CARDIFF UNIVERSITY
PRIFYSGOL CAERDYDD

School of Earth and Environmental Sciences
Ysgol Gwyddorau'r Ddaear a'r Amgylchedd

UKRI Natural Environment Research Council

Train the Trainer

How to train citizen scientists in freshwater quality monitoring
Designed for volunteer coordinators

This session

1. Volunteer management, motivation and retention

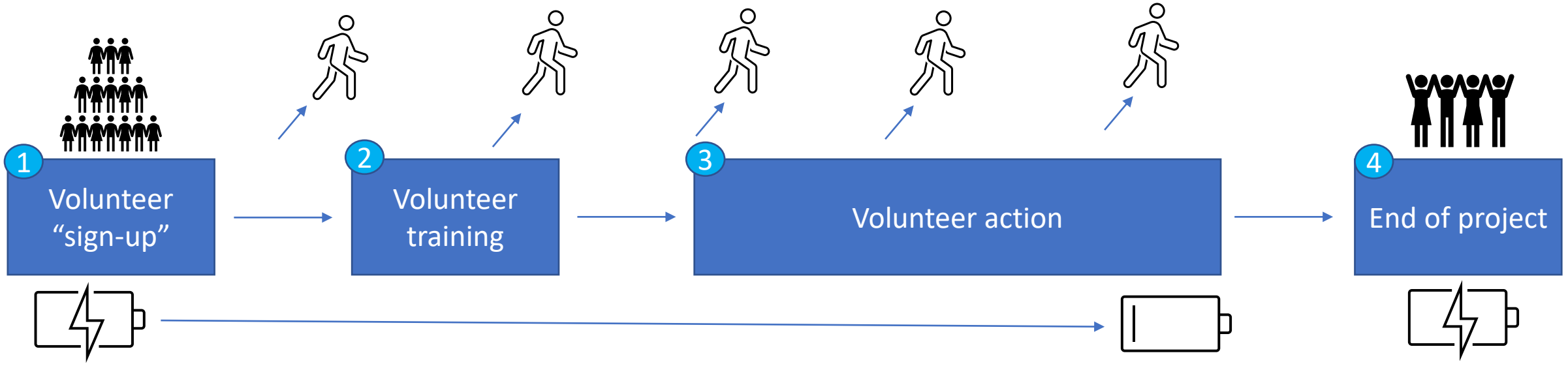
2. How to run a citizen science water quality monitoring training session

Volunteer motivation, management and retention

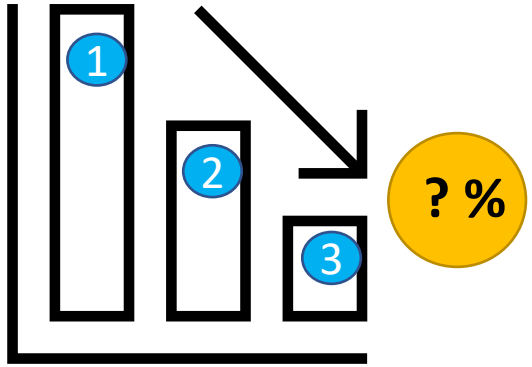
Your volunteer management responsibilities

- Overall organization and guidance
- Health and safety
- Training and ongoing support
- Communication and feedback
- Managing expectation
- Motivation!

Keeping volunteers on-board and motivated



Volunteer drop-off →



What causes volunteers to drop-off?
How can you increase the number of volunteers sticking around?

You can help reduce the drop-off rate of your citizen scientists by providing volunteers with...

An easy sign-up process

Straightforward preparation plan

Clear training and guidance

Open lines of support and access to help

Regular updates and good communication

Well defined key project milestones

Think about the support volunteers need at different stages of their journey through your programme, and the processes you are creating for them…

Imagine two key stages of a volunteer journey:

Stage 1: Trainee citizen scientist - from a volunteer registering their interest to their first independent trip out into the field

Stage 2: Active citizen scientist - a volunteer throughout their time independently monitoring in the field

Key things to plan before getting volunteers involved in your programme

Volunteer monitoring programme design – what, when, where, how?	
Volunteer data collection and management – how, who?	
Volunteer training – what, when, where, how, who?	**Today!**
Volunteer communication – what, when, who?	
Volunteer support network – what, how, who?	
Volunteer resources and equipment distribution – when, how, who?	
Volunteer health and safety – what, how, who?	

Running a citizen science training session

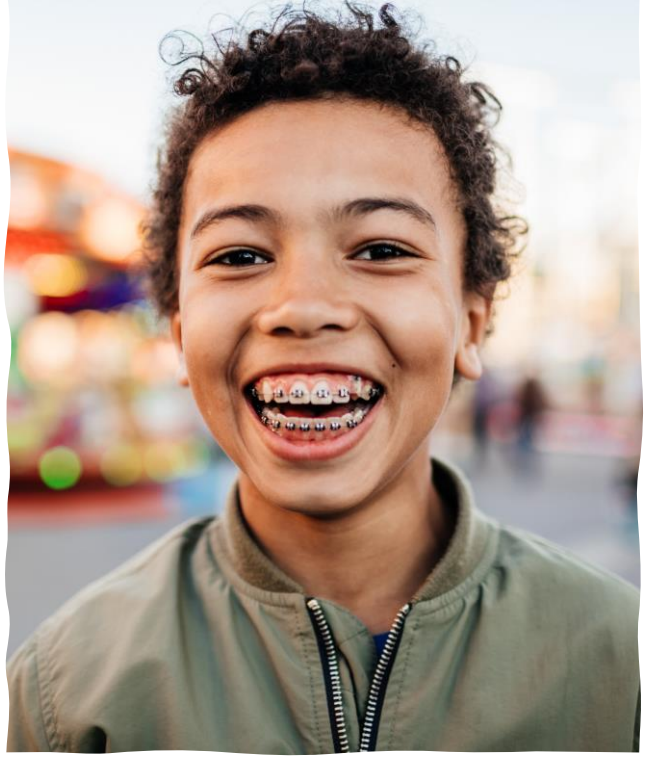
Practical considerations

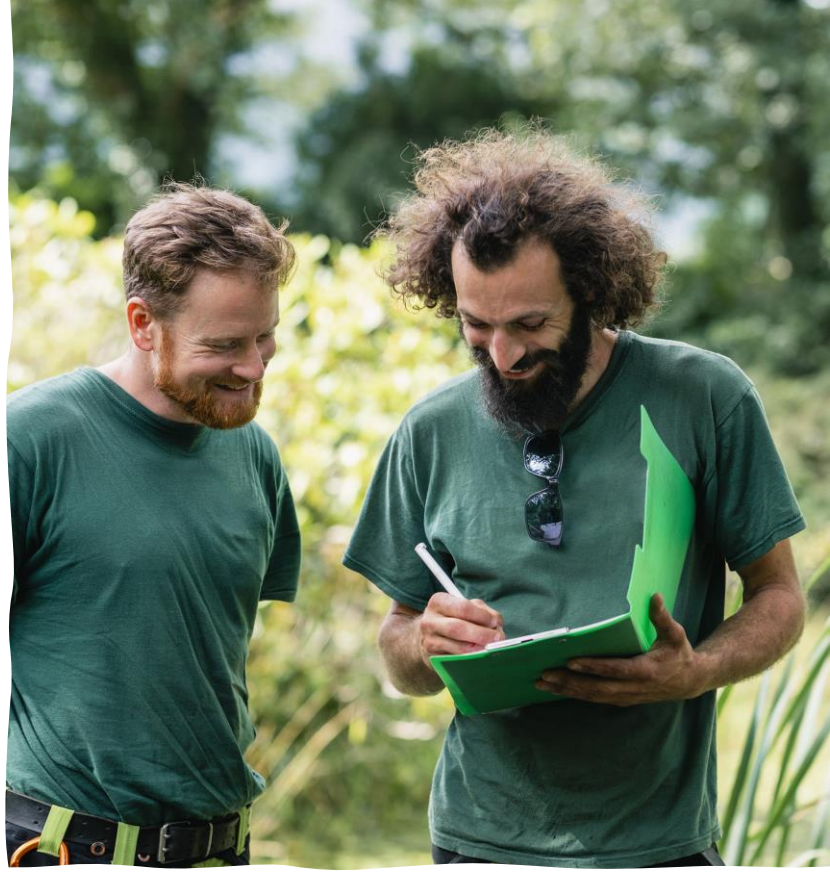
- Will it be in person or virtual?
- How much will be practical vs theory?
- How long will the training session last?
- How will you follow up after the training session?

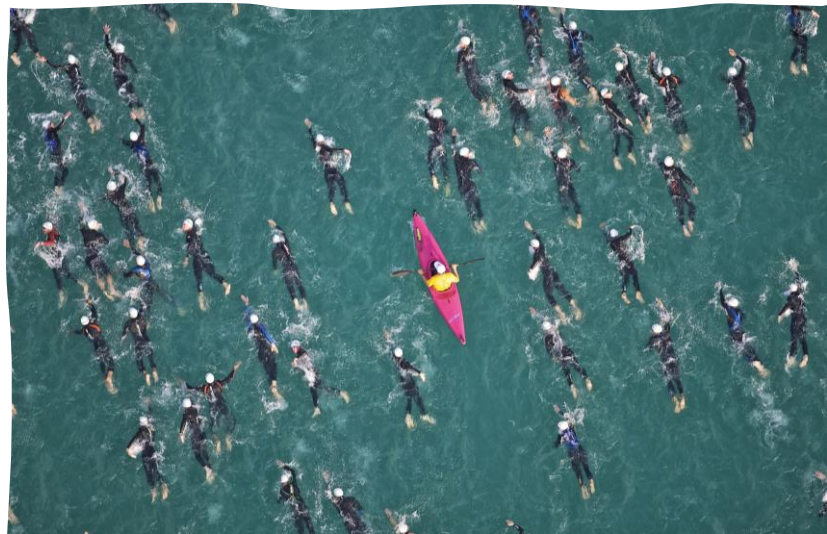
Think about your audience….

- Who are they?
- What do they already know?
- What are they motivated by?

… What do your volunteers need to know to be motivated and confident to safely and reliably monitor water quality?







*Resources provided by Cardiff University

Things to cover in your training sessions

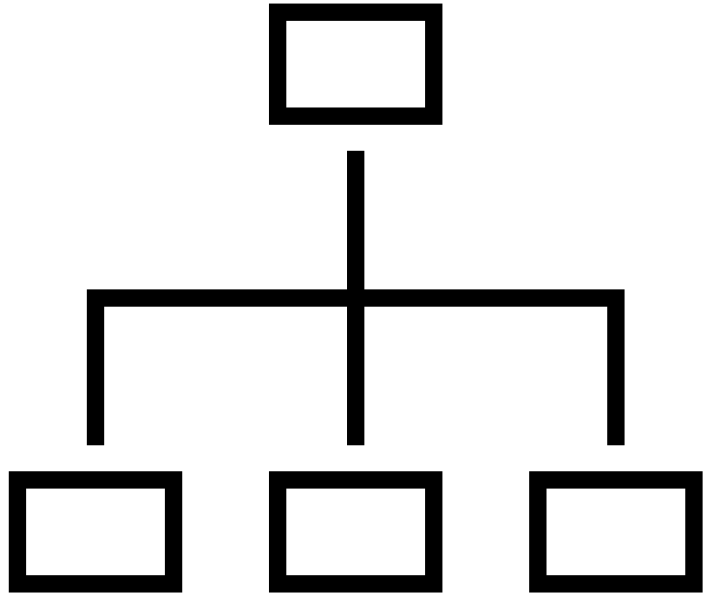
- ❑ The structure, purpose and goals of your programme
- ❑ The support and resources you will provide to volunteers
- ❑ A basic overview of the science*
- ❑ Health and safety information and guidance
- ❑ What you expect from your citizen scientists

Instruction on:

- ❑ how to prepare for the field, collect a sample and carry out water quality tests using the equipment provided*
- ❑ how to make other useful field observations*
- ❑ how to record and submit data via Epicollect*
- ❑ how to select sites and how frequently to sample
- ❑ how to access and look after kit

The structure, purpose and goals of your monitoring programme

- Why is your group running a citizen science water quality monitoring programme?
- Who's who in your group?
- What are the roles and responsibilities of each volunteer coordinator?
- What role will volunteers play in monitoring?
- What do you hope to achieve from your monitoring programme?
- When and where are you looking for volunteers to monitor?
- What is the timeline of you programme and what key milestones do you have planned?



Informing citizen scientists this is part of a bigger catchment-wide citizen science project across the Wye might help motivate them…

The support and resources you will provide your volunteers

- Health and safety advice
- Training resources
- Equipment for monitoring
- Ongoing support network
- Clear and regular communications
- Feedback

A basic overview of the science…

Remember not everyone will be as interested in the science as you – so aim to keep it succinct!

What are the key water quality issues locally?

Why is it important to monitor water quality?

What water quality parameters are your group monitoring and why?

What other useful observations are your volunteers making and why?

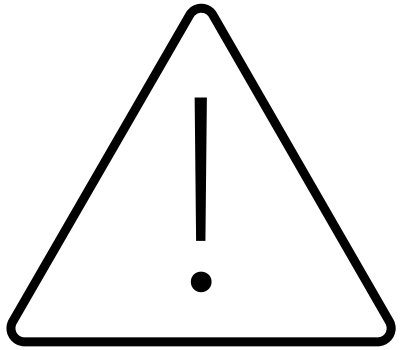
Health and safety information and guidance

Remember:

- It is your groups responsibility to fully understand the dangers of monitoring **and communicate them to your volunteers**
- You will likely need **public liability insurance** and to consider **risk assessments and safety precautions for all your citizen scientists**

A few of the key risks to consider:

- Waterborne diseases
- Drowning
- Slips, trips and falls
- Road and personal safety
- Chemical poisoning



Expectations of your citizen scientists

- Follow all guidance (H&S and other) provided by the group
- Follow agreed frequency, location and duration of monitoring
- Record and share all the data collected in the field
- **Ask for help or support when needed!**

Consider whether and how you want your volunteers to “commit” to the monitoring programme

How to collect a sample and carry out water quality tests in the field

Resources to help you deliver this:

- Written guidance
- Training videos

Provided by Cardiff University and available via the Wye Catchment Partnership website.

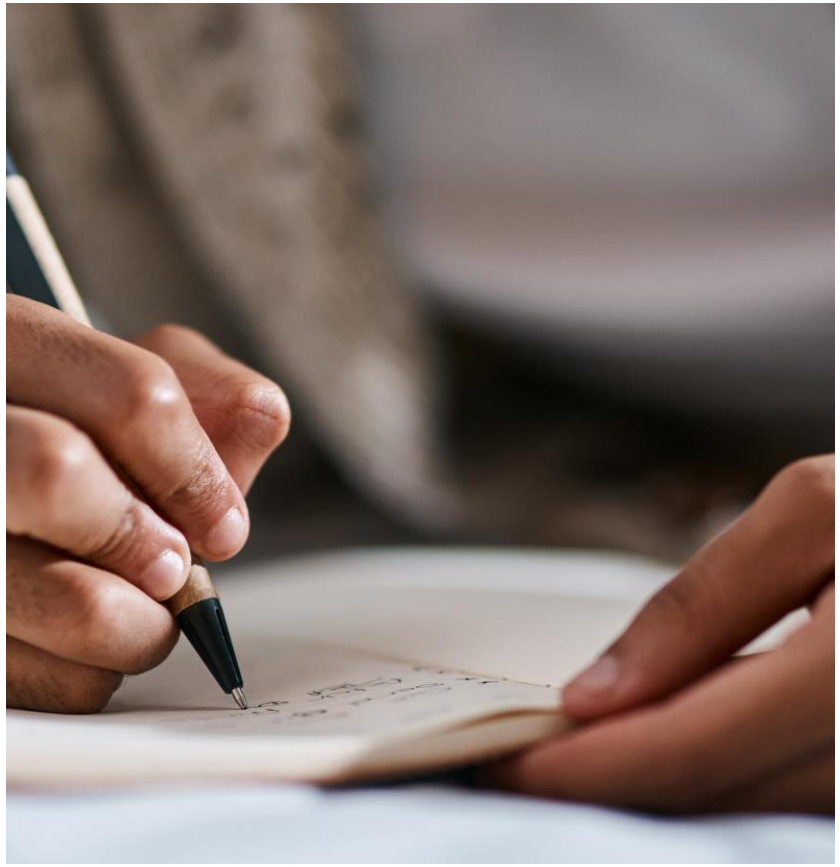
Consider doing this part of the session in the field with volunteers so that they get a chance to try the kit out themselves and ask any questions…

Other important observations

Talk through the other things you want volunteers to observe, and explain why they are important, including:

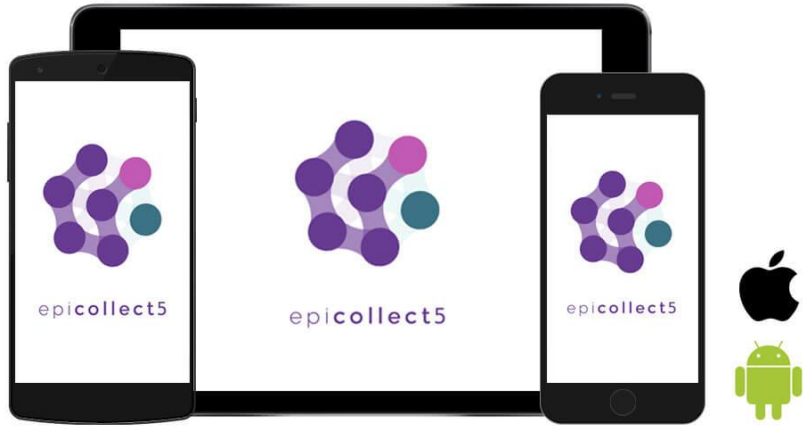
- Time, date, location of sample
- River conditions (water level and flow)
- Recent rainfall
- Visual signs of pollution*
- Presence of algal blooms*

* More information about these is provided in the written materials produced by Cardiff University



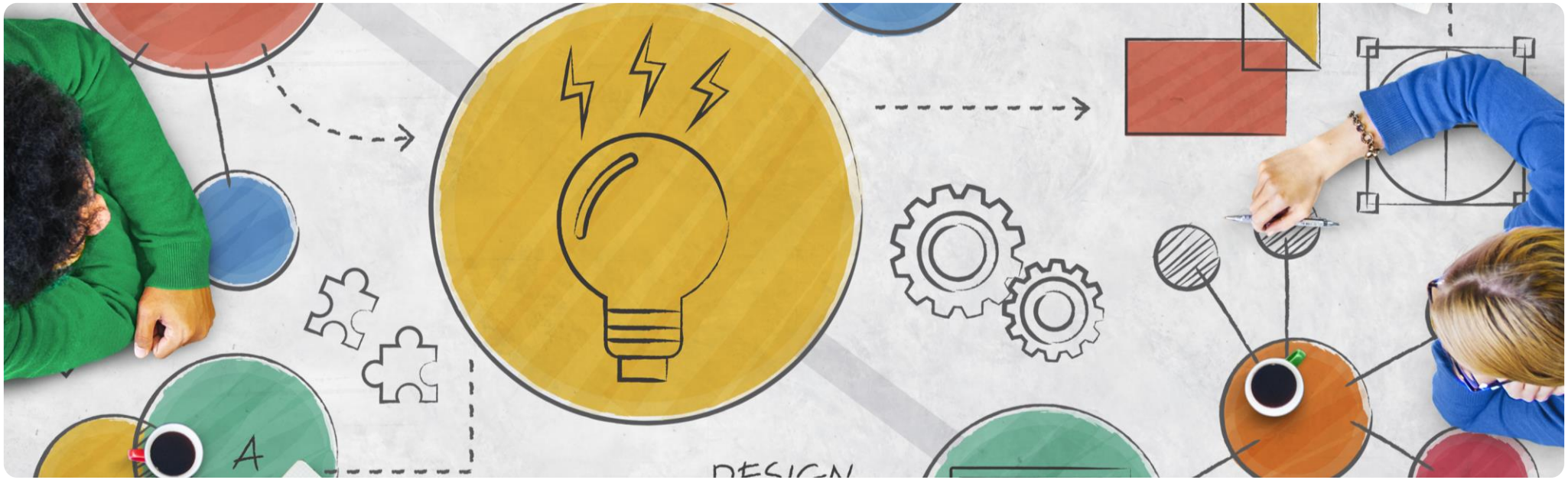
Recording data in the field

- Give a short tutorial on how to use Epicollect to record data and observations
- You have written guidance to support you deliver this
- Remember volunteers only need to know the basics (4 simple steps…)



1. **Download the app**
2. **Add your group project**
3. **Complete survey form**
4. **Upload data**

Provide a **paper form** as an alternative to using epicollect for those who require it



Getting volunteers ready to head out into the field alone…

What else citizen scientists need to know:

- Where to monitor
- When to monitor
- Kit list required
- Health and safety precautions to follow

Selecting monitoring sites

- Decide how this is going to work best for your project before you recruit volunteers

Hints and tips:

- Work with your volunteers to select sites that fit with your monitoring programme but are also easy for them to get to
- Record the site each volunteer is going to monitor with a GR and unique reference
- Offer to help your volunteers scope out suitable sites if they don't feel confident doing this themselves
- If a site becomes unsuitable after monitoring has started – change it!

Agreeing monitoring frequency and duration

- Make sure volunteers are aware of:
  - ➢ how regularly you expect them to monitor;
  - ➢ any set time(s) you want them to monitor;
  - ➢ how long they are expected to continue monitoring for (key milestones)

- Set guidelines, but understand sometimes life get in the way
- Check in with citizen scientists who stop or significantly reduce the frequency of monitoring to see if they need more support

Volunteer kit list - FAQs

- What kit gets provided and how do I get hold of it?
- What other kit do I need to find myself and bring out to the field?
- What if the kit breaks/ I don’t think its working properly ?
- What if I forget how to use the kit?
- What if I run out of supplies or loose kit?
- How do I look after the kit/ does it require maintenance?

H&S Precautions

Hints and tips:

- Be clear with volunteers about the risks and the precautions you expect them to take every time they go out into the field to monitor
- Ensure volunteers understand not to do anything they think might pose a threat to themselves or someone else
- Make sure volunteers have agreed to taking these risks so that you are covered by your insurance
- Consider whether you need to carry out an individual risk assessment for each site