



**SciCamp - A Network for Science Camps in Europe**

# **How to organize a Science Camp (Manual)**

## Project information

Project acronym:	SCICAMP
Project title:	SciCamp – A Network for Science Camps in Europe
Project number:	527525-LLP-1-2012-1-DE-COMENIUS-CNW
Sub-programme or KA:	not applicable
Project website:	<a href="http://www.sciencecamps.eu">http://www.sciencecamps.eu</a>
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This project has been funded with support from the European Commission.

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# I. Introduction

## 1. What is a Science Camp?

A science camp is a residential science education program, which offers various activities for young people between ages 6-20, aimed at supporting and strengthening their science, technology, engineering and math (STEM) skills, and which lasts at least two days with (usually) one overnight within the camp premises.

Science Camps can cover many different scientific topics or can be focused on a single one. Number of participants can vary from a dozen to 150 or more. The length can go anywhere from a single night to three or more weeks. This manual is intended to help you organize whatever type of camp suits your needs and ambitions best.

## 2. The benefits for participants and organizers

Science camps create an environment like no other, which allows the participants to learn, create and discover on their own or in a team, under the supervision of professional camp counsellors.

The social aspect of science camps is also important, as it brings together peers with common interests in science and technology, who sometimes have problems with adjusting with their peers at school. Friendships formed during the camps can last a lifetime and the networks created early on in such an informal environment can make a lasting impact on the participants' professional development.

Organizers and councillors in the camps are frequently selected from the former participants, so they are intrinsically motivated and often volunteer their time and effort. This shows just how fulfilling working in a science camp is. Most of the camp's staff is made out of young professionals, scientists, PhD students, university assistants and professors, school teachers and students. They usually work for the camp for several years, acquiring important experience and connections related to education and their own scientific field.

## II. How to organize a science camp – before the camp starts

### 1. Forming a team of organizers

To start a new science camp, it is paramount to have a core of highly motivated and enthusiastic people willing to be pioneers, with all the challenges it encompasses. The initial team can be small, two to four devoted individuals who work well together and have compatible set of interests and skills is all it takes to get the things going. As well as being interested in organizing and leading a science camp, they should also be specialized in one of the STEM fields.

It is crucial for the success of the camp that the initial team is solid and cohesive, so make sure to pay a lot of attention to team-building activities.

### 2. Figuring out the basics

First thing your organizers' team has to decide on are the basic characteristics of the camp. This will of course depend on your own interests, skills and experience.

Your team should agree on:

#### 1. *The main topic of the camp*

The main topic will most likely arise naturally from the common interests you share with the rest of your team. You can decide on one or several scientific disciplines, depending on your wishes. The important thing is that you create a clear idea of what your camp will be about, an idea you can communicate to your public.

#### 2. *Main aims and goals of the camp*

What do you want the main mission of the camp to be? What is your goal? To inspire kids to become scientists? To encourage them to use the scientific method and critical thinking? To help debunk myths about your own branch of science? To create an environment where geeky kids like you used to be can hang out with likeminded friends? Whatever you want your goal to be – turn it into a fun and motivating mission statement that you will later use in advertising.

#### 3. *The name of the camp*

Once you have a clear idea of the topic and the main mission of your camp – it is time to come up with a catchy name and a tag line. Brainstorm with your team, explore the internet, get inspired – and decide on a perfect name that will reflect what your camp will be all about!

#### 4. *Duration of the camp*

When will your camp happen? How long do you want your camp to last? It can be anything from a single sleepover to several weeks. It can happen only once, or several times within a certain time period. You can make it a summer or a winter camp. Keep in mind what your potentials are, and try to be realistic and objective. Do you

feel like making a camp every weekend of the summer? Will you have the staff do make it happen? Will there be enough interested participants? Would it be a good idea to organize a camp during the school year or during holidays? Think long and hard about this with your team, and come up with an optimum solution which will work for you.

### **5. Target participants**

Who will your camp be for? Figure out the age limits and any specific requirements you may ask of your applicants. Will you work with younger or older kids? Teenagers? Students? Do they need any previous knowledge or skills to participate? How will the application process look like? What is the minimum and the maximum of participants you can handle? Make sure to have answers to all of these questions.

### **6. Camp program**

At this point already you should think about what the participants will do at your camp in more detail. How will the daily program and schedule look like? Will they be separated in groups or will all of them have the same program? Will there be lectures, workshops, and debates? Will they work individually or in teams? Will they work on their own scientific projects? What skills do you want them to gain during the stay? What will be the final product of their work? What will the social program look like? How many people will you need working in the camp and what profiles should they be? Discuss all of those issues with your team, until you all agree on the best solutions that work for you.

### **7. Materials**

To create a budget, you need to predict what materials will you need for the camp. Will there be any specific scientific equipment required? Computers, printers, scanners? Cameras? Stationary? What will you use for the social program and games? Come up with a list with prices, and think about companies and organizations that might lend you their equipment and products in exchange for advertising.

### **3. Budgeting, sponsoring and pricing**

Once you have a clear idea about what you want your camp to look like, it is time to put it down on paper and calculate how much it will cost. Make sure that your list includes boarding, meals, materials for the scientific and social program, transportation costs, staffing costs, medical costs and set aside a certain amount for unexpected expenses. Create a well-organized comprehensible budget spread sheet, so you can keep track of it easily.

Look into the sponsoring opportunities. Some companies and organizations could be willing to lend equipment or even donate money for the cause they believe in or for advertising. You may also try to crowd fund your camp.

Once you have the set budget, it is time to put a price on your camp – a fee that your applicants will pay to participate. Make sure that the price is not too low or too high, as both will create you problems in the applications phase, giving you too many or

too few applicants. Look into the payment methods and create a bank account for your camp if necessary.

If possible, you can think about creating a grant program to sponsor a few selected applicants who show great motivation and potential, but cannot afford to pay the fee themselves.

#### **4. Staffing the camp**

Having a cohesive team of organizers is essential, but you cannot be expected to do all the work before and during the camp. Forming a good team of staff early on is crucial. Depending on the scope and the size of your camp, your staffing requirements will vary. The ideal proportion of participants to staff is 1:8, so for every 8 participants you have, you should plan for a staff member.

Profile of your staff can be very diverse. Try to find volunteers, especially among students of psychology, education and sciences. Actors and entertainment workers might be interested in running sections of your social program. School teachers, university assistants and professors and young scientists might appreciate the opportunity to work with kids, to spread the knowledge about their favorite topics. Certain doctors and nurses might have time to volunteer during holidays.

Do your best to scout for motivated individuals, as they will most likely want to volunteer. Look into people who previously participated in science camps and have experience with the special camp atmosphere. Start looking for the staff early enough, so that you are not forced to make last-minute compromises and that you have time for team-building activities.

Even if you are not paying your staff, make sure to make them feel respected and appreciated. Make them feel like a part of the team, create matching t-shirts for everyone, think of other small signs of appreciation you can give them. Create and conduct training session for everyone where you will explain the main mission of your camp, as well as their tasks and responsibilities. Do your best to give your staff space to self-express and to pick duties that go best with their individual personalities. The more autonomy and sense of purpose you provide – more involved in the camp they will feel, and they will do a better job.

Create a system of communication among your team and make sure to keep all the communication lines open, so you are able to solve the problems as soon as they arise.

#### **5. Branding of the camp**

Having an awesome name is a good start, but it is by far not enough to attract potential participants. Think about what your camp is all about, and find a graphic designer who will create a logo and branding for the camp. You will use these on the website, promo materials and merchandizing, so make sure your team of organizers is happy with the results.

## 6. Location

Before making public announcement about your camp, you have to find a perfect spot for it. What constitutes a perfect place will of course highly depend on the characteristics of your camp – size, length and topic.

Depending on those, look into the appropriate objects, like hotels, recreational centers, mountain lodges, schools, science museums, planetariums, etc.

Make sure the object has enough room for all the participants and their belongings, that the layout is good for the activities you are planning to do, both scientific and social.

A plus would be if the place has a big yard or is close to a park, for outside activities. An easy access via public transport and a well-sized parking is also an important requirement.

Depending on your topic, you may wish to pick a place with special significance – an archeology site if your camp is about history and archeology, or a place near an observatory if you are doing a camp about astronomy, etc.

When talking to the people running the potential venue, make sure that they understand what a science camp is and what it will mean to have that many kids around. Try to pick a place where the staff is enthusiastic about that idea, otherwise you will spend a lot of time and energy playing the mediator between the owners and the participants, which you definitely do not want. Also, let them know about any special requirements you might need for the camp (for example, late serving of meals due to astronomy observations during the night). Make sure you are on the same page about all of the important organizational issues before the camp starts, and keep good relations with the owners.

Make nice pictures of the location, so that you can use them on the website later.

## 7. Marketing – web site, social networks, promo material

Now you have almost all of the details about your camp figured out – it is time to let people know about it!

You will need:

### 1. A web site

Make sure that it is visually pleasing and that it represents the spirit of your camp. It should contain all the basic information about the camp, the organizers, the staff team, many pictures of the venue or past camps (if you have already organized it). Update the web site frequently, with news about the upcoming camp. Make sure to have contact details (email and phone number) so people can come to you with questions and issues. Have a forum or a place where visitors can post questions and comments. Once you have a detailed program for the camp, put it online. Make sure

everything looks professional, check grammar and spelling. The website is the first impression of your camp that your potential applicants will get, so it is very important that it reflects your camp in the best possible light.

## **2. Social networks**

Create pages and profiles for your camp on Facebook, Instagram, Twitter... Learn how to use these social networks and keep them alive – post frequently (but do not spam!) and meaningfully to keep your audience interested. Try to spark conversation and discussion among them, to keep them engaged. Look into boosting your posts on Facebook and reaching the target audience. These can be powerful tools if used properly. Find a person among the staff who is already familiar and comfortable with the social media and let them post for your camp – their posts will feel more natural and appealing to the audiences.

## **3. Promo-material**

Depending on your budget and possibilities, you could invest or find sponsoring for the promo-material and merchandize. You could have designed and print a whole collection of brochures, flyers, posters and booklets about your camp and have them distributed around schools and other places of interest. You could create merchandize like t-shirts, mugs, hats, pens etc. with your logo, and give them away or sell them in the camp. The possibilities for this are limitless, so it is all up to your budget and creativity.

## **8. Insurances and permits**

Before the start of the camp you have to make sure with the officials if you have all the permits and insurances you need to run a children's camp. You may be required to have special permits for serving food to children, someone in your team will have to be certified for the first aid, etc.

As the regulations are different in every country, it is impossible to write a single manual for this, and you will have to check what the rules are in your country and to follow them.

## **9. Info service for the parents and applicants**

Once the information about your camp is out there, you will have to be ready to handle a lot of inquiries from potential applicants and their parents. Make sure to develop a good system for this – decide who will be responsible for answering the phone calls and the emails. That person needs to be responsible, polite, professional and well informed. It is crucial that at this stage your applicants and their parents develop a sense of confidence in your camp staff.

Develop an application system and keep to it. Create an application form, asking for all the essential info on the applicant (including the parents' contact, for emergencies), as well as the motivational letter. Agree on the cancellations policy, as well as the deadline for applicants. Come up with a system on how you will choose participants if you have more applications than available places.

Make sure the parents and applicants have all the information needed to make the application process easy and user-friendly. Make payment information clearly accessible. Have all the basic information and forms online, follow procedures and deadlines you set. Be available for answering applicants' questions in a kind and professional manner.

The application should include a section with Terms and Conditions, and should be signed by the applicant or their parents/legal representatives (if they are minors).

### **10. Detailed program, activities and schedule**

As the camp approaches, you need to create a detailed plan of your camp activities. Think about the schedule for the whole duration of the camp, as well as the daily schedule. When will the participants get up? When will the meals be served? When will the science program happen, for how many hours a day? When will they play games? When will the bedtime be?

You have to know exactly what you want your participants to be doing at each moment of the camp. Of course, the schedule should be flexible, to accommodate last minute changes, if necessary.

### **11. Preparation of the required materials for science and social programs**

Once you have the detailed plan of what you will do during the camp, you should compose a list of required material and acquire it, either via sponsors or purchase.

### **12. Logistics and transportation**

Before the camp, you have to make a plan for the transportation. How will the participants get to the camp? Will you provide transportation? How will your staff and material get there? Try to get sponsors to pay for the buses or vans.

## III. During the camp

### 1. Breaking the ice and introductions

Use the beginning of the camp to break the ice among the participants, to get them to know each other and to build confidence. Explore the internet for ideas for ice-breakers, energizers and team-building activities. Make sure the staff makes proper introductions – it is important that the participants know whom to come to with problems and issues. Make sure the team acts professional, but also fun and approachable.

### 2. Setting the rules and schedules

In the very beginning, make the basic rules clear to all of the participants. Make sure they know that a persistent antisocial behaviour will result in contacting the parents and sending the participant in question home.

Put up a printed version of the camp schedule and the daily schedule, so the participants have a clear overview. Put up a bulletin board in a clearly visible place where you will put daily announcements.

Start every day of the camp with an all-hands meeting, where you will share the announcements. Have meetings with your staff every day, to discuss all of the daily issues and to keep the team spirit alive.

### 3. Running the science and social program

If the preparations for the program are done correctly, all should run smoothly – you should have all the ideas and materials needed for your activities. Make sure participants are happy with what they are doing. If they are working in teams, take care that some kids are not over-worked while the others are procrastinating. Provide plenty of support, but also give them freedom to explore and discover for themselves.

The social program is a very important part of the camp experience, so do not neglect it – dedicate a few hours each day to organized group activities. In the beginning they should be about getting to know each other and trust building, then they can be competitive, creative, etc. Internet is a vast inspiration for these – you can find out about treasure hunting, puppet theatre, capture the flag and other fun games for the whole group. You can also organize movie screenings, parties, board games, sporting competitions, etc.

The thing to remember is that social program cannot be improvised on the spot, so do not underestimate the workload – one person should be dedicated to organizing it well before the camp, to have enough preparation and planning time.

#### **4. Potential problems and how to solve them**

A list of potential problems would be long and scary, and probably not really helpful in this manual. The essential problems could include some kind of medical emergencies, or antisocial behaviour in participants or staff.

Medical emergencies can be prevented with proper care and prevention. Have a medical doctor or a nurse on board, as well as the first aid kit. Be aware of the location of the nearest hospital. Ask participants in advance about any chronic conditions or allergies you should be aware of.

Regarding the antisocial behaviour of participants – do your best to make sure everyone feels included and keep the communication lines open. The participants should know at any point who to come to with issues. Make it clear to them that you can only solve problems if you know about them and that you should be able to talk openly about issues, in full confidence. Keep your patience and clear head when dealing with difficult participants. In case of a persistent antisocial behaviour, call the parents and have them pick up their child.

Pay special attention to your staff team. If you notice problems in communication among your staff arising, try to deal with them as soon as possible. Explore the internet on conflict control, group cohesion and team building.

The basics for solving any other problems that occur are reason, patience, common sense and a cold head. This will help you deal with everyday issues with the staff, participants, venue owners, kitchen staff or even bad weather.

#### **5. Documenting the camp**

Make one person responsible for taking photos and videos during the camp. The selection of photos should be available to all the participants after the camp.

#### **6. Wrap-up activities**

Use the final activities in the camp to create an emotional bond between the participants, thus encouraging them to apply again. Have a session of writing messages to each other, to be read after the camp. Have them exchange contacts, etc.

#### **7. Evaluation**

At the end of the camp, have participants complete an evaluation form that you will prepare in advance. Ask them if they liked the camp, its specific aspects, what they would change about it, if they would recommend it and if they would apply again. Ask whatever you believe will be relevant for the organization of the next year's camp. Once the camp is over, analyze the data required and create a comprehensive evaluation report for your organizational team.

## IV. After the camp

### 1. Lost and found

Collect all the belongings your participants forgot during the camp and offer to post it to them, or have them pick it up.

### 2. Keeping the participants connected

In the age of the social media, there are so many inventive ways to keep your participants interconnected after the camp. Make a mailing list, a Facebook group, a hashtag on Twitter or Instagram and encourage them to keep in touch and post frequently. Put online all the pictures and videos you took during the camp. Have them share their own photos and comment on them. Make a place on your website where they can share their memories and communicate. Organize reunions.

### 3. Sending out the product of the camp

Ideally, all the work your participants did during the camp should be combined into a one final product, like a report book or some kind of a digital collection of results, products, projects. Compile this product, design it in a way that it makes a nice memento that the participants will cherish and send it out to them!

### 4. Encouraging the participants to apply again

After you already had a successful camp and a group of happy participants – you should think of ways to encourage them to apply again and to invite their friends as well! Maybe a special discount for returning participants? Or participants who get a friend to apply get free merchandizing? Figure out a way that works best for you and your camp.

## ***How to organize a Science Camp***

More Information about Science Holiday Camps and our  
SciCamp project at our website [www.sciencecamps.eu](http://www.sciencecamps.eu).