

## **Water Resources and the Environment**

### Lesson Plan/Schedule

#### **Field Work Session: 10am - 12pm**

10am - 10:15am - **Walk to site, & introduction to site**

10:15am - 11:00am

- **Sara: Benthic Macroinvertebrates**

- Students will learn about the EPA's Qual 4 insect macroinvertebrate collection method and will participate in the collection and identification of common benthic macro species.
- Materials:
  - Tarps, white bins, forceps, hand lenses, collection jars
  - Insect ID Sheets
  - Paper, pencils, clipboards
  - D-net, kick net, bucket

- **Raj: Habitat Assessment**

- Students will learn about stream hydrology, morphology, & ecology through site observations and the completion of a stream habitat assessment, which will be used to develop a field data report.
- Materials:
  - Habitat assessment sheets, pencils, clipboards
  - Turbidity Meter
  - YSI Probe

11:00am - 11:45am - **Rotate groups**

11:45am - 12:00pm - **Walk back for Lunch**

#### **Classroom Session: 1pm - 3pm**

*Room 110*

1:00pm - 1:30pm

- **Presentation**

- Healthy vs. unhealthy streams
- Ecology/food webs
- Morphology/Hydrology
- Importance of healthy freshwater habitats
- Restoration & technology
- Field Data Report description & instructions

1:30pm - 2:30/3:00pm

- **Field Data Report**

- Students will work in teams to develop a field data report based on the data collected in both the insect identification and habitat assessment sessions.
  - Write report
    - Introduction
    - Methods
    - Observations
    - Conclusions
  - Include illustrations
  - Give overall assessment of stream
  - Provide ideas for how the stream could be improved

**Extra Activities:**

(If Field Data Report is completed early)

- Coloring pages
- Stream activity sheets
- Video