

OUTDOOR SKILLS

CHALLENGE KIT



E-Patches & Crests
A Division of 1497202 Alberta Ltd.

Teachings: Tying Knots

THE "S" KNOT

This is a good knot for joining two ends of ropes or lines.



1 Start by placing the ends of two ropes parallel to each other.



2 Using one of the free ends, make four round turns over both ropes before passing the end down the centre of the knot.



Teachings: Tying Knots

THE "S" KNOT

3 Take the second end, make four similar turns over both ropes, and pass the end down the centre of the second knot.



4 Pull both standing parts, and the two knots will slide together to form a secure "S" knot.



Teachings: Tying Knots

HALF-S

This knot is a secure slip knot (also called a hitch) which you can use to fasten a rope to a ring or pole. As the name implies, the Half-S is identical to the first part of the “S” knot show before.



1 Start with a bight around or through the pole or ring.



2 Bring the end of the rope around to the standing part, and make four overhand loops over both ropes before passing the end down through the centre of the knot.



Teachings: Tying Knots

HALF-S

3 Bring the end of the rope around to the standing part, and make four overhand loops over both ropes before passing the end down through the centre of the knot.



4 Pull the standing part to tighten the knot.



Teachings: Tying Knots

MODIFIED TIMBER HITCH

This knot is known for its usefulness in raising logs or dragging them along the ground, or tying to a post or spar. Unlike the regular timber hitch, it will hold under slack conditions.



1 Bend the end of the rope around the pole twice, then around the standing part and through the loops just formed.



2 Take at least four turns around both ropes on the post, but space the loops out.



3 Make the last turn at the front near the standing part. Tighten the knot before using.



Teachings: Tying Knots

REEF OR SQUARE KNOT

The Reef knot, or better known by its more common name the Square knot, is one of the most useful knots for first aid and tying bandages. It lays flat, holds well, and can be easily untied. However, do not use if someone's life is at stake. The Reef knot holds well, but not great.



1 Start by taking the two ends and crossing them to form an X. Roll the overhand end under the standing end of the other end. It sounds complicated, but this is the same as the first step in tying your shoe.



2 Bring the ends back above in a second similar crossing.



3 Tighten the knot by pulling on the ends.



Teachings: Tying Knots

FISHERMAN'S KNOT

This knot is used for tying fine lines together such as fishing line.



1 Tie an overhand knot in one of the ropes, but don't pull it tight.



2 Pass the other rope end through the overhand knot and alongside the first rope's free end.



3 Tie an overhand knot in the second rope around the standing part of the first rope.



4 Pull each of the two overhand knots tight separately. Pull the whole knot tight by pulling on each pair of ropes below the overhand knots. This will interlock the two overhand knots.



Teachings: Tying Knots

CLOVE HITCH

The Clove Hitch is a common knot for Guiding because it is used to start and finish most lashings.



1 Bend the rope end around the pole, then bring the end forward over its own standing part.



2 Bend the rope end once more around the pole beside the first turn, then pass it under the second bend.



3 Push the loops close together, tighten the clove hitch by pulling hard on the end and the standing part of the rope.



Teachings: Tying Knots

SLIP KNOT

This knot is commonly used for tying around packages or keeping a balloon from flying away from you.



1 Bend the rope in a large loop around the item you wish to tie up.



2 Tie the end of the rope around the standing part with an overhand knot.



3 Pull the overhand knot tight, then push it up against the item to be tied. Tighten the whole knot by pulling the standing part.



Teachings: Tying Knots

BOWLINE

The bowline is a rescue knot for tying a loop to throw out to a drowning person or used to secure yourself during mountain climbing.



1 Pass the rope around your waist and hold the short end in your right hand. Make a simple overhand loop in the length and hold it with your left hand.



2 Pass the short end through the hole from the bottom.



3 Bend the end around the length and pass it through the small loop just formed alongside its own continuation.



Teachings: Tying Knots

BOWLINE

4 Tighten the bowline by holding onto the bight formed by the rope end and pulling hard on the standing part.



The bowline can also be explained like this:

1 The standing part forms “The Tree”

2 Form an overhand loop as the “Rabbit Hole”

3 The end of your rope is now “The Rabbit.” Bring the rabbit up through the hole.

4 Then around the tree and back down through the hole.

5 Tighten the line and you’re done.

FAST FACT

OUTDOOR ANIMAL FACTS

When hibernating in the winter months animals slow down their heart rate and breathing as well as lower their body temperature in order to conserve energy during the time of year when food sources are scarce and the weather is extra chilly.

Teachings: Plants

HARMFUL/TOXIC PLANTS

IMAGE	INFORMATION
	Foxglove - Can cause toxic reactions that lead to severe sickness and death in animals and humans.
	Giant Hogweed - All parts of this plant are toxic causing blistering and brown pigmentation of skin.
	Hydrangea - Can cause abdominal pain, coma, diarrhea, lethargy and vomiting.
	Poison Ivy - Can cause mild itchiness and redness to severe oozing lesions with fever. Avoid this plant at all costs if possible.
	Rhubarb - Normally a tasty snack in the summertime with some sugar, however, the leaves are highly toxic and can cause abdominal pain, convulsions, drowsiness, vomiting, and even death.
	Snowberry - Ingesting the berries causes mild symptoms of vomiting, dizziness, and slight sedation in children.
	Stinging Nettle - Causes a painful sting, followed by small reddish swelling and prolonged itching and numbness. Initial reactions last only a few minutes, however, repeated contact can cause the pain to intensify and last for days.

Teachings: Plants

HELPFUL PLANTS

	Bracken - the tightly coiled tips of the plants called fiddle heads are edible -wool/hair should be removed and boiled in water for half an hour with salt to remove the bitter taste Warning: avoid long term use, has carcinogenic properties. Avoid mature bracken, which destroys vitamin B and can cause a deadly blood condition.
	Clover - above ground parts can be eaten raw Warning: it is difficult to digest and can cause bloating
	Dandelion - all parts of the plant are edible - good source of potassium, Vitamin A and C - ensure it is picked in an area free from pesticide
	Fireweed - most often grows in areas where the area has been burned -shoots, flowers, and leaves are edible raw Warning: may act as a laxative if eaten in large quantities
	Goldenrod - plants can be cooked and the flowers are edible raw -seeds are also edible raw
	Watercress - plants are edible raw - tastes like peppery lettuce or radishes - grows in calm water - do not eat from sites with polluted water
	Water Lily - flowers are edible raw - seeds and leaves are edible raw - grows in lakes and ponds in slow moving water

Teachings: Plants

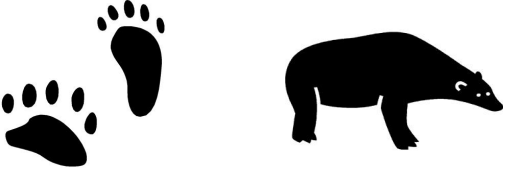
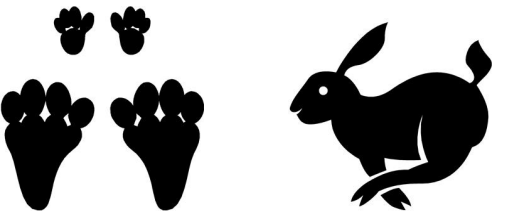
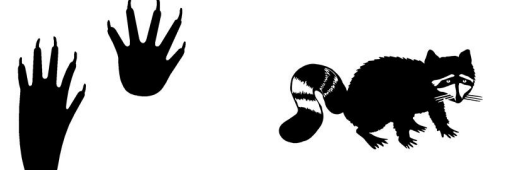
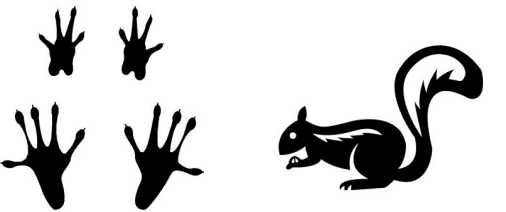
DIFFERENT TYPES OF TREES

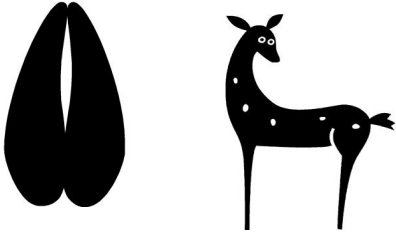
	Balsam Fir - is a small to medium-size evergreen tree with flat, dark green needles, around 15 to 30 millimeters long. They are arranged spirally on the shoot, but with the leaf bases twisted to appear in two more-or-less horizontal rows.
	Red Spruce - is a coniferous tree with yellow-green needles that are around 12–15 millimeters long, four-sided, curved, with a sharp point, and extend from all sides of the twig.
	Tamarack - is a small to medium-size deciduous coniferous tree with 2–3 cm short, light blue-green, needles that turn bright yellow before they fall in the autumn. The needles are produced spirally on long shoots and in dense clusters on long woody spur shoots.
	White Birch - is a medium-sized deciduous tree with white bark that flakes off and often has small black marks and scars. The leaves are alternate, ovate, 1-5 in. long and 2-4 in. broad, with a doubly serrate margin. The leaf buds are conical and small. They are green-colored with brown edges.

Teachings: Animals

ANIMAL TRACKS

While out on hikes around your campsite you may see some of these tracks on the ground. Help your group identify different types of animals that they are sharing their surroundings with. Also, after identifying the tracks let them know the different types of precautions they should be taking in order to not attract wildlife.

TRACK	INFORMATION
	Bear - are large creatures that vary in colour depending on the breed and can be brown, black, or cinnamon. They swim, climb trees, and run fast. They normally hibernate in the winter in dens in sheltered areas such as caves, brush piles, or even sometimes in tree holes. They eat both meat and vegetation such as fish, insects, grasses, roots, and berries.
	Beaver - the largest rodent in North America and can reach over one metre in length. They are notorious for their orange buck teeth and large, flat tail that is shaped like a paddle. They do not hibernate in the winter and build dams and lodges - large cone shaped piles of branches in the middle of a lake or pond. They are vegetarians and eat such things as shrubs and cattail shoots.
	Rabbit - range in a variety of colours from grey, brown, and white and some even change colours in the winter depending on the breed so they can camouflage in the snow. They do not hibernate in the winter and eat anything leafy, roots, and willows.
	Raccoon - is known for his mischievous black mask. They also have an average of 5-10 bands running across their tail in brown or black. The body of a raccoon can be grey, black, brown, or even albino. They live in a wide range of habitats requiring only a place to drink, food, and somewhere safe to live for their den. They eat a range of food from birds, frogs, fish and fruit.
	Squirrel - make high pitched chirping sounds and most commonly live in trees or nest holes, but certain breeds such as ground squirrels may also burrow into tunnels for their home. They eat nuts, leaves, roots, seeds and also catch and eat insects and caterpillars. Tree squirrels will also eat bark, eggs, and baby birds. They most commonly hibernate in the winter.

	White-Tailed Deer - is a tan or reddish brown in summer and greyish brown in the winter. When it senses it is in danger it raises its tail, called "flagging," showing the white patch on the underside of its tail to signal an alarm to any nearby deer. It is a vegetarian and eats things such as nuts and plants. White-Tailed Deer are also very good at jumping and can jump around nine metres in length, and over two and a half metres high.
	Wolf - is the largest member of the dog family and can be many colours from white to black, but is normally grey. Wolves live in packs of 3-7 with one dominant, or "alpha" male and each wolf has its own place within the hierarchy. They hunt as a pack and take turns chasing their prey. They are mainly carnivores but will eat other foods such as berries, but normally eat elk and moose.

Tips for Camping in Bear Country

- *Never feed or approach a bear.*
- *Put away food and garbage before going to bed or leaving the campsite for the day.*
- *Do not leave food or garbage lying around camp, always pack up what you take it. Lock food in the trunk of your vehicle or hang it at least 4 metre off the ground between two trees.*
- *Do not store any food in a tent or soft shell camper.*
- *Use a flashlight when going out at night as this will alert animals of your presence.*
- *Clean dishes and utensils after use.*
- *Wear a change of clothes to bed that will not have food odours on it.*
- *If going hiking, go with a large group and ensure everyone is making noise such as talking, singing, or whistling. Or carry a noise maker to ensure bears are not caught unaware. They do not like to be surprised.*
- *Pack out all your garbage, do not bury it.*
- *If you spot a bear, back away slowly and do not make eye contact while speaking slowly in a monotone voice. Do not run.*
- *Never come between a mother and her cubs. If you spot a baby bear, do not make contact but have your group and yourself leave the area immediately.*

Teachings: Being Outside

ASSIGNING DUTIES AT CAMP

While camping with your group everyone should be involved in helping out - not just the adults. Use the following chart to help your campers choose which duties they'd like to assist with. Ensure everyone understands when and how to do their assigned duty and depending on their age have an older camper supervise if needed.

Feel free to add other specific duties as you see fit as well to personalize them to your camping trips.

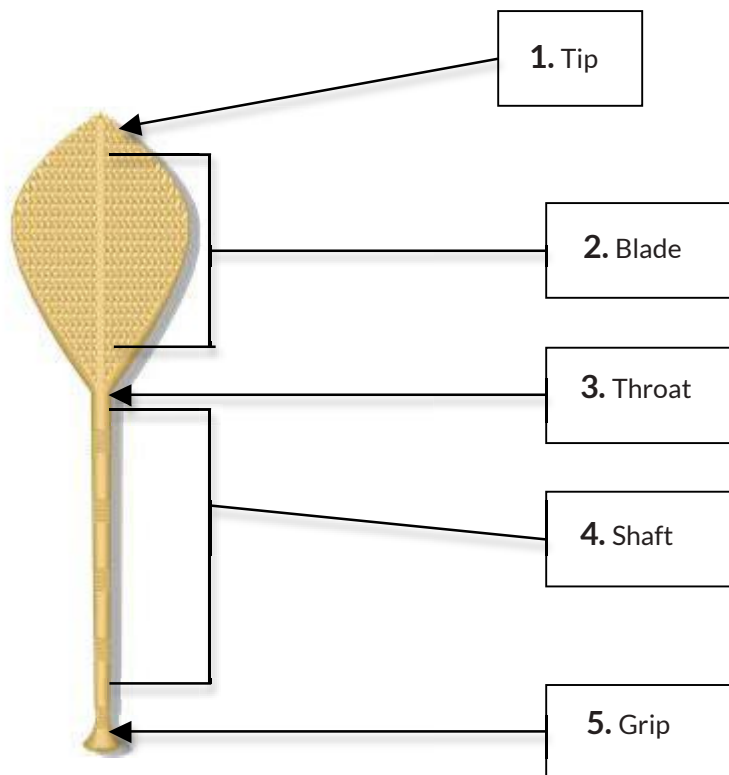
DUTY	FRIDAY	SATURDAY	SUNDAY
Cooking Breakfast			
Washing Dishes			
Drying Dishes			
Cooking Lunch			
Washing Dishes			
Drying Dishes			
Cooking Supper			
Washing Dishes			
Drying Dishes			
Lighting/Putting Out Fire			
Chopping Wood			
Cleaning Up Camp			
Tearing Down Camp	X	X	EVERYONE

Teachings: Canoeing

PARTS OF A PADDLE

Items Needed

- Canoe
- Paddle
- Lifejacket



HOW TO HOLD A PADDLE

1. Place your dominant hand over the top of the canoe paddle at the grip.
2. Grasp the throat of the paddle just above the blade with your opposite hand.

BASIC CANOE STROKES TO MASTER

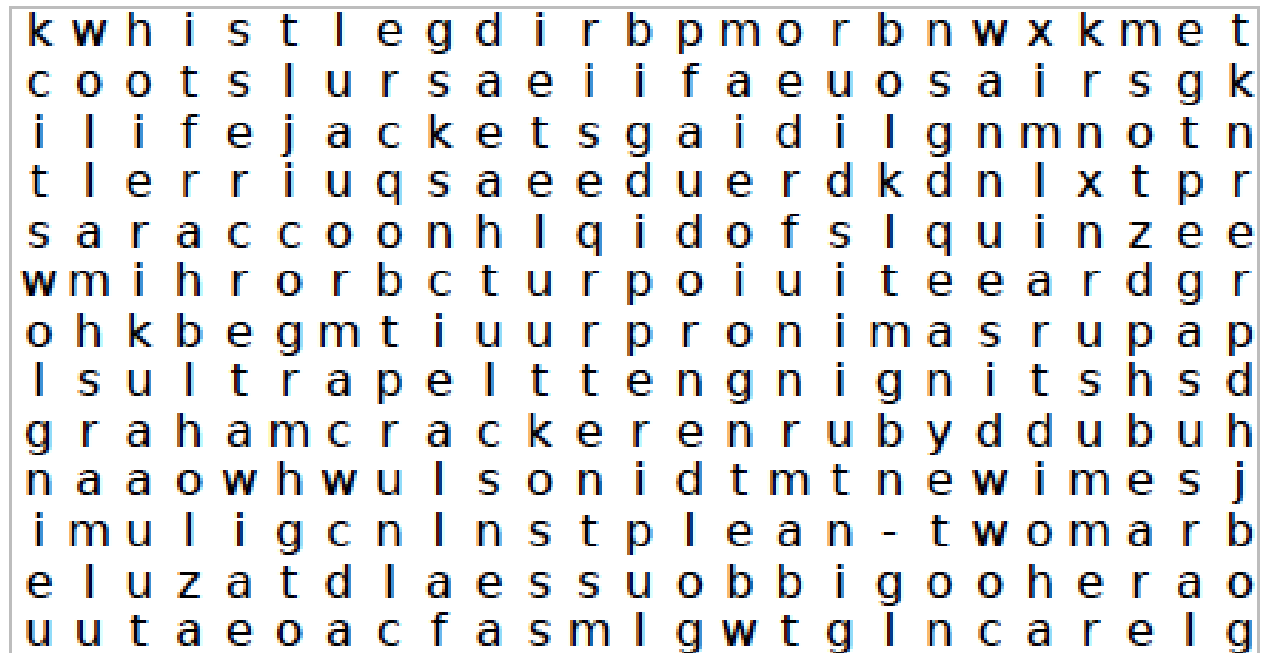
Practice the following strokes with the canoe on land before bringing any inexperienced canoeists out on the water.

THE FORWARD STROKE

1. Raise paddle from the water and bring your top hand up high near your head.
2. Ensure the shaft of the paddle is almost vertical to the water and diagonal across your body.
3. Push your lower hand forward reaching the blade of the paddle to the front of the canoe.
4. Place the paddle into the water in front of your body Pull the paddle back towards you across the side of the canoe by pushing forward with your top hand and pulling back with your lower.
5. Take the blade from the water and repeat Steps 1-5.

Puzzle

OUTDOOR WORD SEARCH



Bear
Burn
Cut
Gauze
Graham Cracker
Lifejacket
Orion
Quinzee
Squirrel
Tent
Whistle

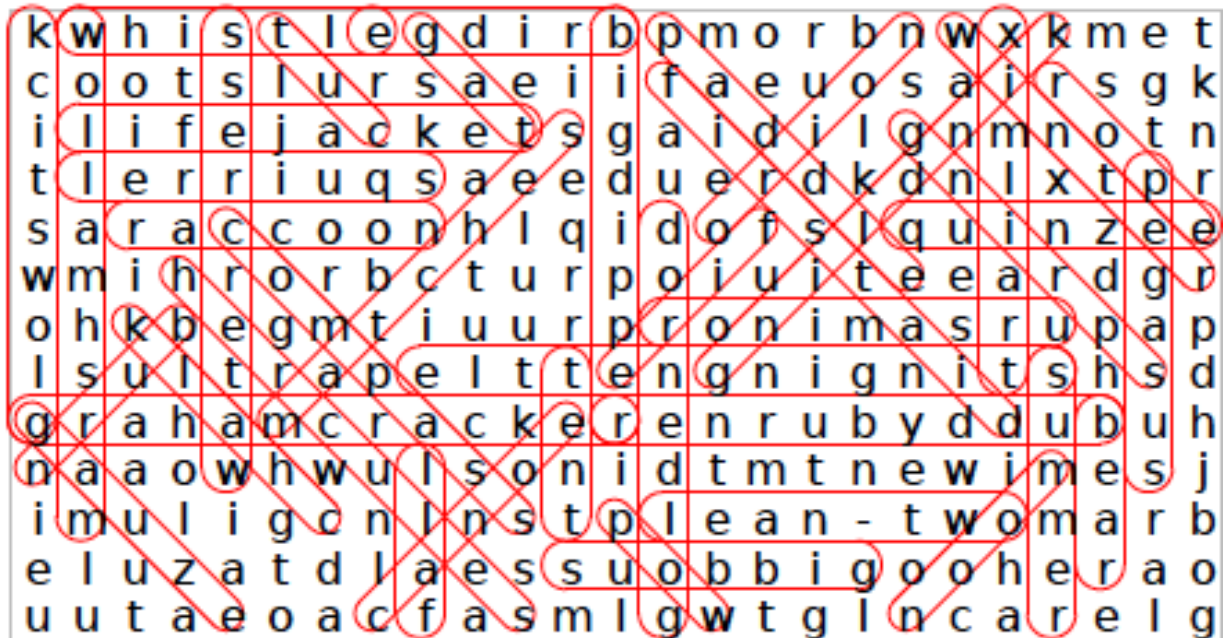
Big Dipper
Canoe
Fall
Gibbous
Hercules
Marshmallow
Paddle
Raccoon
Stinging Nettle
Trail Mix
Winter

Bridge
Chalk
Fire
Glowstick
Kindling
Matches
Pegasus
Rope
Summer
Ursa Minor

Buddy Burner
Compass
First Aid
Goldenrod
Lean-Two
Moon
POW
Spring
Tag
Watercress

Puzzle

OUTDOOR WORD SEARCH KEY



Bear
Burn
Cut
Gauze
Graham Cracker
Lifejacket
Orion
Quinzee
Squirrel
Tent
Whistle

Big Dipper
Canoe
Fall
Gibbous
Hercules
Marshmallow
Paddle
Raccoon
Stinging Nettle
Trail Mix
Winter

Bridge
Chalk
Fire
Glowstick
Kindling
Matches
Pegasus
Rope
Summer
Ursa Minor

Buddy Burner
Compass
First Aid
Goldenrod
Lean-Two
Moon
POW
Spring
Tag
Watercress

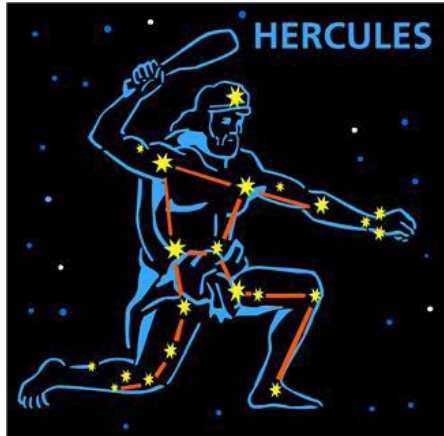
Worksheet

SCAVENGER HUNT CHECKLIST

ITEM	FOUND
Stick Shaped Like A “V”	
Feather	
3 Different Sizes Of Pine Cones	
Something Red	
Cocoon	
Piece Of Moss	
Wild Flower	
Bud From A Tree	
Berry	
Mushroom	
Rock Perfect For Skipping	
Seaweed	
Pine Needle	
5 Different Types of Leaves	

Worksheet

CONSTELLATION MATCH UP



Date: _____

Location: _____

Time: _____

Found: ☐ Not Found: ☐

Comments: _____



Date: _____

Location: _____

Time: _____

Found: ☐ Not Found: ☐

Comments: _____



Date: _____

Location: _____

Time: _____

Found: ☐ Not Found: ☐

Comments: _____

Worksheet

CONSTELLATION MATCH UP



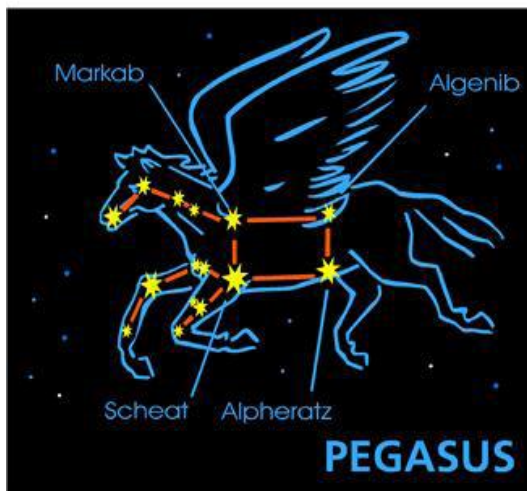
Date: _____

Location: _____

Time: _____

Found: ☐ Not Found: ☐

Comments: _____



Date: _____

Location: _____

Time: _____

Found: ☐ Not Found: ☐

Comments: _____



Date: _____

Location: _____

Time: _____

Found: ☐ Not Found: ☐

Comments: _____
