



# Why water testing?

**For us, water testing is important for two main reasons.**



## 1. Testing leads to connection.

Let's face it- modern society can be busy, complicated, and confusing. This is probably why, even though most Canadians say they care about water, many do not participate in its stewardship.

**The solution? Testing with Water Rangers!** Time and time again, we find that when people learn about and then test the water, they feel motivated to protect it. Now more than ever, we need more people to get involved with environmental stewardship, and testing is a great way to encourage this!

People often remark that testing:

- Encourages them to visit new beaches or lakes
- Helps them notice new things about their surroundings, such as pollution
- Leads to a greater appreciation for wildlife
- Prompts them to think about what else they can do to help

We're so sure about the transformative power of testing because we see the fruit of it every day, but also because we conduct formal and informal research on it.

Learn more about our research [here](#).

## Learn, test, act.

Our Theory of Change states that **when people learn about, then test water, they are prompted to take action to protect it.**

Learn more about the research that informs our Theory of Change [here](#).



## 2. Water quality data is desperately needed.

Massive gaps in water quality data exist in Canada and beyond, which is extremely worrisome. After all, how can our leaders be expected to make good decisions for water if they don't know how well it's doing in the first place?

Unfortunately, there aren't enough scientists and professionals on the ground who can consistently monitor all of the world's water bodies. **That's where testers like you come in!** We don't aim to replace scientists, but we do want to lend a helping hand. By working together, we can accomplish so much more.

Starting in 2021, we're also working on a data-sharing project with the Gordon Foundation's [DataStream](#). This project facilitates data sharing with an automated data exchange between our two platforms, with an initial focus on water data in the Great Lakes region.

In other words, when you add your data to Water Rangers, you'll also have the option to share your data with DataStream. This will allow your data to reach even more people including scientists and decision-makers!

## Find out if your area is data deficient.

We frequently consult WWF-Canada's [Watershed Reports](#) to determine how the water in any given area is doing. We encourage you to check them out, too!



# How to use the Freshwater Explorer kit

Before you use your equipment, make sure to familiarize yourself with the [Water Rangers protocol](#). This will tell you how to pick the best spots to monitor, and will also tell you how often you should go testing.

**Our official testing day is the last Sunday of every month** (back-ups are Saturday and Monday of the same weekend). Remember that **regular testing is required to create a baseline**, so it's more important for you to test at less sites more frequently than the other way around.

Once you've familiarized yourself with where and when to test, it's time to get going with your kit!

Below, you'll find an in-depth video explaining how to use the different tools that come with your [Freshwater Explorer kit](#).



## 1. Get to know your equipment

All of our Freshwater Explorer Testkits contain:

- **A field guide, notepad, and pen.** You'll learn everything you need to know about testing with Water Rangers in our field guide, and you can record all of your observations in the notepad provided if you don't have your phone handy.
- **Stickers, badges, and postcards.** Find these in the 'goodie bag' in your kit's front pocket, and share them with others!
- **A 'reacher stick' and a sample cup.** Attach your sample cup to your reacher stick to grab water samples from hard to reach places.
- **A conductivity meter.** This measures the water's ability to conduct electricity! You can read more about what this means and why it's important [here](#). Do you have an [Ocean Explorer](#) kit? Then you have a [salinity meter](#) or [refractometer](#) instead! You can learn more about why it's important to measure salinity [here](#).
- **A thermometer.** You can use this to measure [air temperature](#) and [water temperature](#).
- **50 teststrips.** We include teststrips that measure pH, alkalinity, hardness, and chlorine in all of our kits. These teststrips are super user-friendly, but if you want to learn more about how to use them and how to interpret your results, check out [this page](#).
- **A container to dispose of your test strips.** Place your used test strips in this container and mail them back to us using the envelope provided- we'll take care of disposal.

- **A secchi disk.** Use this to measure clarity. Visit [this page](#) to find out how to use your secchi disk, and to find out how to measure secchi depth.
- **30 dissolved oxygen tests.** This is probably our most fun, but 'tricky' test. You'll be a pro in no time though! Check out [this page](#) to learn more about the parameter and how to test for it.
- **A container to dispose of your used dissolved oxygen ampoules.** This one is pretty self explanatory, just be careful when you dispose of them since they're made of glass!
- **A secchi disk** to measure water clarity and/or water depth.
- **Dissolved oxygen** tests.

Our Compact Freshwater Explorer kit comes with all of the same tools, except for the secchi disk and dissolved oxygen tests. Want to add these to your testing routine? Visit out [online store](#)!

## 2. Learn how to use your kit

### How to use the Freshwater Explorer kit



All of these instructions can be found within the field guide that comes with your kit, too! We definitely recommend reading it from cover to cover.

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Since starting the testing, I have found that I am noticing the surrounding nature so much more every time I go outside. Who looks in the ditch for flowers?? Well, now I do! I've also started to look for and find animal tracks and signs of insects. I managed to find some pretty neat looking bird tracks on the sandy beaches and have been hearing all kinds of birds that still remain elusive.

Jessica, City of Ottawa Scavenger Hunt participant