How to Sample

Answer the questions below to determine "how" you will collect your samples.

Are you collecting chemical samples?

- Collect your sample from an area where water is moving at a moderate pace. Avoid backwaters (unless you want to compare flowing and still water).

- Collect your sample from just below the water's surface to avoid floating oils, scums and other materials that may alter your results.

- Test water samples immediately after collecting or your results may change.

Most chemical tests must be run within 30 minutes of collection. Nitrate samples may be brought back to the classroom for testing if analyzed within 24 hours. (Keep samples cool and in a dark place.)

Are you collecting physical or biological samples?

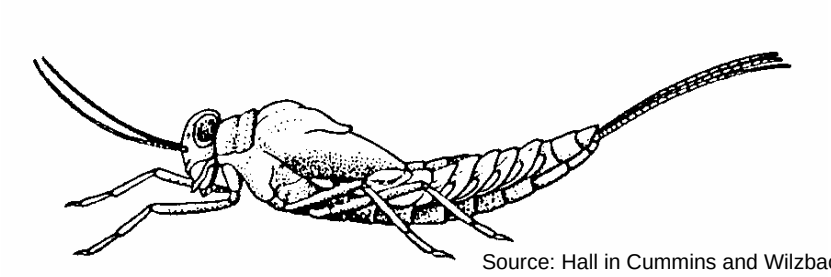
For more diverse biological samples, sample from different parts of a stream, such as slow, pooled areas as well as fast running riffles.

For the most representative flows, sample a straight stretch of stream with fairly even flow. Avoid pools, stagnant areas or stretches where the stream flow has backed up.

Do you want to increase your accuracy and precision?

- Accurate data are representative of the true value. Keep in mind that the tests and measurements used in this program are simplified field methods which will never be as accurate as monitoring with professional equipment and methods. You can increase the confidence in your results, however, by taking several measurements and averaging these.

- The precision of the data represents how well you can repeat the same measurement. Your precision increases when multiple measurements become more consistent and close to each other. To increase precision, have students practice the tests ahead of time, and take care to follow directions carefully and consistently. Be as consistent as possible in how, when, and where you sample to accurately assess trends in water quality. If you stray considerably in these areas, make a note of it on your data collection sheet.



Source: Hall in Cummins and Wilzbach