

## ***Raft Building Designs***

***The Activity:***

*Design and build a raft*

***Activity Type:***

Patrol Activity  
Troop Activity

***Roles:***

Activity Leaders  
Quartermaster  
First Aider/Safety Person

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***The Crean Award:***

***Discovery:***

Patrol Activity  
Skills

***Terra Nova:***

Task/Role in Patrol  
Patrol Activity  
Skills

***Endurance:***

Planning  
Develop Teamwork

***Polar:***

Patrol Activity

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***SPICES***

Physical  
Intellectual

***Adventure Skills and other Badges:***

Paddling

Helmsman Badges



## Plan:

You'll need to right equipment to design and build a good raft!

### Buoyancy

The most important thing about your raft is that you need something to keep it afloat. Anything that floats will work. Inflated tractor or car tubes, (your local tyre centre or garage may usually give you these free of charge), steel oil drums with lids, plastic barrels, plastic bottles or polystyrene blocks could work. It is even possible to make buoyancy from inflated and tied black plastic sacks if you are careful.

Plastic barrels tend to be the most common but you should be sure to check the buoyancy of each one before getting afloat! As a rule of thumb, a 200 litre drum will float  $\pm 100\text{kg}$  at 50% depth, but you will need to experiment.

### Structure

Timber poles or plastic pipes are normally the most commonly used items in Scout rafts. Plastic or PVC pipes have the advantage that they can be also used as the buoyancy element meaning that you can use a lightweight platform to support your rafters, think timber sheeting or suitable plastics. The lighter your structure, the faster you will go, just remember that it needs to be durable enough to hold your rafters!



### Paddles, Oars etc

All aspects of your raft can be made by your rafters. Be cautious about protruding sharp edges or any stray screws or nails. It might be worthwhile to bring in an expert craftsman to assist. There are lots of plans online. It's probably best not to use double-ended paddles in a confined space as the rafters may end up tangled. Remember that a good rhythm and a consistent stroke will give your raft much more speed!

### Rope

Natural fibre ropes like manila will tighten when wet, resulting in tighter lashings on your raft but this can be difficult (and expensive) rope to source. Its proper care and storage is also important. Synthetic rope like polypropylene is light and

it floats but it may loosen with the weight of your crew. Experiment in order to find the right one for your team.

**Do:**

Safety

1. Appropriate Supervision

The person in charge should be of sufficient proven skill to oversee the activity. There should be some sort of rescue structure in place. While rafting normally takes place in shallow water, there should still be sufficient provision for rescue. Appropriately skilled kayakers or a small powerboat should be sufficient in most cases.



2. Physical Fitness

The person in charge should be sure that all rafters have sufficient fitness for the rafting adventure.

3. Swimming Ability

The person in charge should know the swimming ability of all participants and have sufficient safety arrangements in place to account for weaker swimmers.

4. Personal Flotation Equipment

There are few water activities where you are as likely to end up in the water as rafting. Therefore it's important that each Scout is wearing a working Personal Flotation Device of at least 50N buoyancy.

5. Buddy System

You should have a simple plan for what will happen in the event of a Scout falling from the raft or in the event of capsize or sinking. A key part of this should be a buddy system where Scouts are paired off and should keep an eye on one another throughout the activity.

## 6. Skill Proficiency

Each Scout should know the limits of her/his ability and should have enough skills to carry out the activity safely and enjoyably.

## 7. Planning

Choice of location is covered in the next section. Tides & currents should be considered. Your rafting adventure should not interfere with other water users. You should ensure that your activity will Leave no Trace on, in or near the water.

## 8. Equipment

It is advisable that rafters wear a helmet. They are lots of hazards, not least using paddles in a tight space and hard surfaces on the raft itself. Rafters should wear hard-soled shoes throughout, particularly if the water is shallow and the nature of the bottom is not known.

## 9. Discipline

Crews should have an idea as to how best to distribute weight on their rafts. They should also have discipline in a capsized (knowing that they should stay with the raft and use the buddy system) and have an emergency plan

## 10. Weather

A drop of rain won't harm well prepared (and appropriately dressed) Scouts but a gusting and unpredictable wind could have a huge effect on everyone's enjoyment. Have a weather forecast and make decisions based on it.

### Frapping a barrel

Begin with a round turn and 2 half hitches on one spar connected to the barrel.

You should then tightly wrap this rope around the barrel at least 4 times.

Ensure these wraps stay as close and tight together as possible.

Finish on the spar you began on, with another round turn and 2 half hitches.

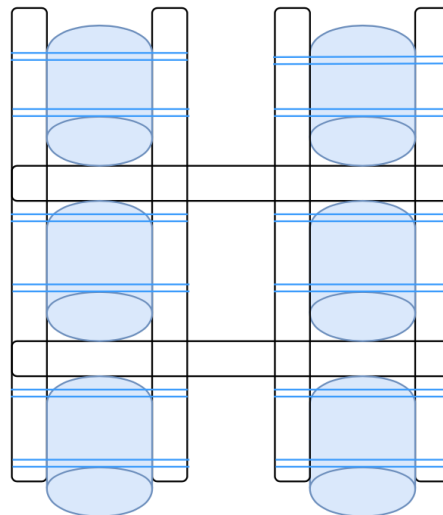
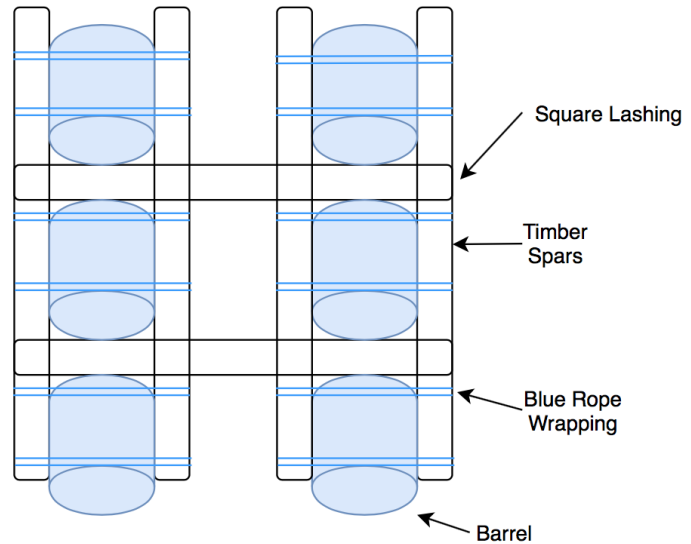


**Sample Design 1**

The below design is simple and extremely effective. Water flows through the centre, resulting in a very solid and balanced raft. You can also easily adjust the amount of scouts it can cater for.

**Construction:**

1. Simply build the structure from timber spars and 8 square lashings. This is easier done with barrels lying on top to get the size right.
2. Then tightly wrap the barrels to the structure with blue rope at each end of the barrel.
3. Turn upside down, hop on and enjoy.

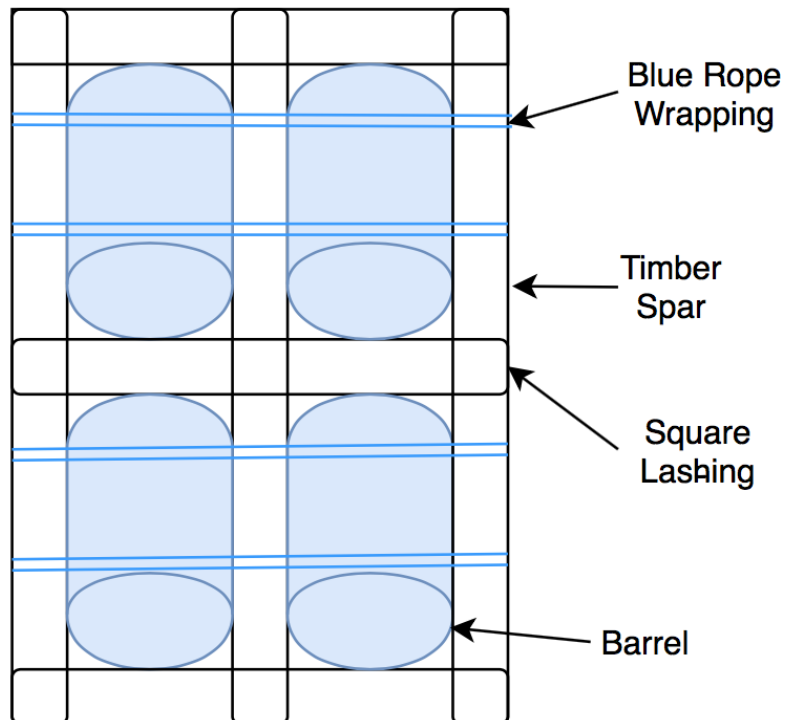
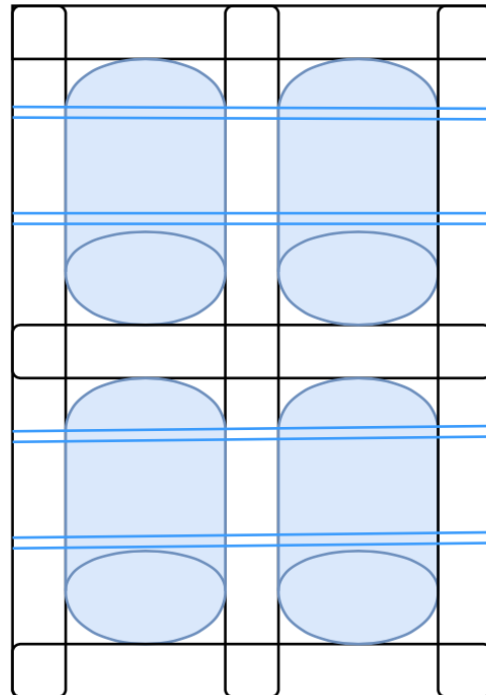


**Sample Design 2**

This raft is marginally easier to make than the first example; however, this has a wide front, therefore it is slightly less comfortable and can tend to bob in the water.

**Construction:**

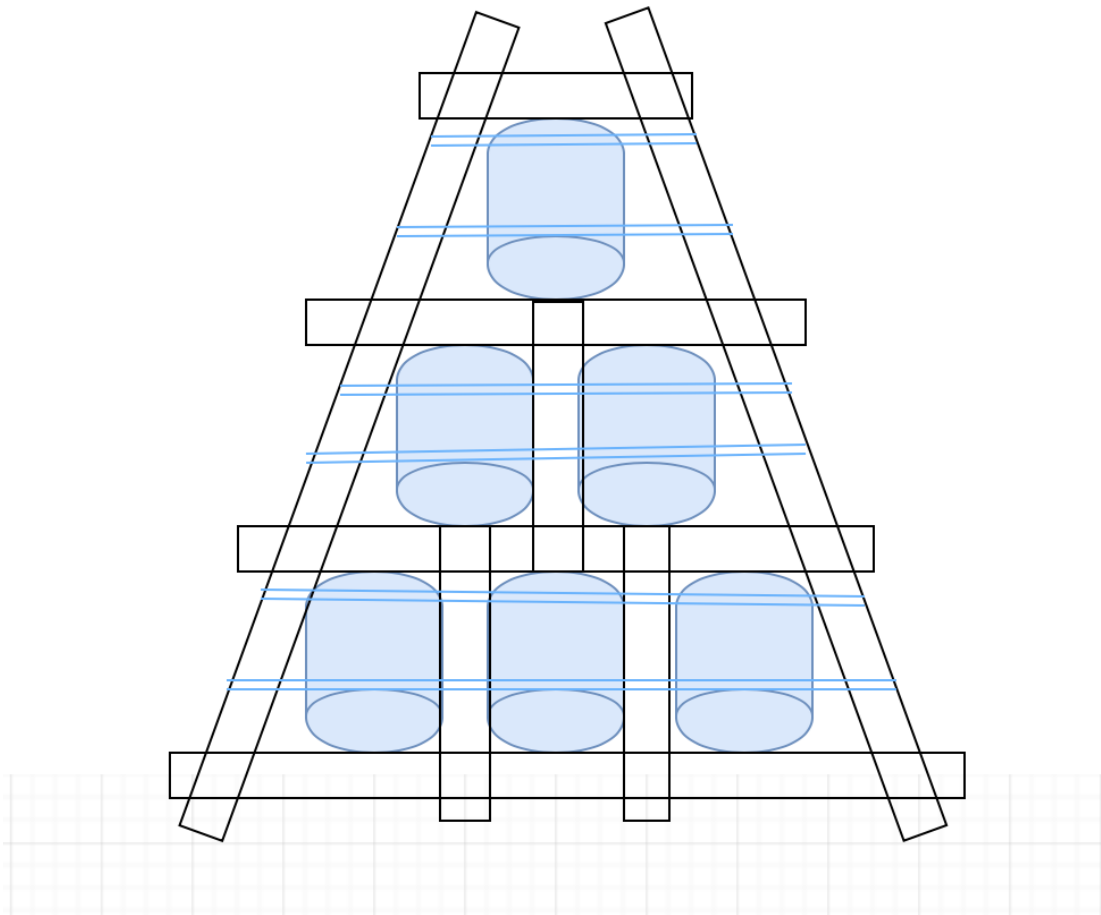
1. It's easiest to build this raft with spars laid out on the floor and barrels on top.
2. Tie the 9 square lashing, Wrap the blue barrels and turn upside down.



**Sample Design 3**

This is an example of a raft that a more adventurous and daring patrol could go for.

While it looks cool, its quite structurally unreliable but an example of thinking outside of the square shaped design.



**Patrol Review:**

What design did you decide on? Did it work out?

Did you have to change your design in the construction?

What was everyone's role?

How did the raft adventure help you with your Crean Awards?



**Review SPICES:**

**Social**

Relationships

Communication Skills

Other Cultures

Community Involvement

Promise and Law

**Physical**

Eat Well

Personal Hygiene

Balanced Lifestyle

How the Body Works

Physical Limitations

Health Choices

Access Help

**Intellectual**

Achieving Goals

New Ideas

Develop Creativity

Learn from Discussions

Team Member

**Character**

Promise and Law

Friends and Friendships

Plan before do

Ensuring Fairness

Respect

Differences and Views

Following Dreams

Live the Scouting Spirit

**Emotional**

Aware of Feelings

Asking/Giving Help

Responsibility for Emotions

Controlling Emotions

Going Further

Beliefs and Values

Developing Talents

**Spiritual**

Promise and Law

Impact on the Environment

Reflection

Changing Beliefs



## The National Raft Race

**Dear Scout/Scouter,**

This Information Pack provides all of the details about the National Raft Race. This event is for Patrols of 6-8 Scouts.

### ***Event Details***

The National Raft Race will take place on Saturday 3<sup>rd</sup> June 2017 in Lough Dan Scout Centre, Co. Wicklow. This fun event will require your Patrol to build a raft of your own design and race it around our course on the water.

Check-in for the event will run from 10:30am-11am in the Lake Field of Lough Dan. We would ask all Accompanying Scouters to ensure that they bring with them an Activities Consent Form for each participant. This form is available to download using the below link:

<http://scouts.ptools.net/Scouter/Management-Resources/Policies-Procedures/All-Official-Forms/SIF-11-05-Scouting-Ireland-Activities-Consent-Form.pdf>

The event involves a Time Trial race. As such, the Patrol who can complete the course in the fastest time will be deemed the winners! The event will finish with a BBQ and Awards Presentation for all Scouts and their Accompanying Scouters at 4pm.

### ***Equipment Required***

Helmets, PFDs, paddles and blue barrels will be provided to all Patrols. However, if any Patrols would like to bring any of the above equipment with them, we welcome them to do so.

Patrols should bring with them their own supply of:

- Rope/Sisal
- Old Clothes for the Water
- Wetsuits (if desired)
- Old Shoes/Booties

A limited supply of pioneering wood is available in Lough Dan which Patrols are welcome to use. Alternatively, Patrols may supply their own pioneering wood.

For tips on how to build a raft (including sample design plans), take a look at the resource below:

<http://www.scouts.ie/pdfJS/pdfViewer.aspx?n=/Scout/Weekly-Resources/05S-Raft-Building-Resource.pdf>



### *Event Theme*

The theme for this event is **Pirates of the Caribbean**. There will be prizes for the Patrols who best incorporate this theme into their raft!

### *Booking Details*

The cost of the event is €40 per Patrol. This covers the cost of the event programme, BBQ and awards and badges. All payments should be to National Office made by **Thursday 1<sup>st</sup> June at 5pm**. Patrols may book in using the link **HERE**.

We would encourage Patrols attending the event to make an overnight or weekend out of it by booking in to Lough Dan Scout Centre through their website:

<http://www.loughdan.com/>

