



# Canoeing



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## About the Tutorial

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Canoeing is a sport in which the racers use a canoe and paddle it using a single blade. The boat used in this sport is pointed at both ends and one or more paddlers propel it in water. This tutorial has been designed to provide a basic knowledge about Canoeing.

Canoeing should not be confused with rowing as the type of boats used in rowing are different from canoeing. Oars are used in rowing, whereas in canoeing, single-blade paddles are used. Canoeing should not be confused with dragon boating either, as the boats used in these two sports are entirely different.

## Audience

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This tutorial is meant for anyone who wants to play Canoeing. It is prepared keeping in mind that the reader is unaware about the basics of the sport. It is a basic guide to help a beginner understand this sport.

## Prerequisites

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Before proceeding with this tutorial, you are required to have a passion for Canoeing and an eagerness to acquire knowledge on the same.

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# 1. Canoeing – Overview

Canoeing is a very popular water sport played extensively all around the world. Canoeing is a sport where one gets into a little boat made for the sport called a **canoe** and using a single-bladed paddle to steer the canoe, tries to travel down a stream of a river.

In some parts of the world, canoeing is also referred to as **kayaking**, in which the boat used is called a **kayak**. The main objective in canoeing is to travel across a stream of water (a part of a river, generally) with the help of a canoe and a paddle.



## A Brief History of Canoeing

The word 'canoe' was generated from the word **kenu** which means dugout. The first ever canoes were made and developed in thousands of years by the Native Americans. These canoes were made out of large tree trunks by shaping them and making them hollow. It was also made sure that they were strong enough to travel from one island to another.

The more effective and well-known version of the canoe was designed by the North American Indians. They made a frame of wooden ribs and covered them with lightweight bark of birch trees. This simple design has not been modified much over the years and had remained more or less the same. White pine roots were used to hold the joints of the canoes together and then hot pine was applied to make the joints waterproof.

The need for canoes grew by a big margin in the mid-18<sup>th</sup> century. In fact, the first known canoe factory was established in the year 1750 by the French at Trois-Rivieres in Quebec. These canoes were used by the fur traders and were capable of carrying up to 12 people including a cargo weight of about 2400kgs.

## A Brief History of Kayaking

We've already seen there is a similar form of canoeing called **kayaking**. Without going into too much detail about kayaking, let's take a brief look at its history as well.

The first ever kayaks were made thousands of years ago by Eskimos of the northern arctic regions. Unlike canoes, kayaks were used for hunting and fishing. In the mid-1800s, kayaking started becoming popular as a sport and the Europeans showed interest, but it was started as a sport by the German and French.

In the 1970s, kayaking became a mainstream popular sport and more than 10 kayaking events were featured in the Olympics. India is a participant and also has a website on Indian Canoeing and Kayaking ([www.ikca.in](http://www.ikca.in)).

## Canoeing – Participating Countries

In the Summer Olympics, there are 85 countries which participate in canoeing. Unfortunately, India does not participate in this championship.

The top 10 countries in this championship are as follows:

Nation	Golds	Silvers	Bronzes	Total Medals
Soviet Union - URS	29	13	9	51
Germany - GER	28	16	19	63
Hungary - HUN	22	29	26	77
Sweden - SWE	15	11	4	30
East Germany - GDR	14	7	9	30
Romania - ROU	10	10	14	34
France - FRA	7	8	18	33
Slovakia – SVK	7	4	4	15
Czechoslovakia - TCH	7	4	1	12
Italy - ITA	6	6	4	16

India has its own national place for Canoeing and Kayaking. In the 35<sup>th</sup> National Games in Kerala, there were 36 different competitions regarding both canoeing and kayaking organized by the National Games organization, Kerala in 2001.

## Canoeing – Playing Environment

Canoeing is a water sport which can be enjoyed as a racing sport. Canoeing is performed in the river and mostly it is hosted in large rivers where the players race while sitting in the boat. They try to cross the river with the help of paddle provided. It can be played as a single person or as a team. Whoever reaches the destination point in minimum possible time wins the race.

In the canoe race, the racers are provided with a canoe, paddle along with eye and head gear. All the players with their respective canoe sit on a single horizontal row and with the signal they start peddling. The river is surrounded by spectators, cameras, and referee who keep notifying the points. This is in case of any championship tournament.

In normal canoeing, it is done casually without the spectators. All the resorts and travel agencies have their own instructor who keeps an eye on all the players, in case they need any help or get into any kind of trouble.

## Advantages of Canoeing

Canoeing has many advantages which are as follows:

- **Exercise** - Canoeing is a bodily activity that enhances and helps in maintaining physical fitness and overall health and wellness. This sport is an aerobic and a physical exercise that helps in improving the cardiovascular system of your body. The body uses more of the energy generating process.
- **Recreation** - This is an organized, competitive, skilful and entertaining physical activity which requires commitment, fair play, and strategy in which a winner can be defined by the means of its objective.
- **Travel and Tourism** - Going to a distant place on the top of a canoe can be an experience and also an adventure of a lifetime.

Canoeing has a high level of danger because it involves speed, height, supreme physical effort, and the use of highly specified gear. Hence, it gives a tremendous thrill to all its participants.



## 2. Canoeing Vs. Rowing Vs. Dragon Boating

### Difference between Canoeing and Rowing

Both Rowing and Canoeing appear to be similar, but they are unique in several ways. Here is a list of points that differentiate these two sports.

- Rowing has two variants, **sculling** and **sweeping**. In sculling, the players use two oars that are attached on both sides of the boat. In sweeping, only one oar is attached.
- In canoeing the paddles with single blade are used to propel the boat. The paddles are not attached to the canoe.
- In rowing, the players have to propel the boat in backward direction whereas in canoeing the players paddle the boat in the direction in which they are sitting.
- The oars of rowing boat are larger than that of canoeing paddle.
- In rowing, the distance to be covered is larger than that of canoeing.
- Rowing is played only on flat water, whereas canoeing is played on flat water as well as white water.



## Difference between Canoeing and Dragon Boating

Canoeing can also be compared with Dragon Boating, as both of them are played on water using a boat.

- In Canoeing, the boat or canoe is pointed on both sides whereas in dragon boating, one end has the face of a dragon.
- Canoeing can be played individually or with a few partners, whereas dragon boating is a team game only.

The boats used in Canoeing are shorter in comparison to dragon boating.





# 3. Canoeing – Canoe Design

There is no such thing as a one-size-canoe for everyone. It can be quite difficult for one to choose, and this variety has a purpose. The design of a canoe directly impacts on how it will be handled on the water.

If it is built for efficiency, it will allow you to paddle faster with less effort. If it is built for manoeuvrability it will help you make quick turns easily. Here will be talk about the dimensions of a canoe along with its advantages and disadvantages.

## Length of a Canoe

The length of a canoe is calculated from the step to the top of the bow. As simple as it sounds, it has a big impact on the performance of the canoe. A longer canoe is faster, goes in a straight line, and has a larger capacity than a shorter canoe.

A longer canoe has its disadvantages as well. It is difficult to manoeuvre. It can't make tight turns and it won't respond as quickly as sometimes required.

## Breadth of a Canoe

The width, also known as the **beam** of a canoe, is measured at the widest part of a canoe. A narrower canoe is faster but it is less stable, while a broad canoe can be far more stable but it won't be as efficient.

## Depth of a Canoe

The depth of a canoe is measured at three places, the bow, the stern and the center. The more the depth, better the carrying capacity and more will be the weight of the canoe.

## Hull of a Canoe

The basic cross-section of the hull of a canoe helps a person to understand its true nature on water. There are four categories of hulls:

- **Flat Bottom hull** – As one can understand from its name, these hulls are focused to be flatter on the bottom with slight curves which makes them highly stable, but they can only be used on still water. This type of design will not be stable in windy conditions and leaning is also very difficult.
- **Round Bottom hull** – This is the contrast of the first one, in this case the bottom is round and highly curved. This design helps in speed and efficiency but comes at a cost of balance.
- **Shallow Arch** – Slightly curvier than a flat bottom hull, this design has moderate initial stability with moderate manoeuvrability. It depends on the manufacturer whether they focus more on the stability or the manoeuvrability of the canoe.
- **Shallow V** – This is similar to the arch hull, but it has a V shaped hull at the very bottom of the arch, focusing on decent stability and improved tracking but decreased efficiency.

## 4. Canoeing – Design Materials

### Traditional Design Materials

Traditionally, artisans made canoes with the following materials to make them more usable and attractive to some extent:

- **Birch bark** – From an early stage, the indigenous people of Eastern Canada and United States produced canoes with the bark of paper birch trees by taking off the bark in a single piece. Both the ends were sown together and tightened with the pitch of **balsam fir**.
- **Dugout** – Many of the indigenous people across the globe made what are called **dugout canoes**. It is made by carving a single large piece of wood which could be an entire trunk or a large part of the trunk of large trees.
- **Reed** – If people did not have suitable large trees for carving out canoes, they used bundled reeds to construct one.
- **Stitch and Glue** – Panels of ply wood are stitched and made into a form of a hull shape. We'll see the hull shape in a bit more detail later on in this tutorial.
- **Clinker, carvel or lapstrake** – Longitudinal plans are kept together and tied and nailed together to form the hull shape.

### Modern Design Materials

- **Plastic** – There is a composition made of vinyl and hard acrylonitrile butadiene styrene (ABS) plastic bonded by heat called **Royalex**. Royalex is used to make high quality canoes which are highly resistant to Ultra-violet damage. As Royalex can be quite expensive, there is a cheaper alternative called **Roto-molded polyethylene**.
- **Composites reinforced by Fiber** – In canoes manufacturing, the most common material used is none other than **Fiberglass**. The most advantage of using this material is that it is not only inexpensive but it also can easily be transformed into any shape and can be repaired in case of any damage.
- **Polycarbonate** – A polycarbonate called **Lexan** is used in transparent canoes. It has all the characteristics of plastics like rigidity. It is easily repairable and that's why it is also a viable option.
- **Polyvinyl Chloride or PVC** – Canoes which can be folded are usually made out of PVC around an aluminium frame for the canoe.
- **PVC for inflatable canoes** – In case of inflatable canoes, there is no frame used and these can be deflated, folded up and can be stored for travel purposes. In this case as well, PVC is used for making tubes and sides which can be filled with air.

## 5. Canoeing – How to Play?

Now we have come to the point where we need to learn what is the difference between canoeing and kayaking so that we can get focused on canoeing without any confusion between the two.

### Canoe

A canoe is a small boat, pointed at both ends. It is propelled by paddlers who kneel or sit on a raised set in the canoe and use single bladed paddles to steer. Normally a canoe is used by two people. It is mostly human powered, but it can also be powered by sails or electric motors or gas motors.



### Kayak

A kayak is a slim boat which is pointed at both the ends. It is mostly propelled by only one person called a **kayaker**, who sits in a low seat and uses paddles which have blades at both ends. It is usually covered by a deck, including a spray deck to cover the cockpit so that the paddler's lower body doesn't get wet.



### Differences in Canoe and Kayak

- **Sitting position** – In a canoe, the paddler is either kneeled or seated on a raised seat. In a kayak, the paddler is seated on a low seat with both the legs extended in front.
- **Paddles** – The paddle of a canoe has only one blade on end while the paddle in kayak is double bladed.

There are many different types of canoeing. These are some of the popular ones.

### Marathon Canoeing

Marathon Canoeing is long distance canoeing races which may also include portages. According to the ICF rules, the maximum canoe weight is 10 to 14 kgs for C1 (single person) and C2 (two persons) respectively. All the other rules depend on the race and the organization.

### Sprint Canoeing

Sprint canoeing, also known as **flatwater racing**, is a race where the paddler kneels on one knee and uses the paddle to propel as fast as he or she can. Here the canoes have no rudder, so the paddler has to steer using a **j-stroke** by his paddle.





These canoes may be partly or entirely opened. These are long and streamlined with a very narrow beam.

### Freestyle Canoeing

Freestyle canoe is the most adventurous type of canoeing. These canoes can be similar to kayaks, but the shapes are slightly different from outside. The paddler has to kneel and use his single bladed paddle to steer on top of the water.

The canoes specialized for freestyle are called **playboats**.





## **Canoe Camping**

Canoe Camping is a blend of canoeing as well as camping. It can be compared to bag packing but canoe camper travel by canoes or kayaks as compared to bag packing. It is simple but time taking.

## **Canoe Slalom**

Canoe Slalom is a competitive sport where the objective is to navigate a canoe across a course of hanging gates on a stream of rapid rivers in the quickest time possible. It is one of the two canoeing disciplines at the Summer Olympics.

## 6. Canoeing – Rules

The rules and regulations depend on which wilderness area or park you have chosen for canoeing. Parks may require permission and safety measures for organizing such events. To get the best idea of the rules, get to know more about your chosen area or park and ask as many questions as required.



Before going on the water, here are some precautions you should take care of:

- **Take an on-water course** – Whether it's just for safety or for skill development, an on-water instruction course will provide you with all the information you need for canoeing, kayaking etc.
- **Wear your lifejacket** – One should expect to capsize and swim occasionally when paddling a canoe or a kayak or any of its kind. A life jacket can save your life in this scenario.
- **Cold water safety** – Cold water can be dangerous so one should be aware about the weather and water conditions before participating in the sport.
- **Rules of the road** – You follow the rules of the road you follow the rules to be followed on how to share the waterways. Get to know more about it through your guide or event organizer.
- **Safety Check** – The canoers should be careful about their safety and should take safety tips before getting into water.
- **Practices, ethics and conduct** – Learn the key points on how to properly share, and relish our natural paddling resources.

All the safety measures should be taken care of including a lifejacket, a map of the region, and first-aid kits.

# 7. Canoeing – Champions

## ICF Canoe Sprint World Championships

The ICF and the Canoe Sprint World Championships hosts the international events for canoeing, one of the two is organized by the International Canoe Federation and is known as ICF. Since 1970, the World Championships have been organized every year in non-Summer Olympic years. The next World Championship will be held in 2017 at Racice, Czech Republic.

## ICF Canoe Slalom World Championships

The ICF Canoe Slalom World Championships, organized by ICF, hosts the international events in canoeing. The World Championships have taken place every year in the non-Summer Olympics years since the 2002. The next ICF Canoe Slalom World Championship is going to be held in 2017 at Pau, France.

## The Australian Slalom and Wildwater Championships

These are canoeing championships held in Australia. The 2016 Australian Slalom and Wildwater Championships and the Australian Schools Championships were held in Tasmania.

Let us now discuss briefly about some of the champions who have made a mark in Canoeing.

### David Florence

David Florence is a British slalom canoeist. He was the world champion in individual canoe C-1 in slalom in 2013 and 2015, and also the champion in 2013 for pair canoe with Richard Hounslow in slalom of C-2.

He won a silver medal in the men's slalom C-1 at the 2008 Summer Olympics in Beijing. He had won a silver medal in the C-2 event at the 2012 Summer Olympics in London.

### Michal Martikán

Michal Martikán is a Slovak slalom canoeist. He has been competing since the mid-1990s. He became the first athlete to win a gold medal in Olympic Games in the year 1996 for Slovakia after its independence in 1993.

He won five Olympics medal in total which include two golds, two silvers and one bronze. He has also won the World Championship title in the C-1 individual category four times.

### Franz Anton

Franz Anton is a slalom canoeist from Germany who has won six medals in ICF Canoe Slalom World Championships. These six medals include one gold, four silvers, and one bronze. He won gold medal in 2015, two silvers (one each in 2010 and 2013) and two silvers in 2015.

In European Championships, he has won two silvers one in 2013 and the other in 2015. He has also won two bronzes in European Championships one in 2013 and the other in 2016.

## **Kateřina Kudějov**

Kateřina Kudějov is a Czech slalom canoeist who has won many medals in various senior and junior championships. She has won one silver in 2011, one gold in 2013, and two golds in 2015 in World Championships.

She has won four medals in European Championships which include one gold in 2011, one bronze in 2013, one gold in 2014, and one bronze in 2015.

Kudějov has participated in U23 World Championships and has won four golds. In U23 European Championships, she has won three golds, two silvers, and two bronzes.

## 8. Canoeing – Locations in India

### Kayaking and Canoeing in Goa, Kerala, and Karnataka

The beaches of Goa, Kerala and Karnataka are the major canoeing and kayaking regions. They have a significant amount of beach resorts which also offer exotic canoeing and kayaking experience. They have the best quality of equipment for the sport. They also have experienced and qualified instructors for the newbies.



### Kayaking and Canoeing in Uttaranchal

In Uttaranchal, one can have the opportunity to experience canoeing in the white water with a combination of hiking and a holiday in a forest. It is best suitable for people who are naturalists. Rishikesh, Ramganga and the Dakpathar in Corbett National Park are the most suitable areas for white water kayaking. Kayaking can be a good option for those who like more adventure. The river gradient and the rapids are the main difficulties which one faces during kayaking.

### Kayaking and Canoeing in Jammu and Kashmir

In the state of Jammu and Kashmir, recently the kayaking and canoeing tournament has been introduced, which will definitely attract the sport lovers. This event is being hosted by the Jammu and Kashmir kayaking and canoeing association with the collaboration of the Departments of Youth Service, sport services and also the Jammu and Kashmir Sports Council.





This event which takes place in Srinagar, will definitely help in the popularization of water sports athletics in Jammu and Kashmir. The winners are then selected as the contestants for the National Kayaking and Canoeing tournament.