CHOOSING A GPS RECEIVER

There are many GPS devices available. Shop around to find the one that is most suited to your needs.

You can choose from many features. Some of the basic features a hunter should look for in a GPS unit are:

- **Water-resistant/Waterproof** – Get a water-resistant device. An IPX7 designation is preferred. It means the GPS case can withstand accidental immersion in one metre of water for up to 30 minutes.
- **Mapping Capabilities** – Most GPS units come with some sort of base map. The map is not usually detailed enough for hunting. A GPS for hunting should be capable of downloading maps that can show the lay of the land in major detail. Topographical base maps are best.

- **Electronic Compass** – Most GPS units provide direction of travel only when you are moving. An electronic compass that determines direction while standing still is a good function for hunters.
- **Screens** – The larger the screen size, the easier it is to read data and map details. A colour display makes reading data and maps very easy, especially when navigating on water near land. Touchscreen-based GPS devices may have large screens, but are slower to load. They also use more power and are harder to see in direct sunlight. Ask to see a demo model or pay special attention to the screen specs before buying online to find a screen that will work for you.
- **Battery Life** – Long battery life is best. Make sure the battery life lasts no less than 12 to 15 hours. A GPS requires considerable power. A practical device should use standard batteries (AA or AAA) that can be replaced easily on the trail. Lithium batteries are recommended for newer GPS models.
- **External Power Source** – A device with a power cable that can plug into a power outlet on your snowmobile, ATV, boat or vehicle is preferred.
- **A Lot of Memory** – This allows you store as many significant points as possible. More memory lets you record good hunting locations and the many trackpoints needed to find your way to and from those spots. Make sure your device has at least 14 MB or more; 25 MB of memory is ideal. You should get a unit with both internal and external memory. This gives you the option to install maps and data downloaded from your computer as well as the ability to use a micro SD card in your GPS device. Additional information like area-specific topographical maps, charts or city navigational data can be loaded onto the SD card.
- **Portability** – Your GPS should be lightweight and easily portable.

LEARNING HOW TO USE YOUR GPS

The best way to learn how to use your GPS unit is to attend a training course. The benefit of a course is that you have the opportunity to ask questions if something is not clear. Good courses give you the opportunity to practice the skills that you are taught.

All good quality GPS receivers come with a detailed owner's manual and reference guide showing how to use all the features and functions on the specific unit.

It is easier to learn to use your GPS if your hunting companions have the same make and model of GPS. You can learn from each other.

Map Coordinate Scale and Protractor

A coordinate scale and protractor is a handy mapping tool used to plot or find grid coordinates on a map and to determine angles or bearings. It is printed on clear plastic so that map details can be seen through it.

With a map coordinate scale and protractor you can determine the exact coordinates for locations on a map quickly. Those coordinates can then be entered into your GPS as waypoints for the route you wish to follow.

The map coordinator scale and protractor also makes it much easier for you to transfer waypoints from your GPS on to a paper map.

There are a number of sites online that can help you to learn how to use this handy tool. One example: www.klfaru.net/plot_blust.htm.