



GEM3

Genes by Environment
Modeling · Mechanisms · Mapping

Module Name: Assessing the Influence of Environment on Morphology in Rainbow Trout

Institution: Idaho State University

Principle Investigator(s): Janet Loxterman, loxtjane@isu.edu

Jessica Fultz, fultjess@isu.edu

Summary:

The labs in this module compare internal organ sizes between wild and hatchery rainbow trout to see if dietary differences during early development influence relative organ size and digestive system morphology. Specifically, we are going to remove and measure the mass of the fish's heart and liver and count the number of pyloric caeca.

This module has been used in ISU's Biology 2 course.

Contents:

- Pre-Lab Reading: *Environmental Influences on Gene Expression*
- Pre-Lab Reading: *Phenotypic Range of Gene Expression: Environmental Influence*
- Lab: Assessing the Influence of Environment on Morphology in Rainbow Trout (Part 1)
- Lab: Assessing the Influence of Environment on Morphology in Rainbow Trout (Part 2)

Notes:

- If you are near ISU, fish samples may be available for your lab. If fish samples cannot be provided, data is available.
- Graduate students are available to assist in teaching this lab remotely. Depending on travel and availability, they may be able to teach in person.

Questions? Contact the PI or the GEM3 PUI Liaison, Stephanie Sevigny, stephanieseigny@boisestate.edu

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