# CANOEING
## LESSON PLAN

WOLF RIDGE℠
ENVIRONMENTAL LEARNING CENTER

# CANOEING

## CLASS DESCRIPTION: An Outdoor Recreation class

Students will use Wolf or Raven Lake as a classroom as they learn canoeing history and equipment and practice techniques on the lake. A short discussion at the canoe landing includes orientation to equipment and its proper use. Skills practice and safety orientation is also done on land. Students then spend 2 hours practicing skills on the lake. They will experience the value of canoeing as a physical activity and how it affects their relationship with the environment. A visiting adult in addition to the instructor is required for this class.

**Total Time:** 3 hours (all outdoors)
**Audience:** 6-20 students, 4th grade through adult
**Activity Level:** moderate
**Travel:** 1/2 mile
**Total Uphill Travel:** 250 ft.

## GUIDING PURPOSE

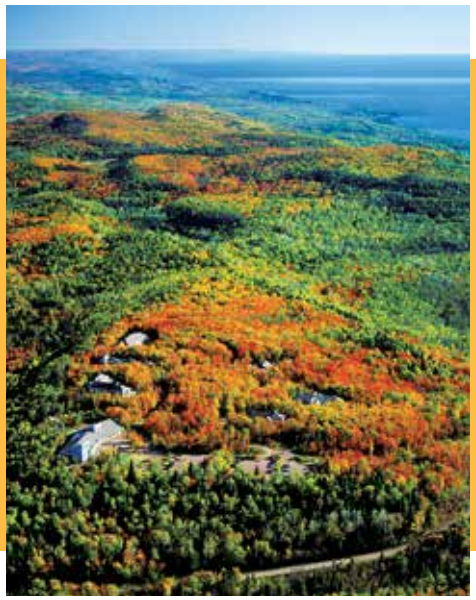
To paddle a canoe, to explore a northern lake, learn efficient canoeing skills, and gather scientific data.

## CONCEPTS

1. Culture and Technology: Humans adapt to their surroundings by experimenting and developing technology.
2. Outdoor Recreation and Risk Management: Responsible watersport activities require the proper use of safety equipment.
3. Outdoor Recreation: We all have potential for physical activity and can improve our skills with patience, practice, and teamwork.
4. Outdoor Recreation: Using physical skills allows us to reach remote natural areas, and gain a sense of place.

## OUTCOMES

Upon completion of the Canoeing class students will be able to:
1. Describe the evolution of the canoe as transportation, as well as recreation.
2. Identify and properly use equipment required for safe watersports participation.
3. Work cooperatively with a partner to maneuver a canoe to specific destinations on a lake.
4. Explore the natural landscape around the lake and interpret its natural history.
5. Explain how exploring wild places can change how we perceive the natural world around us.



# CANOEING

Revised May 2017

## Equipment

- 12 Plastic 17 foot Canoes (Wenonah Auroras)
- Extrasport Universal PFD's
- throw bag with floating poly rope
- assorted floaty things for games
- Carlisle Plastic Canoe Paddles
- 6 - 48" (Blue), 12 - 54" (Red), 8 - 60" (Yellow),
- 2 - 66" (Green)
- first aid kit (hanging in the life jacket rack at the landing)
- secchi disk (in a milk crate container at the life jacket rack on Wolf Lake)

## Appendices

- References
- Resources
- Spiral Learning Sheet
- Planning Outline

## Set-up (15 min.)

- Classroom/class prep description
- Safety Management

## I. Travel to Canoe Landing (30 min.)

A. Landscape Observations

## II. On Land Orientation (30 min.)

A. Canoes
B. Paddles and Strokes
C. Personal Floatation Devices (PFDs)/life jackets

## III. On the Water (90 min.)

A. Safety
B. Canoe Instruction and Exploration
   1. Loading Canoes
   2. Team Paddling
   3. Games for Practice
   4. Secchi Disk (Wolf Lake only)
   5. Returning to the Docks
C. Additional Exploration Options
   1. Hiking
   2. Portaging

## IV. Conclusion (20 min.)

A. Recording Data (Wolf Lake only)
B. Canoeing Story of Class
C. Next Steps

## [Return to Wolf Ridge (20 min.)]

## Clean-up (15 min.)

# Set-up (10 min.)

## Classroom/class prep description

There is no set-up as all the equipment is at the lake, however, you may want to draw a picture on the board of a canoe, lake, map, or something appropriate to focus their interest. Whenever possible the introduction and conclusion should be conducted at the canoe landing dock. A classroom may be needed during cold or inclement weather as well as bringing additional clothing, to address the needs of someone who gets wet. In extreme weather conditions (wind, storms, cold) check with permanent staff to see if canoeing is permitted that day.

## Safety Management

Adhere to and be familiar with all general safety practices designated by Wolf Ridge. Be aware of any student's special needs (medical, etc.) and adjust the activities as needed to maintain safety.

- First aid kit is located on life jacket rack.

- All canoeing instructors must be comfortable with conducting a basic water rescue from a canoe (i.e. reaching rescue followed by towing to shore) while wearing a PFD.
- All persons must **wear** a Personal Flotation Device that has been checked by an adult for proper fit (snug enough that the shoulders of the vest can not rise above the head).
- Participants will be informed of proper conduct while in a canoe: no standing or sudden movements, stay seated on seats or floor of canoe, no sitting on thwarts.
- The instructor will maintain a canoe in a position that allows visual supervision and best possible voice contact of canoes at all times.
- Switching paddling positions, if allowed by the instructor, will be demonstrated at the landing and allowed only when near shore.
- Participants will be instructed what to do in the event of a capsize. The canoes will float. While floating in your PFD, **keep a hold of the canoe,** wave an arm and yell loudly to alert others in the group. Wait for the instructor and follow his/her instructions (see Emergency Procedures).
- In the event of an approaching thunderstorm, stay alert to rapidly changing conditions. If needed, seek emergency shelter away from the water, on any shoreline of the lake. For distant thunderstorms, time your leave from the water well before the storm arrives. Use the **5 seconds = 1 mile** rule, in combination with estimated speed of the storm's approach. Any lightning closer than 1 mile requires immediate seeking of shelter.
- No tandem canoeing after dark. ((Voyageur canoeing is acceptable.)
- Landing canoes is only allowed at docks and SHT landing areas (see map in the appendix) except in emergencies.
- During periods of very cold air or water temperatures, the instructor should bring a pack with extra clothing or assure that the students are bringing extra clothing.
- When the combined air and water temperatures are 90 degrees or less, instructors should be prepared to implement an alternative plan.

**INSTRUCTOR NOTE:**
*Check students for proper clothing. Often it is cooler on the lake than in the woods. Consider bringing a backpack with additional clothes in case someone gets cold or wet.*

**Emergency Procedures**

People are always the priority over equipment. If canoes or paddles are left in the lake, they can be retrieved later. For minor injuries, administer first aid from kit. In the case of swamping, get the wet students to nearest shore as soon as possible; you may only need to escort them as they walk out of the lake. Direct other adults to gather other canoes on nearest shore, then wait until the wet students have been take care of. If swamped in deeper water, avoid the temptation to paddle up to a panicking person and endanger yourself as well. If they seem calm, tow them to shore or escort them

as they swim. If in a state of panic, try to calm them as you raft up a few canoes for stability, then pull them into your canoe. Depending upon weather and temperatures, they may be able to paddle to the landing. If not, change out of wet clothes if possible, keep the PFD on for insulation and walk them back through the woods. In the event of a possible drowning, send for professional help immediately, pinpoint with landmarks the point last seen and take care of other group members.

# I. Travel to Canoe Landing (30 min.)

Meet in the classroom to make sure you have the whole group together, and give them an opportunity to get drinks of water and use the bathroom before heading out to the real "classroom" of the day–Wolf or Raven Lake.

Students will learn canoeing history and equipment and practice techniques on the lake. Before leaving class, give students the chance to get drinks and use the bathroom.

## A. Landscape Observations

At one of the early intersections, introduce paying attention to the landscape on the hike to the canoe dock. At the junction of the perimeter trail, point out Raven Lake and Lake Superior. At the top of the south stairway, point out Wolf Lake, the cliffs above the lake where rock climbers are sometimes seen, Lake Superior and the far shore of Wisconsin in the distance. These are all places that were first explored by canoe.

***Assessment (Concept 1. Humans adapt to their surroundings by experimenting and developing technology):***

*Set up a WALK AND TALK where students walk with a partner down the trail to the next intersection, observing and discussing to answer: What do you notice about the landscape? What do you need to consider if you travel in this area? Instruct pairs to each come up with 1-3 key considerations to share with the large group. At the next intersection, use a WHIP AROUND, where each pair adds their ideas one after the other, for a group summary. Some things people could mention include: big lakes, mud, smaller lakes, hills, rocks, strength, roads, paths…*

*In the large group pose the question: What tools could help us? Or helped people who lived here before us? Give everyone time to individually think. They should signal they have an idea by giving a thumbs up. Once everyone has a thumb up, use NO HANDS QUESTIONING and TALK-MOVES to help the group hear people's ideas. This is a good opportunity to also learn names. Some tool ideas include: roads, paths, boats, packs to carry things, maps, etc.*

Canoeing has been a mode of transportation for centuries. Explain that they will be canoeing today on Wolf or Raven Lake, and what makes that opportunity special.

Minnesota is famous for its canoe country and the Boundary Waters Canoe Area (BWCA) Wilderness is the most heavily used wilderness area in the country. It is through this country that the voyageurs came in 25 foot, 300 pound birch bark canoes to trap and trade for furs, especially the beaver. Wolf Ridge is located at the edge of the canoe country that extends northward to the Arctic Circle. No road can go where a canoe can in this place. The fun of canoeing is gaining a skill that takes you to a places not normally accessible and enjoying the beauty of a wild place.

At the canoe landing, have the students meet on the dock, **before** getting paddles and lifejackets.

# II. On Land Orientation (30 min.)

A historical comparison will likely bring out the vast changes in equipment since the birch bark canoes. Using Wolf Ridge equipment as models, give students an overview of canoes, paddles and life jackets.

## A. Canoes

Pull a canoe off the rack, and use it to point out the evolution, composition and parts of a canoe as you talk.

### 1. History

Boats have been around for thousands of years. What makes canoes special is their small size, usually for one or two people, and their narrow double-ended shape, making them easy to steer on rivers and small lakes. Indians of the northwestern coastal regions of North America made dugouts of excellent design with elaborate totem carvings. Dugout canoes used in the Pacific Islands have outriggers to provide stability. But they were heavy.

Canoe building reached its highest form in North America. The birch bark canoe was light enough to carry over portages and was very maneuverable. This craft was so important to the natives of the northern United States and southern Canada that their culture is often referred to as the Canoe Culture. During the fur trade, Europeans adopted the native canoe, which became the standard transportation for the largest industry in America.

### 2. Materials

Ask if any students have canoes at home. Some may respond, "Yes, but our canoe doesn't look like the Wolf Ridge canoe." Have them compare their canoes with the one in front of them. Obviously canoes can be made of different materials.

#### a. Plastic (Wolf Ridge canoes)

Plastic canoes are the toughest and the cheapest. Built either as a solid plastic like a milk jug or in a laminate. The Wolf Ridge canoes are a thermoplastic laminate which is very strong, difficult to puncture and its very slippery sliding quietly through the water (and over rocks). Some of the best whitewater and long distance tripping canoes are constructed this way. On the negative side, the material resists being formed into tight curves, so plastic canoes tend to be slower and less sophisticated in design than thoughtfully designed wooden, fiberglass or Kevlar boats.

#### b. Aluminum

Aluminum is very strong, maintenance free, and reasonably priced. On the negative side, aluminum canoes are noisy, unsophisticated in design, not very speedy, and they dent. Aluminum also has a tendency to “stick” to rocks rather than slide over them.

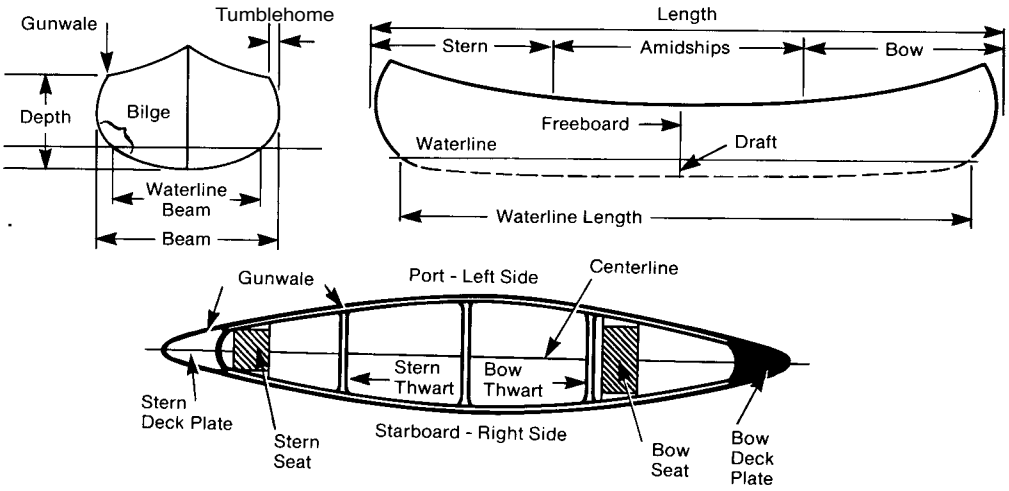
#### c. Fiberglass & Kevlar

Unlike aluminum or plastic, fiberglass and Kevlar can be formed in complex curves. Thus, sophisticated, easy-to-paddle hull shapes can be fashioned. Both are quiet and resilient. Kevlar is the more durable of the two and extremely lightweight. All of these qualities make these canoes very expensive.

#### d. Wooden Canoes

These frames are built of wood (such as cedar) and the hull is covered with either fiberglass or waterproof canvas. They are beautiful and quiet to paddle, but usually require a lot of money to purchase or time to build, along with regular maintenance.

### 3. Parts




**bow -** The front end of a canoe.
**stern** - The rear or back end of a canoe.
**thwart** - Cross piece which provides strength and stability to a canoe. Not to be sat upon.
**yoke -** Cross piece made for carrying a canoe upside down on your shoulders over portages. Not to be sat upon.
**gunwales** - Structural supports for the sides of a canoe. Located on the uppermost portions of the sides and extending from the stern to bow on both sides.
**hull** - The body of the canoe. In plastic canoes like ours, the hull also provides flotation of the craft if swamped. Laminated inside the hull is a layer of foam with air bubbles. Canoes have various kinds
**painter** - A length of rope attached to the bow and/or stern. Painters can be used for tieing off to a dock or tree on shore as well as guiding the craft through a rapids as the paddlers walk along side.

## B. Paddles and Strokes

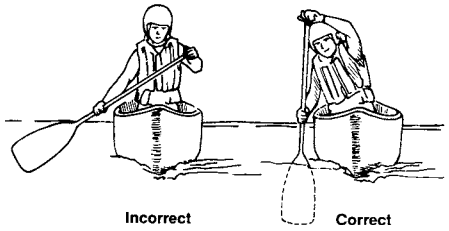
Moving the canoe requires different strokes.

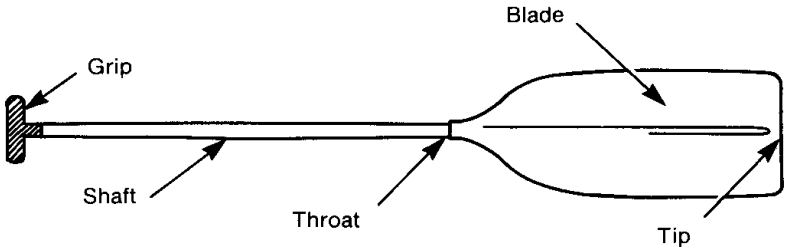
***Assessment (Concept 2. Responsible watersport activities require the proper use of safety equipment):***

*Selecting an appropriately-sized paddle, practicing strokes, and putting on an appropriately fitted PFD are all embedded assessments. Encourage students to help each other once they have it figured out. Pay attention to students who may need additional supports or instruction.*

Before students select a paddle, explain how to choose a paddle that fits them. The grip should come to about their chin or nose. Ask them to rest the blade on their foot, not on gravel or between cracks of the dock, so it doesn't get damaged. When they have each selected a paddle, have them gather on the dock again. Show them the parts of the paddle (grip, throat, blade), and how to hold it correctly. One hand should be over the grip and the other at the throat.

**INSTRUCTOR NOTE:**
*Have the students dry land practice each stroke in unison as you explain technique and purpose.*



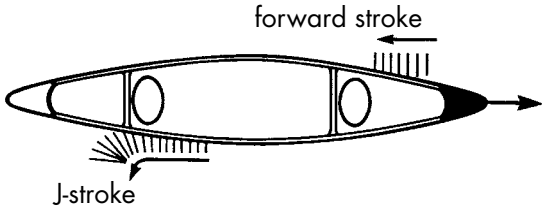



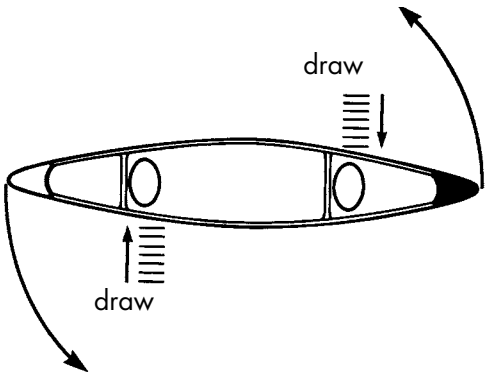

Introduce and dryland practice the basic strokes (i.e. #1-4). Later, during a gathering on the lake, review the already demonstrated strokes and introduce the rest of the strokes. The most efficient paddling technique is employed with straight arms, letting the larger muscles of the truck of your body move the paddle more than the smaller muscles of your arms. If you look down at your lifejacket zipper as you paddle, it should be moving side to side.

Remember, the paddle blade should be placed all the way into the water to get the most energy out of your stroke.

**forward stroke** - The basic propelling stroke for the bow person. Remember to feather the paddle. ("Feather" means that on the recovery part of the stroke turn the blade of your paddle parallel with the water and knife edge the blade through the air to the beginning of the next stroke.)

**backward stroke** - A maneuvering or stopping stroke done by both paddles simultaneously.




**J-stroke** - The basic propelling and steering stroke for the stern person. Remember to push the water with the same side of the paddle as you "J" away from the canoe. Leave the blade in the water until the canoe straightens out to the course you desire. A "rudder" instead of the J-stroke will steer the canoe also although forward momentum is lost. Encourage the J-stroke. Feather the recovery.

**sweep stroke** - A stroke used to push the canoe away from the paddlers side. It has the opposite effect of the J-stroke or "rudder."

**draw stroke** - A powerful stroke for maneuvering the canoe sideways at slow speeds or quick changes of direction at normal speed. When done simultaneously by both paddlers on the same side the canoe is pulled sideways. Used for approaching a shore, dock, or other canoe. When the draw is done by only the bow person he/she can pull the bow of the canoe quickly out of a dangerous path.

**pry stroke** - Essentially the opposite of the draw. Used to move the canoe away from an object.

## C. Personal Floatation Devices (PFD's)/Lifejackets

It is a state law in Minnesota that each person in a boat have a Coast Guard approved lifejacket (Personal Flotation Device) in their possession and near at hand while in a watercraft. **At Wolf Ridge everyone must wear lifejackets at all times on the water.** The fact that the lifejacket is on and not just handy nearby has saved many people from drown-

ing where time did not allow the opportunity to retrieve it. High winds may also whisk the lifejacket out of reach after capsize and cold water may prevent the canoeist from getting it over his/her head. Always wear your lifejacket. Demonstrate proper donning of the PFD and fit - snug around the middle and the shoulders of the vest should not be able to rise above your head. All persons should be checked for proper fit of their PFD. Following dryland practice of strokes, send students to get life jackets.

**INSTRUCTOR NOTE:**
*All persons must wear lifejackets while canoeing. Each life jacket must be zipped up and checked for proper fit.*

# III. On the Water

## A. Safety

Be familiar with all Safety Management and Emergency Procedures found at the end of this lesson plan. Clearly list expectations for behavior on the water to avoid such things as canoe "ramming wars" or "splash wars." Adults should be spread out among separate canoes for maximum supervision. Their help on the water will be needed with the mastering of techniques and generally overseeing the lesson. In warm weather, it may be necessary to make appropriate consequences for intentional swamping. Landing is only allowed at docks on the lake (except in emergencies).

One of the first canoes out should have an adult for supervision. Instruct students to stay near the dock, paddle around while practicing their different paddle strokes. The instructor will likely be the last canoe onto the water. Once all canoes are out, gather the group and correct any bad habits (i.e. improper holding of a paddle) and strongly encourage paddling on different sides using your strokes to maneuver rather than switching sides.

Windy weather warrants the instructor assigning partners, to avoid two very lightweight people in a canoe. With little weight in a canoe, it tends to be blown around more easily; adding a "duffer," especially with an extra paddle, can help tremendously. All technique will "go out the door" at times when the winds are unkind, stay close to shore and the instructor should be the last canoe or "sweep boat" in the line with the other adult as the "lead boat".

## B. Canoeing Instruction and Exploration

An example route on Wolf Lake may be to meet as a group in front of the canoe landing, paddle to the beach area, gather for a review and introduce new strokes. Travel from the beach down the west shoreline to the back bay, setting a slalom course as you go. In the back bay, practice pivots, shifting sideways, straight lines, etc., then trade places. From the back bay, paddle to the voyageur dock, compare the voyageur canoe and its related history to our canoes. Practice all the same maneuvers again, but in different paddling positions. Start your return trip up the lake and maneuver the canoes through your slalom course. Play games. Return to the dock and conduct your conclusion.

***Assessment (Concept 2. Responsible watersport activities require the proper use of safety equipment):***

*Selecting, loading, and paddling a canoe is an embedded assessment. Doing the activity demonstrates understanding. As pairs or trios of students load into canoes, ask them: What will you remind yourselves of? Each person should share either a safety guideline, aspect of equipment, or part of a skill.*

**INSTRUCTOR NOTE:**
*Have a pair of students demonstrate how to enter the canoe, trade places (on the water), land the canoe and get out safely.*

### 1. Loading Canoes

Flip a canoe over on the rack and slide if off. One person should be on either side, carrying the canoe by the gunwales to the water edge. Dragging the canoe isn't a tragedy but should be discouraged.

**INSTRUCTOR NOTE:**
*Instructor should be in the stern and steering position in a boat for easy access to helping groups. Bring along supplies for Secchi Disk readings (if on Wolf Lake) and for Canoe Tag.*

Ease the canoe into the water and then along side the dock. One person steadies the canoe at the dock edge, while the other loads. Step into the center of the canoe, lower yourself into a crouching position while holding both gunwales and walk to your seat. Once in position, steady the canoe along the dock as the second person loads. A passenger ("duffer") may enter, then sit on the floor near the middle of the canoe (sitting on thwarts or yokes is dangerous and not allowed). A spare lifejacket may be used as a seat pad for the "duffer". Canoes travel better when "trimmed" with the weight slightly toward the stern, except when paddling into a wind. The "duffer" should "trim" the boat by sitting either in front of or behind the yoke or thwart. When unloading at the dock, reverse the procedure.

## 2. Team Paddling and Exploring

The beginning of your paddling time should be structured with specific destinations so as to facilitate evaluation and constructive criticism of their skills. Review of strokes and positive reinforcement of the teamwork taking place will be needed. After canoe groups explore a bit and are all on the water, the instructor should check in with each boat. Depending on conditions and skills, either have everyone "raft up" or visit each boat individually.

***Assessment (Concept 3. We all have potential for physical activity and can improve our skills with patience, practice, and teamwork. Concept 4. Using physical skills allows us to reach remote natural areas, and gain a sense of place.)***

*Ask questions of canoe groups to help them practice physical canoe skills and teamwork skills, as both are important to paddling success. Here are examples:*
- *What do you notice?*
- *How is it going so far?*
- *What's working?*
- *What needs work?*
- *How is communication in your team?*

*Moving a canoe effectively requires practicing strokes, teamwork, and communication.*

*What should we do next to improve our canoe skills? Have each group identify something to practice, like honing a stroke or communication tips. Give suggestions as needed.*

## 3. Games for Practice

In between independent practice and lake exploring, introduce some games and challenges to practice new skills and hone others.

Circle
With both bow and stern person doing draw strokes on opposite sides, spin or pivot your canoe as if it were pinned in the middle. Move your canoe sideways to the left, to the right. (drawing & prying) Pick a destination and paddle in a straight line to that point. (stern = J or sweep stroke and bow = forward or draw stroke as needed)

Canoe Tag
Have the bag of floaty bowling pins in your boat. You are "it" when the bowling pin is in your boat. The object of the game is to tag other boats by throwing the bowling pin into their boat. It has to stay in their boat (not bounce out) in order for them to be "it." No blocking! If you miss the tag and the bowling pin is in the water, the boat that threw it is responsible for paddling over to pick it up. Canoe tag helps people practice tight steering manuevers, moving in a circle, and teamwork.

Trading Places
Trading should only be done along side shore. The Turtle technique should be used. Only one person is up and moving at a time. The first person crouches on the floor in the middle of the canoe, on elbows and knees with head down between their elbows. The second person then moves slowly, staying low, hands on gunwales, in a crouched position, steps over the "turtle" on the floor. Once the moving person is seated with paddle in hand and stabilizing the canoe, the "turtle" gets up slowly and moves to their seat.

***Assessment (Concept 3. We all have potential for physical activity and can improve our skills with patience, practice, and teamwork. Concept 4. Using physical skills allows us to reach remote natural areas, and gain a sense of place.)***

*Ask questions of canoe groups to help them reflect on and practice physical canoe skills, teamwork skills, and observation skills. Here are examples:*
- *What do you notice?*
- *What has changed since the beginning?*
- *What's working?*
- *What needs work?*

*Gather all boats together, raft up, and ask the group: While playing and exploring, what have you learned about the lake? Use TURN AND TALK, and then TALK-MOVES in the large group when some people share. Transition to data collection as another way to learn about the lake.*

## 4. Secchi Disk (Wolf Lake only)
Before setting out in a canoe, gather water monitoring equipment from the box on the side of the life jacket stand located on Wolf Lake. For the beginning put it all in the instructor's boat: secchi disks, and anchor. Leave the datasheet behind and fill it out on the dock.

Scientists and volunteers can use canoes to gather data (like water quality) and learn about remote areas. We need tools to measure the lake's water clarity. While rafted up, hand out secchi disks to five canoe teams. The best place to take the readings is in the deep part of the lake near the narrows. The secchi disks can be shared among the canoes to collect water clarity information. Hold up a secchi disk and explain that the disk helps keep track of the health of Wolf Lake. This citizen science project is part of the MN Citizen Lake-monitoring Program, which is administered by the MN Pollution Control Agency. It is very important that all classes make a recording.

To collect the information: Try to stay in one place on the water. One person lowers secchi disk over the shaded side of canoe. Lower the disk until you can no longer see the disk. The disk is attached to a white measuring tape. Raise disk again until you can see it. Remember the value on the tape to the nearest foot that is at the top of the water. What did you find out? Did anything surprise you? The instructor should also take a measurement. Remember all values for recording them at the conclusion of class.

## 5. Returning to the Dock
Plan appropriately for your return to the dock. Prevailing north winds can create challenges for your paddlers. As much as 30 minutes may be needed for the whole group to reach the dock. In the event that student paddled canoes can't make it back, the instructor or another adult may put the children in their canoe (sitting on the floor) and tie the bow painter of the student canoe to the stern of the adult canoe and tow the empty canoe back. Only tow empty canoes. Try to keep one adult near the front of the group as the lead boat and the instructor near the rear as the sweep boat. As the adult should

reach the dock first, they will be able to assist with student landings, return of equipment to the racks and focusing children to help each other. Upon the whole group returning, gather in a circle on the dock for your conclusion.

## C. Additional Exploration Options

Prior to "returning to the dock," some classes may have time and energy for more than canoeing. When students have accomplished all the outcomes for canoeing, the latter portion of the class should be open for exploration, either by canoe or, if enthusiasm for canoeing is waning, by foot. Access to the Superior Hiking Trail is possible from the south end of either lake. Canoeing evolved in this portion of the country because it was quickest way from place to place. It remains, today, the quickest way to these areas of Wolf Ridge.

### 1. Hiking

On Raven Lake, hiking is often done the last half hour of class. Land your canoes on the north side of the lake, right below the campsite. Be sure all equipment is pulled well out of the water before leaving for the hiking trail. See map in appendix for trail location.

On Wolf Lake, when time permits, land your canoes at the south end of the lake, in the right hand corner as you approach the back of the bay. Be sure all equipment is pulled well out of the water, before leaving for the hiking trail. See map in appendix for trail location.

While overlooking Superior, imagine you are the first European explorers, the French-Canadian voyageurs, coming to this country by canoe and traveling up the great lakes to Lake Superior. You and nine others would paddle a birch bark canoes 36 feet long through waves and wind, pulling into a cove where a log fort bustling with activity awaits you. You're greeted by other voyageurs and native Ojibwe people. In a few days you leave your large "Montreal canoe" behind, grab a "north canoe" (28 foot) and, along with only five other voyageurs, depart for an Ojibwe camp a few days away. Upon arrival, the gentleman who accompanies you trades blankets, beads and tobacco for beaver furs. After many Ojibwe camp visits you arrive at another fort, and this cycle repeats itself over and over again. All of this travel was done by canoe, the craft in which you spend most of your waking hours of the spring, summer and fall. This was the exploratory life of the voyageurs. People came to this area because the canoe allowed them the means to get here. We should point out that the canoe has done the same for us today.

### 2. Portaging

On a wilderness trip to the BWCAW, canoes are portaged between lakes. We don't need to portage any canoes at Wolf Ridge, but point out the portage yoke. If time permits at the end of class, provide students with a chance to feel the weight of a canoe on their shoulders. You might mention that 300 years ago a voyageur, by himself, would be running down the portage with 2-3 times the weight of the canoe on his back.

# IV. On Land Conclusion (10 min)

Gather on the canoe dock for a wrap-up conversation.

## A. Recording Data (Wolf Lake only)

At the conclusion of class, the instructor should have class share values and record them on the laminated datasheet. With the class's help and possibly weighted on instructors values, record accurate but not average values. There are instructions on the data sheet and a couple other observation questions about aestheics and water color to fill in. If you see the data sheet is almost full, bring it up to the main campus and give it to Peter Harris.

## B.Canoeing Story of Class

***Assessment (Concept 3. We all have potential for physical activity and can improve our skills with patience, practice, and teamwork. Concept 4. Using physical skills allows us to reach remote natural areas, and gain a sense of place.)***

*Ask questions of canoe groups to help them reflect on and practice physical canoe skills, teamwork skills, and observation skills. Use a combination of SYNECTICS and TURN AND TALK. Depending on the group, either give the comparisons for metaphors or have students come up with their own. Have students first brainstorm with a partner before sharing in the large group. Here are some examples:*

- *Canoeing is like walking because _____*
- *Canoeing is like math class because _____*
- *Canoeing is like a map because _____*
- *Canoeing is like _____ because _____*

*Depending on focuses that you observed throughout class, and through themes shared in this debrief, choose a track through which to continue the conclusion.*

Canoeing allows us to travel to remote places and learn more about the environment. Let's review the story of class today! There are options for themes to follow at the end of canoeing class, depending on the major points the group is taking away from the day. They include: Recreation and Trips, Observation and Environmental Health, and Interpersonal Communication. All roads lead back to Skills Practice and Transfer.

Recreation and Trips

Share a personal or found story about canoeing to illustrate that canoe experience can extend beyond today. Other themes that come up could include adventure, mishaps, camping…

Observation and Environmental Health

Use the sign on side of canoe dock to start a conversation about the MN Citizen Lake-monitoring Program. So far secchi data from Wolf Lake indicates that the water quality of Wolf Lake is good. The deeper the secchi disk value the clearer the lake is. Water clarity is naturally more cloudy in southern Minnesota and clearer in Northern Minnesota. There are hundreds of volunteers throughout Minnesota keeping track of a lake they live on or visit. Clarity of water usually depends on the amount of algae and the suspendable solids. Aquatic animals and plants need different water clarity values to survive. Scientists are looking for long term trends to see if people are causing water clarity to decrease and take action to correct it. Wolf Ridge took action to update our septic system based on water quality data from Wolf Lake. Water from the septic system flows toward Wolf Lake. We also try to keep a buffer of vegetation between trails and lake shore to prevent erosion from washing dirt and nutrients into the lake. Two things cabin owners can do to keep their lake healthy is to update their septic system and leave shrubs growing between their cabin and beach and leave a shallow entrance to any beach. You can point up hill from canoe landing to the septic system and stop to look at the buffer on walk back home.

For more information on how you can participate in this program and find data you can "google": MN Citizen Lake-monitoring Program or go to http://www.pca.state.mn.us/water/clmp.html. Thanks for your help in monitoring how healthy Wolf Lake is.

Interpersonal communication

Were there any frustrations in working together as paddling partners? Probably there were. Did switching places give you renewed appreciation for the challenges your

partner faced when he/she was in the bow? What was the key to your success or the beginning of your demise? Give examples of how you and your partner's relationship changed throughout the class? Through patience and practice we can do most anything that we want to do.

## C. Next Steps

***Assessment (Concept 3. We all have potential for physical activity and can improve our skills with patience, practice, and teamwork. Concept 4. Using physical skills allows us to reach remote natural areas, and gain a sense of place.)***

*Ask the final wrap-up questions to the large group: What part would you need to practice if you canoed again? What would you need to change? Use PARTNER SPEAKS so students have time to think about and practice sharing their ideas before turning to the large group.*

*Where do you want to explore outdoors near you?*

Years ago nearly everyone had strong connections with the environment, because it was a necessity of life. In the present day, we can very easily live without even going outside, let alone going to a "wild place." If students enjoyed canoeing on an undeveloped lake, they are also stating a value for this type of experience and natural area. Individuals who value natural areas like Wolf or Raven Lake will likely make wise choices for the future generations. The choices you make may be different from mine, but we both will have made more educated decisions, and know our impact because we have spent time out here today.

# [Travel Back (20 min.)]

# Clean Up

Assure that all canoes have been neatly stacked upside down on the rack, lifejackets are hung and paddles stored upright (with tip down) in bins. Make sure that your Secchi disk data (if appropriate) has been recorded properly and seal the disk and record in the container.

Travel back to the ridge, gathering students at each intersection.

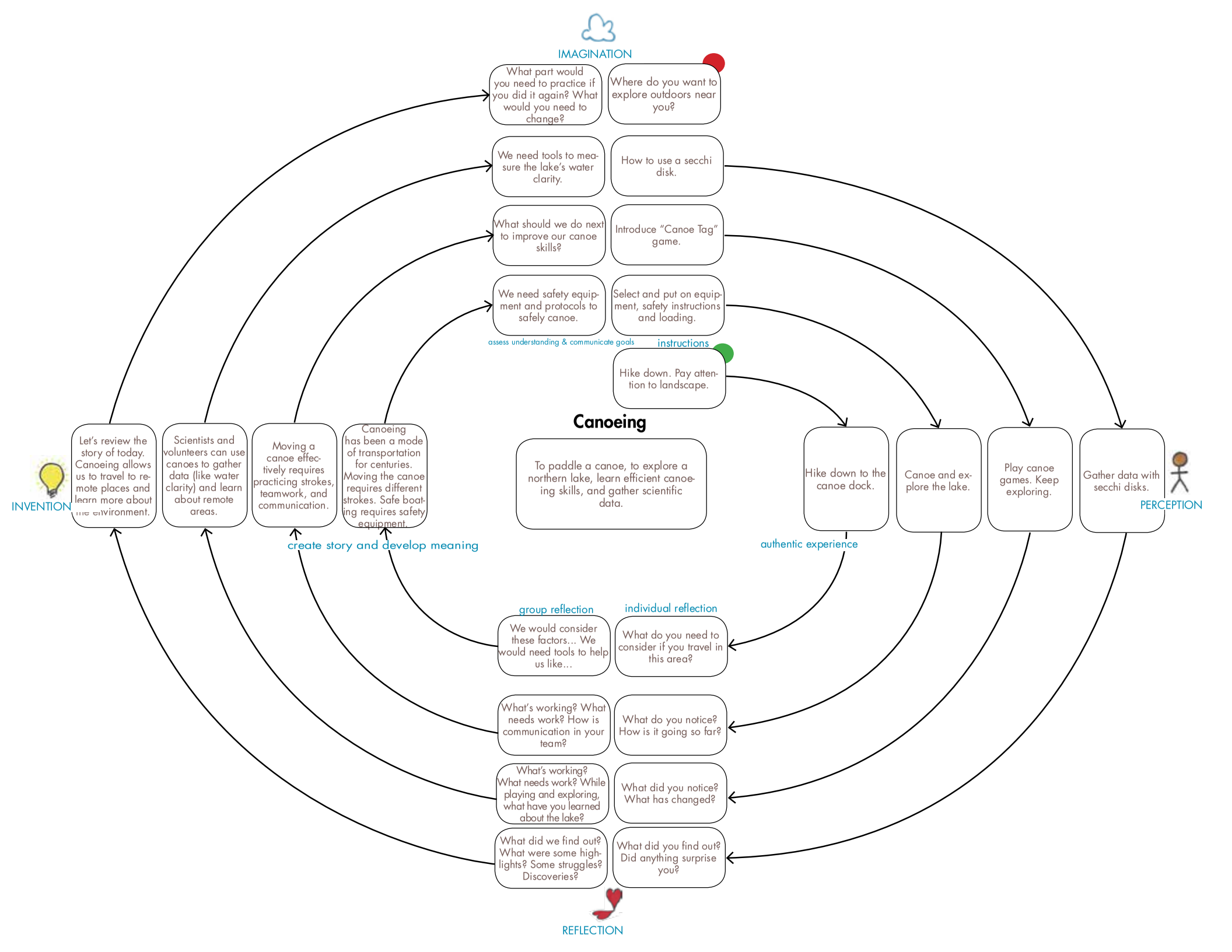
# Appendices

## References


- *Path of the Paddle,* Bill & Paul Mason, Northword Press, Rev. 1995, ISBN 1559714700
- *The Basic Essentials of Canoeing*, Cliff Jacobson, Ics Books, 1997, ISBN 1570340579
- *Canoeing & Camping: Beyond the Basics,* Cliff Jacobson, Ics Books, 1992, ISBN 0934802807
- *Canoeing and Kayaking Instruction Manual,* American Canoeing Association, 1987, ISBN 0-89732-136-7
- *Manual of Accreditation Standards for Adventure Programs,* Association for Experiential Education, 1993


## Sources

- WeNoNah Canoes, P.O. Box 247, Winona, MN 55987-0247, 507-454-5430
- Carlisle Paddles, Great Northern Sales Representative Group, 11975 Portland Ave., Suite 120, Burnsville, MN 55337, 800-279-8368
- www.extrasport.com; PFD's
- Forestry Suppliers, Inc. (Secchi Disk), P.O. Box 8397, Jackson, MS 39284-8397, 800-430-5566


IMAGINATION
What part would you need to practice if you did it again? What would you need to change?
Where do you want to explore outdoors near you?
We need tools to measure the lake's water clarity.
How to use a secchi disk.
What should we do next to improve our canoe skills?
Introduce "Canoe Tag" game.
We need safety equipment and protocols to safely canoe.
Select and put on equipment, safety instructions and loading.
assess understanding & communicate goals
instructions
Hike down. Pay attention to landscape.
Canoeing
To paddle a canoe, to explore a northern lake, learn efficient canoeing skills, and gather scientific data.
INVENTION
Let's review the story of today. Canoeing allows us to travel to remote places and learn more about the environment.
Scientists and volunteers can use canoes to gather data (like water clarity) and learn about remote areas.
Moving a canoe effectively requires practicing strokes, teamwork, and communication.
Canoeing has been a mode of transportation for centuries. Moving the canoe requires different strokes. Safe boating requires safety equipment.
create story and develop meaning
Hike down to the canoe dock.
Canoe and explore the lake.
Play canoe games. Keep exploring.
Gather data with secchi disks.
PERCEPTION
authentic experience
group reflection
individual reflection
We would consider these factors... We would need tools to help us like...
What do you need to consider if you travel in this area?
What's working? What needs work? How is communication in your team?
What do you notice? How is it going so far?
What's working? What needs work? While playing and exploring, what have you learned about the lake?
What did you notice? What has changed?
What did we find out? What were some highlights? Some struggles? Discoveries?
What did you find out? Did anything surprise you?
REFLECTION

# PLANNING OUTLINE: Canoeing

## GUIDING PURPOSE

To paddle a canoe, to explore a northern lake, learn efficient canoeing skills, and gather scientific data.

***What do I know about this group that could influence how they learn and how I teach?***
***What could I find out from them?***

## I. Travel to Canoe Landing (30 min.)

Key things to remember -

Questions to ask -

Assessment routines -

Relating to my learners -

## II. On Land Orientation (30 min.)

Key things to remember -

Questions to ask -

Assessment routines -

Relating to my learners -

## III. On the Water (90 min.)

Key things to remember -

Questions to ask -

Assessment routines -

Relating to my learners -

## IV. Conclusion (20 min.)

Key things to remember -

Questions to ask -

Assessment routines -

Relating to my learners -

## [Return to Wolf Ridge (20 min.)]