**Lesson**: PowerPoint Presentation for Cold Water Ecology   
**Content area:** Ecology

**Grade:** 8-12 **Standards:**

* PA Science and Technology Standards  
  [3.4.12.B1](http://www.pdesas.org/standard/StandardsBrowser/25389/),
* PA Listening/Speaking Standards  
  1.6.9A, 1.6.10.A, 1.6.11A, 1.6.12.A
* PA Environment and Ecology Standards  
  4.2.6 C, 4.2.6.D, 4.2.7.F, 4.2.7. D

**Resources:**

* PDF PowerPoint *Cold Water Ecology*

**Materials:**

* Computer and projector/Smartboard

**Objectives:**

* TSWBT define and identify what a watershed is
* TSWBT define the study of ecology and the different scales that it can be studied on.
* TSWBT define and identify the water quality factors that affect life in a cold water ecosystem and identify what a limiting factor is

**Vocabulary:**

* + Ecology
  + Watershed
  + pH
  + Alkalinity
  + Acidity
  + Dissolved Metals
  + Dissolved Oxygen
  + Benthic macroinvertebrates
  + Biodiversity
  + Limiting Factor

**Set Up:**

1. Set up computer and projector in order to present the PowerPoint presentation of *Cold Water Ecology*

**Procedure:**

1. Guide students through the PowerPoint presentation.
2. Refer to the PowerPoint notes for further information on the presentation

**Closure:**

1. Refer to lessons plans for further exploration of the concepts discussed in the PowerPoint