



FREQUENTLY ASKED QUESTIONS

Rainfall Experiment FAQ

Quick answers for students, coordinators, and parents — equipment, locations, measuring, reporting, and everything in between.

GRADES 9–12 | BANGLADESH | STUDENT FIELD RESEARCH

Measure carefully. Report honestly. Learn from local rain.

Getting started

Q. Do I need any special equipment or money to join?

No. You need a straight-sided plastic container (a food-storage container works), a ruler marked in millimeters, a marker, and a stable spot with open sky. A phone camera helps but is not required.

Q. Can two or three students share one station?

No — this one is an individually run experiment.

Q. I live in an apartment. Can I still take part?

Often yes, but balconies are tricky: the wall beside you and the roof or balcony above can block rain or drip into the collector. Apply the distance test, take a photo looking straight up from the collector (the sky should fill the frame), and ask your coordinator to approve the spot. A rooftop that you can reach safely by stairs, or a shared courtyard, may work better.

Q. What if I go on holiday or get sick?

Ask a family member to observe for a few days — show them the routine first. If nobody can check the collector, report those days as Missing. Missing days are normal and honest; invented numbers are not.

Equipment

Q. Why can't I use a cut soft-drink bottle?

Most bottles curve near the bottom, so the water depth no longer equals the rainfall. If the sides are not straight and vertical from bottom to rim, your measurements will be wrong. Use a straight-sided container instead.

Q. Why does the opening need to be at least 10 cm across?

A small opening catches so few drops that wind and splashing distort the result. A wider opening collects a fairer sample of the rain — that is why professional gauges have wide funnels.

Q. My container broke or disappeared. What do I do?

Tell your coordinator before you start using a new one. Register the new container's diameter and depth, and note the change date in your report. Never quietly switch containers — it changes how your data should be read.

Q. Can I use a real rain gauge from a shop instead?

If you have a proper gauge, ask your coordinator. Mixing gauge types across the group makes comparison harder, so the default is the standard container method for everyone.

Q. Does the container need a lid at night?

No — never use a lid. The collector must stay open to the sky at all times so no rain is missed. Daily emptying keeps the water from sitting long enough to cause problems.

Location

Q. What is the “distance test” again?

Keep the collector at least **twice as far** from an obstruction as the obstruction rises above the collector. A wall 2 m above the collector → at least 4 m away. A tree 5 m above → at least 10 m away.

Q. Why is water from a roof or tree not counted as rain?

That water is runoff — rain that already landed somewhere else and then flowed or dripped in. It makes your reading larger than the true rainfall, and nobody can correct for it afterward. Only drops falling straight from the sky count.

Q. Can I put the collector on the roof?

Only if you can reach the spot safely without climbing, water cannot flow across the roof surface into the container, and the rim is above splash height. Many roofs fail these tests. Never climb to install or measure — safety comes before data.

Q. Someone keeps disturbing my collector. What can I do?

First, tell your family and neighbors what the experiment is — most disturbance is curiosity. Move the collector to a protected spot only after telling your coordinator, and mark disturbed days as Invalid. A small sign (“Science experiment — please do not touch”) works surprisingly well.

Measuring

Q. Why must I measure every day if I only report weekly?

Water sitting for a week evaporates, overflows, collects leaves and insects, and can be disturbed — so the weekly number would be wrong. Daily measuring also tells us which day the rain fell, which matters for comparing with floods and other stations.

Q. Why 8:00 AM? What if I really can't make that time?

One shared time makes every station's “day” cover the same hours, so numbers can be compared. If 8:00 AM is impossible, agree a different fixed time with your coordinator and stick to it every single day.

Q. It didn't rain today. Do I still have to do anything?

Yes — check the collector, record **0.0 mm**, and make sure it is still clean, level, and secure. A zero is a real measurement. A blank tells us nothing.

Q. What is “trace” rainfall?

When you can see moisture in the container but it is too little to measure — record **Trace (less than 1 mm)**, not 1 mm and not 0.

Q. How do I read the ruler correctly?

Stand the ruler vertically until it touches the bottom, bend down so your eye is level with the water surface, and read the depth in millimeters. Reading from above makes the water look deeper than it is.

Q. It rained after I measured. Does that rain count for today or tomorrow?

Tomorrow. Each reading covers everything since the previous reset. That is why the fixed daily time matters — everyone's “day” runs from reset to reset.

Q. The container overflowed in a storm. Can I estimate the real amount?

No. Report “Overflow — actual rainfall greater than container capacity,” give the container's capacity in mm, and mark the day incomplete. During big storms you may measure and empty several times in the day and add the readings together — that prevents overflow in the first place.

Reporting and data quality

Q. What is the difference between Missing and zero?

Zero means “I checked, and there was no rain.” **Missing** means “nobody checked.” Writing zero for a day you did not check is the single most damaging mistake in the whole experiment — it turns an unknown into a false measurement.

Q. When should I label a day “Questionable” instead of “Valid”?

When you have a specific, minor doubt: the container looked slightly tilted, there was debris in the water, or splash might have entered. Describe the issue in the explanation box. If the problem is serious — knocked over, runoff, tampering — the day is Invalid.

Q. I forgot to measure yesterday. What now?

Measure now, record the actual date and time, and note how many hours the reading covers (for example, 48 hours). Yesterday itself has no separate value. Never split or guess the amounts.

Q. Will I get in trouble for reporting problems or missed days?

The opposite. Coordinators are trained to praise honest problem reports. Every real dataset has gaps — what ruins a dataset is hidden gaps filled with invented numbers.

Q. Why does my station show different rainfall from my friend's station 1 km away?

Some difference is real — rain showers can be very local, especially in the monsoon. Some difference is measurement: an obstruction, runoff, or a reading error. Compare your setups first; if both stations pass all the checks, you may have discovered a genuine local pattern. That is science working.

Weather and safety

Q. There is lightning or a dangerous storm at measurement time. What do I do?

Stay inside. Measure when it is safe, record the actual time, and note the hours covered. No measurement is ever worth an injury.

Q. What happens during floods?

If floodwater reached or could have reached the collector, mark the day Invalid and say so. Your report also asks whether you saw flooding or waterlogging in your neighborhood — that observation is valuable even when the rainfall reading is lost.

Q. Strong wind blew my collector over. Is the week ruined?

No — mark that day Invalid, note what happened, re-secure the collector, and carry on. Then improve the anchoring so it does not happen again: a heavier base, a holder, or partially burying the base.

For coordinators

Q. A student's numbers look invented. How should I handle it?

Privately and kindly. Ask them to walk you through their routine for a specific day — students who measured can describe it easily. Re-explain why honest gaps are valued, and reset expectations going forward. The goal is to recover an honest observer, not to punish.

Q. Two stations disagree wildly. Which one is wrong?

Possibly neither. Check both setups against the approval checklist (obstructions, runoff, level, container shape). If both pass, the difference may be a real local rain pattern — monsoon showers can vary sharply over short distances. Treat it as an investigation for the class.

Q. How many weeks should the experiment run?

Eight weeks of live data is a good minimum — enough for patterns, comparisons, and a meaningful analysis session. Running through a full monsoon season is even better.

Q. Can the data be used beyond the classroom?

Yes — that is the vision. Consistently collected student data builds a local picture of rainfall that supports Rainflower's youth-led rainwater preservation mission. The honesty and quality labels are what make the data usable beyond the classroom.

Can't find your question? Ask your coordinator, or see the Setup, Data Collection and Reporting Guide for full procedures.