

# Paddling – Kayaking



## Winneshiek County Conservation Equipment and Recommendations:

- **Who:** 5th grade and up
- **What:** no equipment available
- **Where:** Lake Meyer Park  
There are a number of kayak rental businesses along the Upper Iowa River in Decorah and the surrounding area. Call 563.534.7145 for more information.

## Introduction

Kayaking is an excellent way to exercise, relax, and enjoy the outdoors. It can be done even in shallow water, with limited gear and limited skill. Being in a kayak gives a person the unique feeling of being close to the water they are paddling in. Here it is easy to feel you are just an extension of the water. Paddling a kayak is very versatile: you can go solo or with others, for a short paddle or an overnight camping trip, across a smooth lake or down a whitewater river. Kayaking is a very enjoyable and “green” way to explore northeastern Iowa’s unique waterways.

## A Brief History

There is no date marking the origin of the kayak, but it is estimated that North America’s aborigines kayaked the Arctic over 5,000 years ago. Inuit people are most commonly credited with the creation of the kayak. While the exact birthplace of kayaks is uncertain, Aleutian hunters are thought to be among the original users of these boats.

The original boats looked very similar to the fiberglass, Kevlar, and plastic boats we paddle today, only made with different materials. Originally, there were two basic types of kayaks: one built with light driftwood and the other made by stretching animal skins over frames made of whalebone. Tribal members used whale fat to waterproof the vessels. To improve buoyancy, they would fill seal bladders with air and tuck them into the front and back sections of the boat.

Covers made of animal skin were then sewn to the deck of the boat in order to keep chilly Arctic water out and to better insulate the paddler. This meant that the Inuit were, in essence, an extension of their boats, increasing the ability to maneuver quickly and efficiently. The Inuit had to be able to roll their boats upright if they flipped over as a safety measure. This maneuver has since been nicknamed “the Eskimo roll.” The boats paddled by Inuit people were hunting tools. The quiet approach of a kayak made it a sleek and ideal hunting vessel. Sometimes Inuit hunters would even drape a white cloth into the water from the front of the boat to make it look like a floating chunk of ice.

Kayaks were not introduced for recreational sport until the middle of the nineteenth century. This introduction came in 1845 in the form of a British boat called “the Rob Roy.” Using a Rob Roy, John MacGregor explored rivers and lakes throughout Europe. He recounted his adventures in a book called “A Thousand Miles in the Rob Roy Canoe.” The book was a best-seller and shortly after its release, paddling became a popular pastime throughout Europe.

In 1936, the Olympics included kayak races in the Berlin games. Now the Olympic Games feature more than 10 different white-water kayak events. Kayaking enjoyed modest participation as a fringe sport in the U.S. until the 1970s, when it began moving to the mainstream.

### **Terms & Definitions**

**broach** - when a boat is held side to the current against one or more obstacles, pushed by the force of the water

**eddy** - area of calm water

**floatation bag** - filled with air to help keep the kayak afloat if capsized or filled with water, may be included with kayak or added as an accessory.

**flow** - movement of water; used to describe how and where the water travels

**keel** - reinforcing fin that runs along the centerline of the kayak bottom; may be inside or outside

**knee pads** - protect your knees and keep them from sliding around inside the kayak

**line** - (1) the "route" taken down a rapid or section of river (2) shouted in a rescue situation, to signal to a swimmer that a throw line is about to be thrown

**painter** – a line of rope at the front/rear of the boat used to secure it to the bank

**portage** - to walk around a feature or section of river carrying the boat

**roll** - when a paddler self-rights their own boat

**throw-line/bag/rope** - a length of **floating** rope packed into a bag ready to be thrown to a swimmer for rescue

### **Equipment & Supplies**

kayak

paddle (Optional: paddle strap and drip guards)

PFD or life preserver

extra clothes

food and water

rain gear

dry bags

river or lake maps

first aid kit

sunscreen

sunglasses

sun hat with dark under bill

### **Selecting a Kayak**

One choice is a recreational kayak, which is usually more stable with a large cockpit or a sit-on-top style. Another choice is an ocean (sea) kayak, which will generally be longer, narrower, and have a smaller cockpit than the recreational kayak. For the novice kayaker, a recreational kayak

is an easy, relatively safe, and inexpensive way to try out the sport. For less commitment, rent a kayak from an outfitter in your area first. Then, as you determine your kayak preferences, you can shop for the kayak that fits your needs.

### Parts of the Kayak:

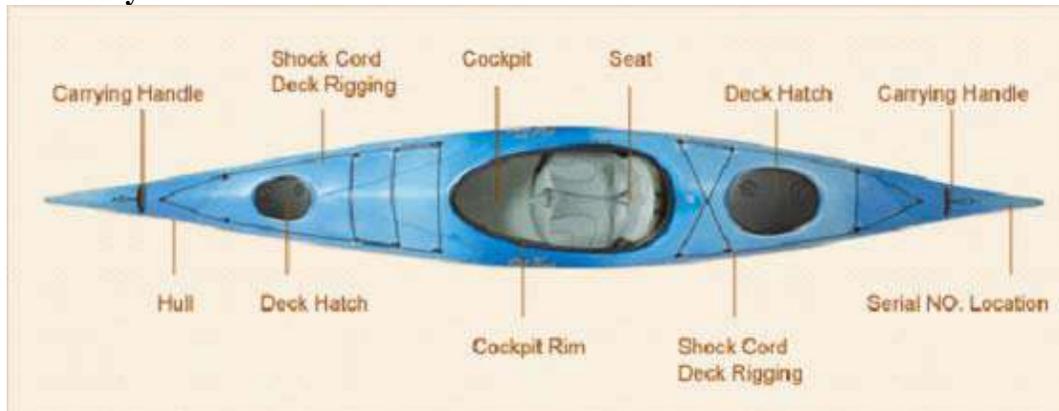


Image from smart-start-kayaking.com

**bow** – front end of the kayak

**cockpit** – area enclosed by the "deck" where the paddler sits

**foot peg** – located inside the kayak, adjustable pegs for feet to rest on so knees can be braced against the sides of the kayak

**port** – left side of the kayak when facing forward

**starboard** – right side of the kayak when facing forward

**stern** – back end of the kayak

### Parts and Types of Kayak Paddles:

**kayak paddle** – long and double bladed

**blade** – wide parts of a kayak paddle located at the end of the shaft; are dipped into water alternately to move boat

**drip rings** – small rubber disks that normally slide up and down the shaft and are designed to stop water dripping down the shaft onto the paddler

**feathered blade** – blades are rotated at an angle to each other; non-feathered blades are positioned parallel to each other; feathering reduces wind resistance when paddling

**shaft** – middle part of paddle that you hold; shaft design can be straight or crooked

**tip** – end of paddle blades

**touring paddle** – designed for efficiency and comfort; a narrower and smaller blade; blades may be cupped (spoon) or flat (flat blades are recommended for beginners)

**whitewater paddle** – has a rigid shaft, wide blades, and typically are feathered; allows paddler to have control while traveling through rapids.

### Sizing the Kayak Paddle

When sizing a kayak paddle, consider the type of paddling you will be doing, the width of the kayak, and your torso length. A general rule is that an average size paddler (5'2"–6'2") in an average-sized solo touring kayak can use a 200–220 cm (80–88 inches) paddle. A longer paddle gives you more turning power, a shorter one tends to make it easier to move forward in a straight line.

## **Regulations**

Water regulations in Iowa are set by the Iowa Department of Natural Resources. For a complete list of rules, go to the Iowa DNR website or refer to the current edition of “The Handbook of Iowa Boating Laws and Responsibilities.”

A few of the basic rules include:

- A U.S. Coast Guard–approved wearable PFD (life jacket) in good condition must be **available** to every person in a canoe or kayak.
- A child under 13 years old must **wear** a USCG–approved PFD.
- Canoes and kayaks over 13 feet in length must have an Iowa Registration Certificate and decals to be operated legally on public waters. Register your vessel in the County Recorder’s office.
- If two crafts are meeting head-on or nearly so, both operators should alter their course to the right and pass at a safe distance.

## **Skills & Strategies**

### **Getting into and Launching a Kayak**

Position the kayak so the cockpit area is in shallow water. Assume you are entering from the port, or left, side:

1. Place paddle across back of cockpit.
2. Grasp paddle and back edge of cockpit with right hand and ease right leg into kayak.
3. With left foot still on ground, reach left hand behind you and grab paddle, which should be behind your back.
4. Sit on back of cockpit and bring left foot into kayak.
5. Making sure to have good balance, ease into kayak seat.
6. Slowly bring paddle in front of you.
7. If kayak has a spray skirt, attach it to cockpit rim.
8. Paddle away from shore/dock.

### **Holding the Paddle**

Grip the paddle in the palm of your hands rather than your fingers. This makes it easier to rotate your wrists and gives you better control over the paddle. Your hands should be at a slightly greater width than your shoulders. Your elbows should be at a 90 degree angle to your forearms, which are approximately a 70 to 90 degree angle to the paddle shaft. An easy way for beginners to remember their hand position is to use tape to mark their grip location on the paddle.

### **Paddle Front and Back**

It is a common mistake for kayakers to hold their paddle backwards the first time they pick up a kayak paddle. Although it may not immediately seem to make a difference which side of the blade pulls you through the water, it does have a significant impact on the amount of power you can generate with your stroke. Keep the part of the paddle blade that is concave or smooth facing you. The best way to visualize this is to picture the palm of your hand as a paddle. Keep your fingers and thumb together and ever so slightly angle your fingers inward. The palm of your hand represents the face of the paddle and the back of your hand represents back of the paddle. The face, or power face, of the paddle is the part you want to be pulling through the water.

## Paddle Top and Bottom

Many kayak paddles are asymmetrical. This means there is a top and a bottom to the paddle blade. If you have an asymmetrical paddle it is important that you hold the paddle as it is designed. The top of the paddle is more horizontal than the bottom. The bottom has more of a tapered effect. Sometimes there is horizontal writing on the paddle. Keeping the writing upright and not upside down is a shortcut that will help you remember how to hold your paddle.

## Kayak Paddling

When paddling a kayak your arms and wrists will follow a similar motion that your legs and ankles do when riding a bike. When going forward, kayakers push out with their upper arm and pull back with their lower arm. This creates a need for kayakers to rotate their body in order to keep their trunk and shoulders facing their hands.

<p><b><u>Basic Strokes</u></b></p>	<p>When paddling, make sure that you have good posture in your kayak. It's important that you sit up in your kayak instead of leaning back. With proper position you'll be able to make all of your paddling strokes as powerful as possible. You should also make sure that your feet are right up against the footrests inside your kayak.</p>
<p><b>Forward Stroke</b> Moves kayak forward.</p> <p>Back Stroke is reverse of the forward stroke with paddle blade being lifted from the water toward the front of the kayak.</p>	<p>Blade should be completely in water; craft will naturally turn, so beginners need to practice timing and power.</p> <p><i>Catch:</i> paddler's torso rotates with right shoulder forward; insert blade in water close to kayak</p> <p><i>Propulsion:</i> upper hand pushes out toward bow while lower arm pulls, rotating paddler's body; blade moves parallel to centerline; lower arm comes to paddler's hip</p> <p><i>Recovery:</i> paddle blade removed from water by lifting wrist and elbow to shoulder level; torso has rotated with left shoulder forward and ready for catch position on opposite side</p>
<p><b>Forward Sweep Stroke</b> Turns bow of kayak away from stroke while maintaining forward movement (e.g. a sweep on the right turns the bow to the left)</p>	<p>Paddle moves in an arc from bow to stern; paddle blade should be fully submerged throughout propulsion; useful for moving around obstacles.</p> <p><i>Catch:</i> paddler's torso rotates with right shoulder forward; insert blade in water close to kayak</p> <p><i>Propulsion:</i> upper hand pushes forward while lower simultaneously pulls paddle back in a wide half circle;</p> <p><i>Recovery:</i> paddle removed from water similarly to forward stroke, ready for catch on opposite side.</p>
<p><b>Reverse Sweep Stroke</b> Slows forward motion of kayak as it turns craft toward side on which stroke performed; essentially the reverse of forward sweep stroke</p>	<p><i>Catch:</i> paddler's torso rotates with left shoulder back; left blade inserted in water close to kayak and behind paddler; beginners should look over their shoulder to see where blade is inserted</p> <p><i>Propulsion:</i> upper hand pulls back while lower simultaneously pushes forward in a wide half circle</p> <p><i>Recovery:</i> paddle removed from water similar to back stroke, ready for catch on opposite side.</p>

<p><b>Draw stroke</b> - pulls boat sideways without slowing forward momentum; done on either side.</p>	<p><i>Catch:</i> both of paddler's hands extended over water on the same side; upper hand reaches farther out, making paddle nearly perpendicular to water; blade face turned toward kayak before it is inserted in water  <i>Propulsion:</i> paddler pulls boat to blade using both arms, keeping paddle nearly vertical; lower hand applies most of the force  <i>Recovery:</i> stroke ends when blade is near craft; blade is rotated toward the kayak and brought out of water, then placed in catch position for next stroke.</p>
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### Safety

- Watch for dangerous dams and circulating currents below dams.
- Paddling alone is discouraged. If you do paddle alone, be sure to let someone know your paddle plan.

### **Rescue Techniques**

Do not panic if your craft capsizes. A kayak may eject the paddler. If not, simply fall out of the kayak unless you know the skill of rolling a kayak back upright. Your PFD will keep you afloat. Kayaks have some built-in floatation. When turned upside down, even if they fill with water, they will usually stay afloat. After being ejected from the kayak, swim back to the craft. If you can roll it upright, do so. Otherwise, hang on to the kayak and pull or wade it back to shore.

In moving water, stay on the upstream side of the kayak to prevent entrapment between a rock and the kayak. If possible, stay with the kayak because of its floatation and visibility to other boaters and rescuers. If others are not available to throw a line, ride the river until you can swim or wade to shore.

### Extensions

Science: Stream velocity, volume (gal/min), hydrology cycle, certification classes, water ecology  
History: voyagers, Marquette & Joliet, Native American history, American history

### Resources

- Iowa DNR. "The Handbook of Iowa Boating Laws and Responsibilities".  
<http://www.boat-ed.com/ia/handbook/index.htm>
- Iowa DNR. Canoe/Kayak Curriculum. <http://www.iowadnr.gov/education/canoeing.html>
- Kayak types, trips, instruction. <http://www.paddling.net>
- History and Skills. <http://www.iowadnr.gov/education>
- History. <http://www.kayakcrusades.ca/history.htm>
- Gear, types, techniques. <http://adventure.howstuffworks.com/kayaking4.htm>
- Paddling.net. <http://www.paddling.net/index.html?refer=DOTCOM>
- Types, purchasing. <http://www.kayakhelp.com/kayaking-strokes/forward-paddling.php>
- General information. <http://www.smart-start-kayaking.com>