

# Organizing Your Group

## What factors will influence how you organize your group?

- **What you would like your students to gain from sampling?** In some programs each student samples many different parameters. In other programs students specialize in one or two parameters and then share their findings with the rest of the class.
- **How much stream do you want to study?** If you wish to monitor as much of a stream as possible (and you have enough adult supervisors) spread separate monitoring groups over a longer distance.
- **How much equipment do you have?** More equipment allows you more flexibility. For example, you may choose to create specialized sampling teams, such as a “nutrients team,” in which several students, with several test kits, take multiple samples of the same parameter.
- **How prepared is your group?** Proper classroom preparation allows groups more flexibility in the field; students can operate in autonomous groups (with an adult along for safety) and can run more tests in the same amount of time.
- **How large is your group?** If you have few students (about 10 or less) then you may want to work together in a single group. Larger groups will find it more effective to split-up to avoid distractions.

## How much time? How many students will you need?

These estimates are based on an eighth-grade skill level, assume practice sampling has occurred, and include any time needed to perform calculations on the “Data Collection Sheets.”

Activity		Time required (minutes)	# persons required	
Physical	Stream flow	45	4	
	Stream shape	Channel pattern	2	
		Substrate type	15	3
		Riffle/run/pool <sup>1</sup>	15	3
Temperature		2	1	
Chemical <sup>2</sup>	Nitrate	15	1	
	Ammonia	5	1	
	Phosphorous	10	1	
	pH	2	1	
	Dissolved oxygen	3	1	
Biological	Macro-invertebrates	Collect and look	40	2
		EPT	60+	3 or more
		WQ Rating Index	120+	3 or more
	Riparian	Greenline	30	2
		Canopy cover <sup>3</sup>	30	2
		Ground cover	35	2

<sup>1</sup> The riffle/run/pool ratio can be measured at the same time as the pebble count with no additional persons. Estimate 20 minutes to complete both activities if done together.

<sup>2</sup> The chemical tests must sit for various periods of time. Students can perform other activities while waiting.

<sup>3</sup> The canopy cover can be measured at the same time as the greenline with no additional persons. Estimate 40 minutes to complete both activities if done together.

## **What roles will your students assume?**

Below is one example of an organizational plan. This plan divides groups into six-person teams. Each person on the team has a unique role. In this plan, all the Utah Stream Team water chemistry parameters are sampled, as well as stream flow and macroinvertebrates.

Consider the following points, whether you follow this plan or create your own.

- Students should clearly understand their role before reaching the field.
- Students should be held accountable for completing their tasks.
- Give students a choice in the role they assume. This is a great planning exercise and further increases motivation for the program.
- Have students switch roles on each subsequent visit.

### **Team leader**

- Makes sure team members know and accomplish their tasks.
- Makes sure the group stays focused and on schedule.
- Reads sampling directions aloud and makes sure they are followed.
- Conducts a nutrient test.

### **Assistant team leader**

- Assists in measuring the length intervals.
- Assists in measuring width of the stream.
- Double-checks all measurements.
- Helps with stream velocity test.

### **Recorder**

- Holds the notebook and records all information on “Data Collection Sheets.”
- Makes sure group agrees on all results.
- Conducts temperature tests.
- Helps identify macroinvertebrates.

### **Wader**

- Measures depth of stream to determine cross-sectional area.
- Assists with velocity test.
- Collects Dissolved Oxygen sample.
- Assists with macroinvertebrate sampling and identification.
- Conducts turbidity test.

### **Timer/measurer**

- Carries stopwatch and times velocity test.
- Carries tape measure and measures distances (places flags at designated intervals)
- Assists with measuring width of stream
- Conducts pH test

### **Equipment keeper**

- Helps carry tub with all equipment in it.
- Distributes equipment.
- Returns supplies and equipment to the tub; ensures all equipment is accounted for.
- Conducts two nutrient tests.

The 6 plan will take 2 to 3 hours to complete, depending upon your groups' abilities and preparation.