

# Temperature

## Why do we measure this?

Temperature of a stream can determine biological and chemical structure of a stream. Colder water can hold more dissolved oxygen than warmer water and the activity of toxic chemicals can increase with warmer temperatures. Biological communities are sensitive to stream temperature. Trout prefer cold water for spawning and growth of juveniles ( water temperatures below 65° F or below 18° C). Benthic macroinvertebrates are also sensitive to temperature and community structure changes as temperature increases. Land use has a major effect on the temperature of a stream. Runoff from impervious surfaces and the removal of stream shading trees increases the temperature of a stream. Discharge from industrial plants and the release from dams can also alter temperature.

### Equipment Needed:

- Thermometer
- Waders
- Physical and Chemical Data Sheet

## Definition of Terms

**Runoff:** The portion of precipitation on land that ultimately reaches the stream, often with dissolved or suspended material.

